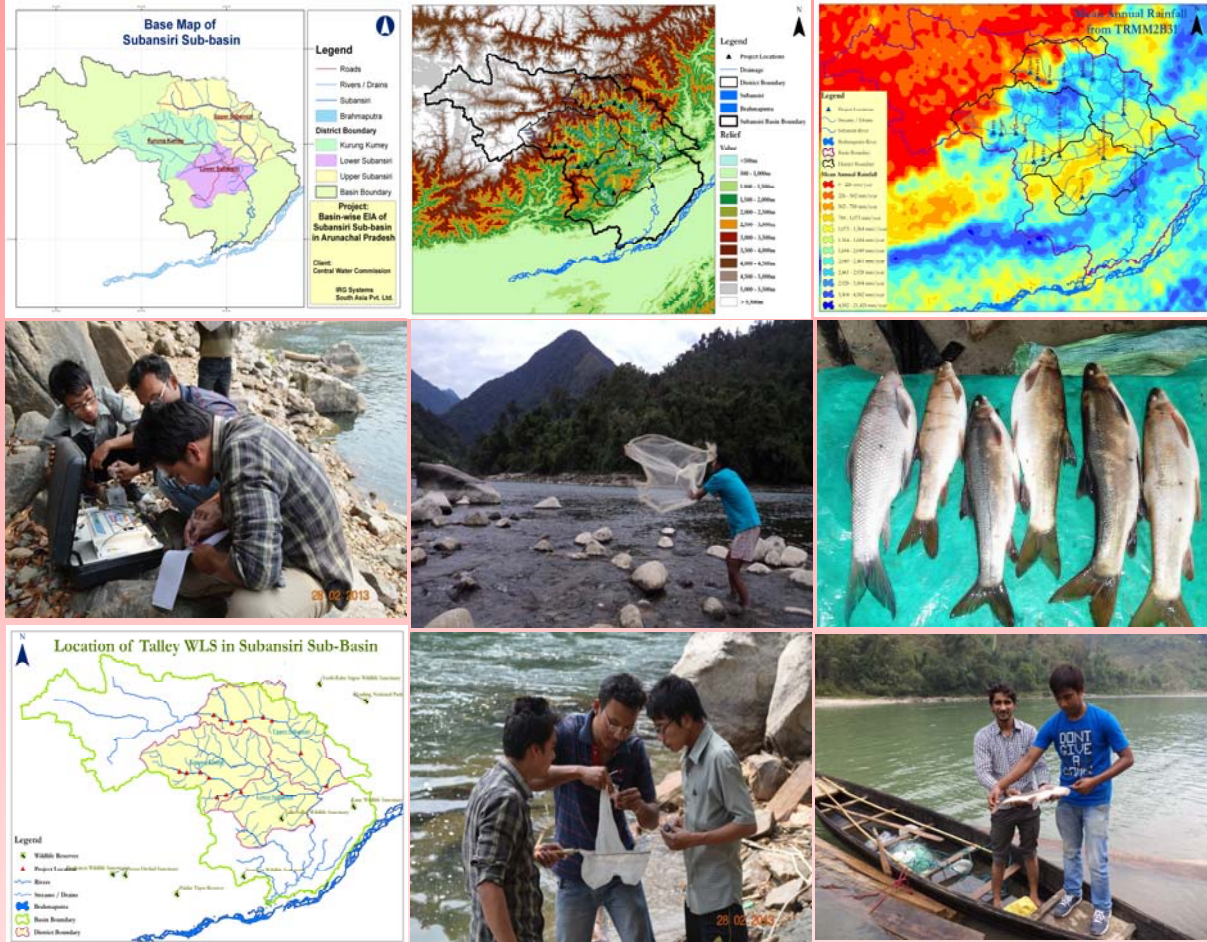


# Cumulative Impact and Carrying Capacity Study of Subansiri Sub Basin including Downstream Impacts



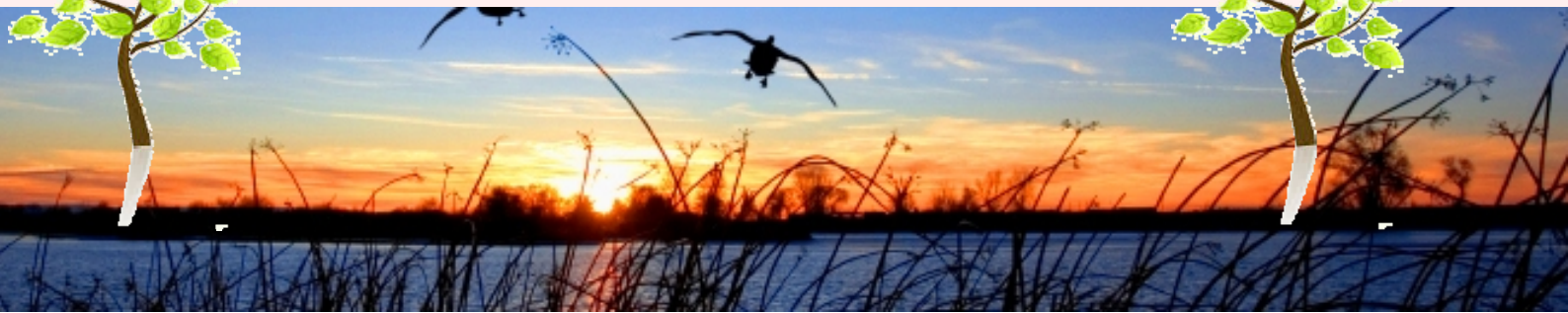
Submitted to:  
**Central Water Commission,**  
 Ministry of Water Resources  
 Sewa Bhawan, R.K. Puram,  
 New Delhi – 110 066  
 India

Submitted by:  
**IRG IRG Systems South Asia Pvt. Ltd.**  
 LGF, AADI Building  
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In association with

**Eqms** **EQMS India Pvt. Ltd.**  
 304 & 305, 3rd Floor, Plot No. 16,  
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**Final Report**  
**Annexure - Volume - II**  
**December, 2014**





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# **Volume-II – Annexures**



## **Annexure – 1.1**

### **Scope of Work (SoW)**

**(PREPARED FROM SECONDARY DATA & FIELD SURVEYS)**





## A. OBJECTIVE OF THE STUDY:

1. The basin study envisages providing optimum support for various natural processes and allowing sustainable activities undertaken by its inhabitants. The same is determined in terms of the following:
  - Inventorisation and analysis of the existing resource base and its production, consumption and conservation levels.
  - Determination of regional ecological fragility / sensitivity based on geo-physical, biological, socio-economic and cultural attributes.
  - Review of existing and planned developments as per various developmental plans.
  - Evaluation of impacts on various facets of environment due to existing and planned development.

The study should involve assessment of stress load due to varied activities covering e.g. exploitation of natural resources, industrial development, population growth which lead to varying degree of impacts on various facets of environment. The basin study should also envisage a broad framework of environmental action plan to mitigate the adverse impacts on environment which should be in the form of:

- Preclusion of an activity
- Infrastructure development
- Modification in the planned activity
- Implementation of set of measures for amelioration of adverse impacts.

The basin study is a step beyond the EIA, as it incorporates an integrated approach to assess the impacts due to various developmental projects.

## 2. STUDY AREA

The study area to be covered as a part of the Basin Study is for entire Subansiri Basin. The study should be based on secondary as well as primary data collection.

## 3. PROJECTS ENVISAGED IN SUBANSIRI BASIN

Nineteen (19) projects are envisaged in the study area to be covered in the Subansiri basin. The details of the same are given below in Table.

**Table: Projects on Subansiri River (Cascade development)**

Sl. No.	Name of the project	Catchment Area (Sq.km)	Present IC (MW)	FRL m	Ht. of the dam (m)	Tail Water Level (m)
1.	Oju – I	13350	700	1950	110	1670
2.	Oju – II	13760	1000	1650	90	1300
3.	Niare	14400	800	1280	100	1055
4.	Naba	14300	1000	1035	110	780
5.	Mili	-	75	1400	-	1200
6.	Sape	-	38	1155	-	1080
7.	Chomi	-	80	1040	-	920
8.	Chela	-	75	900	-	805
9.	Kurang I & II	2302	330	745	140	620
10.	Tamen	-	175	320	-	250
11.	Tago – I	-	55	1080	-	790

Sl. No.	Name of the project	Catchment Area (Sq.km)	Present IC (MW)	FRL m	Ht. of the dam (m)	Tail Water Level (m)
12.	Subansiri Lower	34900	2000	205	116	-
13.	Subansiri Middle	8100	1600	460	203	-
14.	Subansiri Upper	20250	2000	460	214	-
15.	Nalo	14500	360	765	125	645
16.	Dengser	17625	552	630	100	490
17.	Tammu	-	55	310	-	220
18.	Nyepin	-	32	1060	-	920
19.	Hiya	-	41	880	-	745

#### 4. DATA COLLECTION

In the present study emphasis should be laid on terrestrial and aquatic ecology. The estimation of supportive capacity of the basin should involve the preparation of the existing scenario i.e., the preparation of detailed data base of the basins. This should be accomplished through the steps outlined in following sections.

##### 4.1 Meteorology

The information on various meteorological aspects is to be collected from India Meteorological Department (IMD) for meteorological stations located within the basin area or in vicinity to the basin boundary. The information on various aspects such as rainfall, temperature wind, humidity etc. will be collected.

##### 4.2 Water Resources

The information on following aspects should be collected:

- Review of drainage characteristics of the basin, including various surface water bodies like rivers and lakes.
- Data collection and review of past studies/reports/data, etc.
- Review of existing water sharing agreements for meeting various need-based existing and future demands viz. municipal, irrigation, power generation and industrial.
- Analysis of all, past assessment of the water availability and assessing the water availability, as per updated data for the system as a whole and at existing ongoing / proposed project locations on annual / monsoon / non – monsoon and monthly basis.
- Estimation of sediment load at various points in the basin based on available secondary data.
- Identification of perennial sources of water and their designated usages.

##### 4.3 Water Quality

As a part of the Studies, secondary data is to be collected for water quality in the study area. In addition to above, information on human settlement, sewage generated and mode of collection, conveyance treatment and disposal of sewage should also be collected.

The water quality monitoring should be conducted at 32+2 locations in the study area. The frequency of sampling should be once per month for 9 months including one rainy season. The various parameters include pH, Dissolved Oxygen (DO), Electrical Conductivity (EC), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Total Alkalinity, Total Hardness,

Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Nitrates, Chlorides, Sulphates, Phosphates, Sodium, Calcium, Magnesium, Potassium, Iron, Manganese, Zinc, Cadmium, Lead, Copper, Mercury, Total Chromium, Total Coliform.

#### **4.4 Flora**

The following data should be collected from various secondary sources for river Subansiri and its tributaries in the basin area:

- Characterization of forest types in the study area and extent of each forest type.
- Information on general vegetation pattern and floral diversity.
- Presence of economically important species in the basin area.
- Presence of endemic floral species found in the basin area, if any should be assessed as a part of the basin study.
- Location of wild life sanctuaries, national parks, biosphere reserves if any, in the study area

The field studies should be conducted for sampling at 32 locations to collect primary data on terrestrial ecology in the study area. The monitoring should be conducted for 3 seasons (one should be rainy season). The following should be covered as a part of the EIA study.

- Identification of forest type and density, bio-diversity in the study area.
- Preparation of comprehensive checklist of flora (Angiosperms, Gymnosperms, Lichens, Pteridophytes, Bryophytes, Fungi, Algae etc.) with Botanical and local name.
- Importance Value Index of the dominant vegetation at various sampling locations.
- Frequency, Abundance and density of each species of Trees, Shrubs and Herbs at representative sampling sites should be estimated.
- Identification and listing of plants genetically, biologically, economical and medicinal importance.
- Major forest product, if any, and dependence of locals on the same in the forests observed in the study area.

In addition, based on the published literature including various research papers, the information on forest types, presence of various species, biological diversity etc. should be collected for the study area.

#### **4.5 Fauna**

The following data be collected from various secondary sources for the study area:

- Inventory of Birds (resident, migratory), land animals including mammals, reptiles, amphibians, fishes etc reported & surveyed in the basin area should be prepared.
- Presence of RET faunal species as per the categorization of IUCN Red Data list as per different schedules of Indian. Wildlife Protection Act, 1972 in the basin area.
- Presence of endemic faunal species found in the basin area, if any should be assessed as a part of the Basin Study.
- Existence of barriers and corridors for wild animals, if any in the basin area should be covered as a part of the study.
- Identification of threats to wildlife in the region.
- Presence of National Park, Sanctuary, Biosphere, Reserve Forest etc. in the basin area should be assessed.

During ecological survey, identification of faunal species should be carried out simultaneously. Indirect observations of mammals should be carried out by identification of tracks, droppings (scat),

claw marks and calls, etc. The listing of faunal species by direct observation techniques should be carried out. The detailed list of faunal species should be formulated based on forest record and published literature.

#### **4.6 Aquatic flora and fauna**

The following data should be collected from various secondary sources or river Subansiri and its tributaries in the basin area:

- Presence of major fish species
- Inventory of migratory fish species & migratory routes of various fish species
- Presence of major breeding and spawning sites.

The field studies should be conducted for sampling at 32 locations to collect primary data on aquatic ecology & fisheries in the study area. The density and diversity of phytoplankton, zooplankton should be estimated. In addition, primary productivity should be monitored at various location to be covered as a part of the study.

The diversion of water for hydropower generation leads to reduction in flow downstream to the dam site upto disposal of tail race outfall. This leads to diverse impacts on riverine ecology. The dam could also act as a barrier for migration of fishes. The data on prevailing fish species should be collected from the Fisheries Department. To augment the existing data, a fisheries survey should be conducted at 32 locations in the study area. The survey should be conducted once per month for Nine months. The details of the monitoring work should be carried out as per the following;

- Assessment of biotic resources with special reference to primary productivity, zooplanktons, phytoplanktons, benthos, macrophytes, macro-invertebrates and fishes in the study area.
- Population densities and diversities of phytoplanktons, zooplanktons, benthos, macrophytes, macro-invertebrates and fish shall be estimated. Diversity indices of these ecological groups should also be calculated separately.
- Fish composition
- Migratory route of migratory fishes
- Spawning & breeding grounds of fish species, if any, should be identified.

### **5. IMPACTS DUE TO HYDRO POWER DEVELOPMENT**

The impacts on terrestrial and aquatic ecology should be studied. The scenario to be considered for assessment in the present study should be based on the hydropower projects presented in Table. The key aspects to be covered are listed as below:

- Modification in hydrologic regime due to diversion of water for hydropower generation.
- Depth of water available in river stretches during lean season and its assessment of its adequacy vis-à-vis various fish species.
- Length of river stretches with normal flow due to commissioning of various hydroelectric projects due to diversion of flow for hydropower generation.
- Impacts on discharge in river stretches during monsoon and lean seasons due to diversion of flow for hydropower generation.
- Impacts on water users in terms of water availability and quality.
- Impacts on aquatic ecology including riverine fisheries as a result of diversion of flow for hydropower generation.
- Assessment of maintaining minimum releases of water during lean season to sustain riverine ecology, maintain water quality and meet water requirement of downstream users.
- Impact due to loss of forests.
- Impact on RET species & impacts on economically important plant species.

- Impacts due to increased human interferences
- Impacts due to agricultural practices.
- Downstream impact on Assam due to hydropower development in Subansiri basin and release from Lower Subansiri Dam.

## **6. OUTCOME OF THE STUDY**

The key outcomes of the study should be to:

- Provide sustainable and optimal ways of hydropower development of Subansiri river, keeping in view of the environmental setting of the basin.
- Assess requirement of environmental flow during lean season with actual flow, depth and velocity at different levels.
- Downstream impacts on Assam due to hydropower development in Subansiri basin in Arunachal Pradesh.

### **B. Deliverables**

An interim report of 10 (ten) copies giving Rapid Assessment on the study should be submitted after 5 months for review. The Expert Appraisal Committee after examining the same would suggest, mid-course correction, if any.

The draft final report of 10 (ten) copies should be submitted with 10 (ten) months and power point presentation is also to be made by the consultant on the report before the committee. The study should be completed within the time scheduled frame and 15 copies of final report along with soft copy in CD pdf from within two months of approval of report by CWC.



## **Annexure – 3.1**

### **Details of Hydro Electric Projects Allotted to CPSUs & IPPs for Implementation in Subansiri Basin**





Sr. No.	Name of Project	Address of Agency	Allotted capacity (MW)	Revised / Proposed capacity (MW)	River
1.	Pein	Nido Energy System Pvt. Ltd. Arunachal Pradesh	8.00	10.00	Pein
2.	Panyor Lepa Middle	JMD Power Solutions Pvt. Ltd.	21.00	21.00	Panyor
3.	Siken	Gepong Enterprises Arunachal Pradesh	8.00	8.00	Siken Near Menga
4.	Palin HEP	T.T. Power & Project Developers Pvt. Ltd., Arunachal Pradesh	6.00	6.00	Palin
5.	Panyi	Sowbhagya Energy Pvt. Ltd. Andhra Pradesh	24.00	24.00	Panyi
6.	Sichi	SLS Power Ltd., Ashok Nagar, Navalak Garden, Nellore – 524002, Andhra Pradesh	24.00	24.00	Sichi
7.	Pei HEP	Apik Constructions Pvt. Ltd., Itanagar	5.00	5.00	Pei
			<b>96.00</b>	<b>98.00</b>	

**Details of Proposed Small & Micro HEPs**

<b>Sr. No.</b>	<b>Name of Works</b>	<b>Capacity</b>	<b>Year of taking up</b>
<b>Lower Subansiri District</b>			
1.	Pange MHP at Hake Tari	2 x 1000 KW	
<b>Upper Subansiri District</b>			
1.	Sippi SHP	2 x 2000 KW	1991
2.	Taksing MHS over Esmi Nallah at Taksing	2 x 50 KW	2012
3.	Pinto Karo MHS near Aki Nirin	1 x 30 KW	2008
4.	Sikin Koro MHS under Gusar Circle	2 x 100 KW	2008
5.	Sinyum – Koro MHS under Dumporijo	2 x 50 KW	2008
6.	Kojin Nallah MHS near Taliah	2 x 50 KW	2008
7.	Mini Micro Hydel Project Over river Jete-Koro at Bora Ropuk village	1 x 50 KW	
8.	Jugdin Nallah MHS at Doyom Village at Taliha Circle	3 x 500 KW	
<b>Kurung Kumey District</b>			
1.	Kush MHS at Sangram	2 x 1000 KW	1991
2.	Payu MHS at Koloriang	2 x 500 KW	2008
3.	Chambang MHP	1 x 30 KW	2008
4.	Kidding MHS	2 x 250 KW	2008
5.	Pagu MHS under Palin Circle	2 x 1000 KW	2009
6.	Fure MHP at Damin	1 x 50 KW	2008
7.	Paya MHS at Hiya	2 x 50 KW	2008
8.	Payu MHS at Pinchi	2 x 250 KW	2008

**List of Existing Hydel Under Department of Hydro Power Development, Aurnachal Pradesh**

<b>Sr. No.</b>	<b>Name of Existing Hydel</b>	<b>Installed Capacity (in KW)</b>	<b>Year of Commissioning</b>
<b>Kurung Kumey District</b>			
1.	Patte MHS at Tali	1 x 30 KW	2004-05
2.	Koye	2 x 50 KW	2009-10
3.	Chambang	1 x 30 KW	2009-10
4.	Paya MHS at Hiya	2 x 50 KW	2011-12
<b>Lower Subansiri District</b>			
1.	Mai PH – I	4 x 500 KW	1977-78
2.	Mai PH – II	2 x 500 KW	1982-83
3.	Tago	3 x 1500 KW	1992-93
<b>Upper Subansiri District</b>			
1.	Dulom (Daporijo)	4 x 1000 KW	1981-82
2.	Maro	1 x 30 KW	2002-03
3.	Sippi	2 x 2000 KW	2008-09
4.	Pinto Karo MHS	1 x 25 KW	2011-12
5.	Sikin Koro	2 x 100 KW	2011-12
6.	Sinyum Koro	2 x 50 KW	2011-12
7.	Kojin Nallah	2 x 50 KW	2011-12
8.	Ayingmuri	2 x 125 KW	2012-13
9.	Limeking	1 x 30 KW	2012-13

Correspondence with Department of Hydro Power Development (Government of Arunachal Pradesh)

GOVT. OF ARUNACHAL PRADESH  
DEPARTMENT OF HYDRO POWER DEVELOPMENT (MONITORING)  
JAL VIDYUT BHAWAN:: ITANAGAR  
Ph:0360-2290767,2290771(F), Email:hpdmonitoring-arn@nic.in

NO.CE(M)/HPD/W-374/2013-14/ 503-04  
To

Dtd. 12/6/14

M/s IRG Systems South Asia Pvt. Ltd.  
Lower Ground Floor,  
Action for Ability Development and Inclusion (AADI) Building  
2, Balbir Saxena Marg  
Hauz Khas, New Delhi-110016, India

Sub:- Request for providing data on HEPs in Subansiri Basin for project titled "Cumulative Impact and Carrying Capacity Study of Subansiri Sub Basin including Downstream impacts", Central Water Commission, Government of India, reg.

Ref:- Letter No.NIL dtd.11/6/2014.

Dear Sir,

This is with reference to your letter dtd.11/6/2014 addressed to the Secretary (Power) and copy endorsed to undersigned vide which you have sought PFR/FR/DPR in respect of 9 projects and the contact details of developers. In this regard, it is to inform you that out of 9 projects Chela HEP (75 MW) and Chomi HEP (80 MW) has been allotted to M/s Adevta Power Pvt. Ltd. and the contact details are as given below:

M/s Adevta Power Pvt. Ltd.,  
Malpur, Tehshit-Nalagarh,  
Dist.- Solan, Baddi-173 205,  
Himachal Pradesh.  
Sanjay Sharma, VP 9654681474, 01795304000,01141679000  
sanjaysharma@advetapower.com

As regards Hiya HEP, it is to inform you that one project by the name of Panyi HEP to be developed between EL 915 m (FRL) and EL 870 m (TWL) has been allotted to M/s Sowbhagya Energy Pvt. Ltd. Subsequently M/s Sowbhagya Energy Pvt. Ltd. requested the State Govt for permission for shifting the proposed project downstream which coincides with the location of Hiya HEP whose levels are EL 880 m & EL 745 m. The State Govt has approved for the same and Panyi HEP is being renamed as Hiya HEP. However, formal MoA in this regard is yet to be

executed. The contact details of M/s Sowbhagya Energy Pvt. Ltd. is as given below:


M/s Sowbhagya Energy Pvt. Ltd.,  
22-9-2, LakshmiDham,3rd Floor, V.B.Puram, Korukonda Road,  
Rajahmundry-533 105,  
Andhra Pradesh.  
Contact Person – Shri Balaji Mahadevan, Mbl. No. 09490424835/08832444322  
Ph. No. 08832444322  
CH Vijay Kumar, Resident Director, 9876556640  
Email-balajimahadevan@yahoo.com

The Nyepin HEP is approved for allotment to M/s Nguffa Developers Pvt Ltd. for which formal MoA is yet to be executed. The contact details are given below:

M/s Nguffa Developers Pvt Ltd  
Panchali (Mowb-II)  
Itanagar-791111  
Papu Pare District  
Arunachal Pradesh  
Contact Person – Sri Tadar Niglar, CMD, 9436050790, 0360-2292696.


The Mili HEP, Sape HEP, Tamen HEP, Tago-I HEP and Tammu HEP have not been allotted and are CEA identified projects. Therefore, the PFRs may be available with the CEA and this office donot have the same.

Yours faithfully

  
Chief Engineer(Monitoring)  
Deptt. of Hydro Power Development  
Itanagar  
Dtd.

NO.CE(M)/HPD/W-374/2013-14/  
Copy to:-

1. The Secretary(Power), Govt of Arunachal Pradesh,Itanagar for information please.

  
Chief Engineer(Monitoring)  
Deptt. of Hydro Power Development  
Itanagar

GOVERNMENT OF ARUNACHAL PRADESH  
DEPARTMENT OF HYDRO POWER DEVELOPMENT  
JAL VIDYUT BHAWAN:: ITANAGAR

Near Indira Gandhi Park, Itanagar, Arunachal Pradesh

Telephone No: 0360-2292284(Off), 0360-2291502(Fax) email: ceoffice@arunachalhydro.in

No. CE/WZ/HPD/W-III/7/2014-15/

Dated Itanagar, the July, 2014

To,

1. **Shri Jummar Kamdak,**  
Superintending Engineer (C),  
Itanagar Civil Circle,  
DHPD, Itanagar.
2. **Shri Tarh Hari,**  
Executive Engineer (C),  
Ziro Civil Division,  
DHPD, Ziro.
3. **Shri Taba Tagu,**  
Executive Engineer (C),  
Koloriang Civil Division,  
DHPD, Koloriang.
4. **Shri Jundo Kena,**  
Assisatnt Engineer (C),  
Daporijo Civil Sub-Division,  
DHPD, Koloriang.

Sub:- **Request for providing data on small and micro HEPs in Subansiri Basin for project titled "Cumulative Impact and Carrying Capacity Study of Subansiri Sub-Basin including Downstream Impacts", Central Water Commission, Government of India, reg.**

One letter has been received from General Manager- Projects, M/s IRG System, South Asia Pvt. Ltd. vide letter No. Nil dtd. 23.6.2014 who has been entrusted by Central Water Commission, Government of India for carrying out " Cumulative Impact and Carrying Capacity Study of Subansiri Sub-Basin including Downstream Impacts". The list of small Hydro Power Projects under Department of Hydro Power Development as submitted by

Chief Engineer (M), Department of Hydro Power Development vide letter No. CE(M)/HPD/W-374/2013-14/578-80 dtd. 26.06.2014 is enclosed herewith. Therefore, all of you are requested to verify the coordinates of Weir & Intake, Power House etc. of existing and proposed hydro power projects in Subansiri Basin which are under Department of Hydro Power Development as per the list of Chief Engineer (M) and furnish to M/s IRG System, South Asia Pvt. Ltd., New Delhi urgently under intimation to this office.

**Enclo:** As Stated Above

Chief Engineer (W/Z),  
Department of Hydro Power Development,  
Itanagar.

No. CE/WZ/HPD/W-III/7/2014-15/2202-11 Dated Itanagar, the 2<sup>nd</sup> July, 2014  
Copy to:-

1. The Secretary (Power), Government of Arunachal Pradesh, Itanagar for favour of information please.
2. The Chief Engineer (M), Department of Hydro power Development, Itanagar for information with reference to his letter No. CE(M)/HPD/W-374/2013-14/578-80 dtd.26.06.2014 please.
3. ✓ Shri Krishna Kumar, General Manager-Projects, IRG System South Asia Pvt. Ltd., Lower Ground Floor, Action for Ability Development and Inclusion (AADI) Building 2, Balbir Saxena Marg, Hauz Khas, New Delhi - 110016, India for information please.
4. The Superintending Engineer (P&D) / Superintending Surveyor of Works for information and necessary action.
5. The Superintending Engineer (EM), Western EM Circle, Department of Hydro Power Development, Itanagar for information and necessary action.
6. The Executive Engineer (EM), Ziro EM Division, Department of Hydro Power Development, Ziro for information and necessary action.

Chief Engineer (W/Z),  
Department of Hydro Power Development,  
Itanagar.

GOVERNMENT OF ARUNACHAL PRADESH  
OFFICE OF THE CHIEF ENGINEER: WESTERN ZONE  
DEPARTMENT OF HYDRO POWER DEVELOPMENT  
JAL VIDYUT BHAWAN: NEAR I.G PARK: ITANAGAR  
Tel.No.0360-2217309, 2217846, Fax No.0360-2291502, e-mail: ceoffice@arunachalhydro.in

No.CE/HPD/WZ/W-<sup>3603</sup>2014-15/  
Ta.

Dated Ita., the 10/10/2014.

1. **Shri Jummar Kamdak,**  
The Superintending Engineer (C),  
Itanagar Civil Circle,  
Department of Hydro Power Development,  
Itanagar.
2. **Shri Tarh Hari,**  
The Executive Engineer (C),  
Ziro Civil Division,  
DHPD, Ziro.
3. **Shri Taba Tagu,**  
The Executive Engineer (C),  
Koloriang Civil Division,  
DHPD, Koloriang.
4. **Shri Jundo Kena,**  
The Assistant Engineer (C),  
Daporijo Civil Sub-Division,  
DHPD, Daporijo.

Sub: - **Request for providing date on small and micro HEPs in Subansiri Basin for project titled "Cumulative Impact and Carrying Capacity Study of Subansiri Sub-Basin including Downstream Impacts", Central Water Commission, Government of India, reg.**

Ref:- No.CE/WZ/HPD/W-III/7/2014-15/2202-11, Dated 2.7.2014


With reference to the above subject, vide above refer letter, you had been directed to verify and submit the coordination of weir and intake, power house etc. of existing and proposed hydro power project in Subansiri basin which are under department of hydro power development. The copy of above refer letter and the letter received from IRG system South Asia Private Limited are enclosed herewith for your ready reference and fill up the format and submit to office urgently.

This issue as per the direction of Chief Engineer (WZ), DHPD, Itanagar. \*



No.CE/HPD/WZ/W-<sup>(15)</sup>36/2014-15/3842+99 Dated Ita., the 19/9/2014.  
Copy to:-

1. The Chief Engineer (M), Department of Hydro Power Development, Itanagar for information with reference to his letter No.CE(M)/HPD/W-374/2013-14/578-80 dated 26.06.2014 please.
2. ✓ Shri Krishna Kumar, General Manager-Projects, IRG System South Asia Private Limited, Lower Ground Floor, Action for Ability Development and Inclusion (AADI) Building 2, Balbir Sexena Marg, Hauz Khas, New Delhi - 110016, India for information please.
3. The Superintending Engineer (EM), Western EM Circle, DHPD, Itanagar for information and necessary action.
4. The Executive Engineer (EM), Ziro EM Division, DHPD, Ziro for information and necessary action.
5. Office copy.

  
17/9/14

**Suptdg. Surveyor of Work (C),**  
For Chief Engineer (WZ),  
Department of Hydro Power Development,  
Itanagar.



## **Annexure – 4.1**

**Rainfall stations in Subansiri Basin, their class, coordinates and elevation**



Station name	Class	Lat deg	Lat min	Lon. Deg	Lon. Min	Height (mtr)	Catchment
Daporijo	HYDRO	27	59	94	13	248	501
Koloriang	HYDRO	27	54	93	21	1000	502
Ziro	OBSY	27	33	93	49	1476	502
Limeking	HYDRO	28	24	93	36	1240	502
Taliha	HYDRO	28	14	94	9	800	502

Source: IMD



**Map Showing Rainguage Stations in Subansiri Basin**

**Annual Rainfall in the Basin (in mm)**

<b>Year</b>	<b>Lower Subansiri</b>	<b>Upper Subansiri</b>
1901	1757.713	1575.486
1902	2050.754	1842.796
1903	1906.225	1686.386
1904	1781.048	1500.423
1905	1656.092	1465.649
1906	1716.783	1550.705
1907	1854.35	1604.586
1908	1890.02	1717.038
1909	1837.531	1627.337
1910	1778.812	1573.715
1911	2078.154	1821.344
1912	2046.023	1792.748
1913	2033.689	1789.774
1914	1698.595	1463.135
1915	2191.895	1913.411
1916	1735.43	1581.559
1917	2156.998	1855.86
1918	1988.617	1730.387
1919	1878.194	1703.448
1920	1665.411	1496.41
1921	2188.783	1895.45
1922	1685.732	1518.755
1923	1936.189	1771.704
1924	2039.24	1810.12
1925	1863.648	1686.271
1926	1609.748	1461.258
1927	2113.623	1896.261
1928	1893.419	1719.096
1929	1926.284	1688.688
1930	2098.254	1882.443
1931	2180.723	1897.266
1932	1902.668	1708.735
1933	1757.134	1596.919
1934	2081.035	1760.145
1935	1794.409	1641.515
1936	2063.479	1905.048
1937	1636.988	1300.276
1938	2124.013	1957.62
1939	1663.111	1515.926
1940	1783.923	1533.759
1941	1713.642	1406.308
1942	1945.648	1721.835
1943	1922.01	1652.7
1944	1517.602	1374.627
1945	2007.551	1793.379
1946	1753.668	1521.818
1947	2077.188	1822.699
1948	2227.509	2005.969
1949	2126.098	1848.609

<b>Year</b>	<b>Lower Subansiri</b>	<b>Upper Subansiri</b>
1950	1792.995	1637.788
1951	1907.446	1732.408
1952	2090.837	1862.635
1953	1716.483	1430.225
1954	1973.409	1770.09
1955	1952.797	1743.552
1956	1987.724	1748.277
1957	2024.207	1810.92
1958	1983.333	1800.59
1959	1913.243	1725.013
1960	1527.908	1326.489
1961	1824.762	1534.452
1962	1954.58	1933.544
1963	1729.209	1548.282
1964	1672.699	1395.305
1965	1897.405	1654.326
1966	2048.152	1797.694
1967	1442.714	1218.842
1968	1897.814	1692.948
1969	1716.182	1565.557
1970	2065.226	1782.348
1971	1940.867	1688.033
1972	1515.057	1259.848
1973	1980.652	1715.384
1974	1882.014	1663.719
1975	1802.952	1585.983
1976	1657.858	1434.979
1977	2295.927	1911.893
1978	1851.961	1689.245
1979	1701.032	1596.879
1980	1976.988	1790.487
1981	1928.175	1791.809
1982	1445.845	1212.226
1983	1750.349	1449.276
1984	1729.456	1460.624
1985	1828.997	1654.613
1986	1793.265	1669.37
1987	1789.07	1626.766
1988	2115.005	1755.732
1989	1680.329	1354.837
1990	2126.556	1911.23
1991	2333.89	2067.781
1992	1827.863	1525.439
1993	1866.298	1600.191
1994	1660.508	1464.688
1995	2191.142	1863.51
1996	1789.531	1541.661
1997	1572.174	1402.916
1998	2084.985	1930.226
1999	1874.944	1651.95

<b>Year</b>	<b>Lower Subansiri</b>	<b>Upper Subansiri</b>
2000	1914.392	1715.168
2001	1867.421	1673.845
2002	2006.204	1821.524



**Monthwise & Year wise Rainfall (in mm) in Lower Subansiri from 1901 to 2010**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	21.378	8.387	29.148	148.742	124.985	373.515	312.819	303.257	251.974	104.218	68.021	11.269
1902	8.051	7.864	73.717	210.261	205.148	364.867	458.564	332.831	333.274	48.748	5.422	2.007
1903	16.079	24.857	66.954	100.139	187.053	448.437	258.194	430.225	237.127	113.941	20.786	2.433
1904	8.997	27.233	49.891	222.173	234.198	271.134	349.237	375.783	157.743	59.687	22.282	2.69
1905	16.459	10.066	65.233	133.428	191.182	215.549	299.398	470.749	163.808	50.71	17.609	21.901
1906	10.629	32.768	53.659	221.137	149.236	317.172	335.994	297.481	183.305	98.522	15.109	1.771
1907	16.479	30.328	86.403	198.356	169.486	388.853	429.161	232.182	273.264	20.35	1.34	8.148
1908	9.778	16.36	21.274	189.939	268.987	427.034	436.244	221.63	235.102	54.411	6.956	2.305
1909	22.892	5.443	5.375	140.805	273.989	519.661	332.965	308.17	133.02	86.172	4.973	4.066
1910	7.817	20.305	77.139	130.246	146.193	443.806	409.03	250.924	98.474	166.707	13.31	14.861
1911	28.204	12.511	32.783	139.375	276.085	361.521	398.705	330.319	278.574	190.487	25.379	4.211
1912	6.372	43.384	46.591	189.428	174.349	387.021	489.221	390.777	215.353	76.404	20.544	6.579
1913	7.025	43.321	46.049	189.559	346.551	343.83	287.765	278.175	201.52	224.039	4.278	61.577
1914	3.47	30.285	33.996	155.039	164.253	275.818	411.485	370.959	189.254	46.328	13.82	3.888
1915	3.569	34.094	69.838	122.088	335.402	466.835	543.933	348.045	192.88	59.776	9.131	6.304
1916	11.544	13.09	53.078	134.79	244.699	346.285	349.712	316.472	141.736	106.35	13.016	4.658
1917	6.692	50.61	26.718	162.341	141.817	420.464	609.287	344.595	255.731	114.261	23.299	1.183
1918	4.17	17.633	54.586	81.243	172.5	530.112	467.129	363.327	225.703	65.797	4.409	2.008
1919	8.879	14.658	8.114	110.99	216.53	387.722	480.153	196.813	270.473	168.534	13.99	1.338
1920	10.819	24.867	91.099	108.421	171.644	365.399	322.553	288.046	213.578	57.024	2.956	9.005
1921	25.15	20.077	74.058	257.287	286.838	367.841	387.137	399.649	217.102	132.561	9.031	12.052
1922	14.712	6.666	19.128	75.775	178.757	318.272	409.186	389.549	187.606	73.309	7.06	5.712
1923	1.375	39.785	8.35	129.868	266.865	436.046	413.779	299.634	270.954	47.934	9.608	11.991
1924	7.553	17.812	16.85	106.39	273.34	349.968	516.27	352.135	261.277	94.712	40.628	2.305
1925	8.176	12.634	39.628	112.506	337.295	322.371	442.846	264.742	263.692	55.065	2.685	2.008
1926	10.195	7.482	74.571	110.538	210.054	264.524	436.258	201.124	107.136	157.894	19.639	10.333
1927	23.296	49.322	64.407	157.916	158.841	347.97	395.872	361.1	384.566	157.062	11.699	1.572
1928	9.628	12.151	39.445	103.461	317.707	365.132	309.245	370.858	187.465	151.626	22.043	4.658
1929	12.141	6.093	44.961	128.93	429.685	389.715	293.886	356.859	153.829	81.988	22.735	5.462
1930	8.498	23.043	56.57	179.633	114.476	402.224	267.15	426.39	364.282	202.141	48.932	4.915
1931	4.866	27.779	40.661	203.957	235.005	425.66	564.583	317.914	211.453	102.762	11.257	34.826
1932	13.959	23.63	36.546	108.442	292.432	407.591	336.58	273.806	215.246	111.563	50.41	32.463
1933	12.974	25.283	15.995	153.09	206.529	387.732	356.58	354.574	111.846	124.702	4.168	3.661
1934	12.96	40.502	11.751	186.765	331.596	537.998	388.563	224.333	191.274	125.488	25.13	4.675
1935	5.303	28.063	33.232	59.142	149.626	483.18	433.904	325.758	254.235	7.036	10.389	4.541
1936	13.985	41.64	30.03	128.628	262.896	443.703	467.657	288.332	256.763	87.261	21.451	21.133
1937	7.908	32.796	21.242	88.63	210.017	206.953	308.932	466.613	210.381	75.32	5.514	2.682
1938	20.993	47.05	85.646	129.828	142.839	364.074	582.665	351.036	217.554	137.005	40.714	4.609
1939	3.786	18.07	13.702	100.857	210.198	397.191	362.205	159.836	289.921	105.339	0.285	1.721
1940	1.628	34.822	104.165	63.275	244.938	438.427	295.28	221.828	266.198	68.425	11.409	33.528
1941	9.517	16.38	39.295	91.849	294.177	419.4	223.911	270.422	270.117	56.81	11.408	10.356
1942	1.683	15.612	105.552	149.292	286.05	401.228	307.803	327.576	339.398	7.631	3.696	0.127
1943	27.583	13.912	85.072	144.2	280.226	346.751	366.767	309.46	266.272	73.134	3.832	4.801
1944	16.363	13.371	26.787	67.577	208.651	324.475	298.984	226.394	235.882	71.904	7.268	19.946
1945	28.17	18.904	39.817	81.62	261.793	429.661	469.557	267.875	233.029	163.9	1.34	11.885
1946	0.02	11.067	65.5	69.005	180.306	393.598	377.036	228.04	193.605	226.599	8.508	0.384
1947	4.549	6.231	33.766	154.037	230.481	275.979	547.46	309.071	332.918	170.245	4.691	7.76
1948	6.777	12.775	73.692	149	553.678	296.723	505.027	295.102	170.301	139.426	20.42	4.588
1949	14.764	7.707	41.902	197.086	288.337	341.539	323.526	368.514	401.247	121.693	9.363	10.42
1950	6.295	21.873	43.261	74.573	178.854	419.732	370.971	335.127	163.883	150.594	21.699	6.133
1951	5.264	17.618	53.58	130.419	168.396	513.565	392.734	248.468	170.722	135.782	48.246	22.652
1952	7.829	18.088	62.259	91.907	252.563	357.657	359.184	419.717	362.419	124.439	33.246	1.529
1953	14.524	21.687	98.673	107.676	252.27	367.034	368.994	166.02	229.715	75.896	1.303	12.691
1954	22.754	28.253	17.741	142.899	256.197	331.127	388.598	449.269	231.092	79.846	0.226	25.407
1955	5.598	14.203	75.482	117.076	176.316	403.682	603.976	316.659	136.387	70.234	8.099	25.085
1956	18.836	7.201	95.338	157.564	288.821	496.319	254.325	343.652	197.152	88.192	29.148	11.176
1957	20.169	27.602	15.77	153.686	266.924	393.94	516.31	278.354	241.834	72.691	13.845	23.082
1958	15.899	30.552	7.23	65.588	379.258	237.255	463.481	432.878	195.45	147.843	0.181	7.718
1959	20.809	19.951	66.533	101.401	351.256	455.427	304.98	154.137	240.235	181.233	8.479	8.802
1960	3.57	29.954	13.343	39.273	168.283	301.476	454.84	240.511	248.394	15.038	4.964	8.262

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	6.078	5.846	70.622	100.805	265.269	287.616	334.727	325.877	330.461	79.863	13.958	3.64
1962	25.114	26.43	34.864	144.477	136.816	588.69	293.459	397.477	222.634	72.876	5.659	6.084
1963	5.833	15.097	34.746	83.701	260.168	304.063	426.995	352.893	118.314	100.375	21.266	5.758
1964	7.703	17.6	76.745	132.352	131.163	348.977	414.412	253.546	175.533	96.953	2.949	14.766
1965	2.004	24.169	28.625	138.259	244.892	320.683	444.916	348.64	214.61	37.136	90.185	3.286
1966	10.937	7.54	11.077	77.249	243.478	580.844	329.047	460.61	227.395	75.921	20.042	4.012
1967	6.212	9.735	86.82	133.785	166.605	312.07	251.287	200.873	238.956	19.317	15.396	1.658
1968	18.303	74.645	27.483	128.592	362.075	323.483	396.999	289.574	224.829	51.442	0.262	0.127
1969	19.908	0.857	121.889	61.372	137.641	335.325	378.89	386.272	190.819	73.894	7.743	1.572
1970	16.688	23.739	39.41	111.129	291.168	376.741	464.198	331.27	199.318	204.857	6.581	0.127
1971	9.344	13.362	78.465	114.96	149.051	416.072	412.335	333.326	150.681	193.859	63.293	6.119
1972	13.032	10.814	39.171	146.122	236.572	240.478	401.76	244.141	150.616	24.58	3.813	3.958
1973	8.352	25.201	13.886	194.352	219.318	528.626	288.65	291.156	282.374	53.198	21.552	53.987
1974	18.106	5.148	20.596	125.722	157.189	375.115	570.052	353.172	215.925	33.469	6.236	1.284
1975	5.43	73.037	24.58	90	204.539	296.843	410.202	336.799	242.423	108.882	3.846	6.371
1976	27.005	24.063	50.175	99.299	150.53	534.231	378.534	245.23	98.964	39.19	8.089	2.548
1977	6.491	13.886	44.195	299.869	314.19	397.658	437.389	373.15	226.033	132.988	21.924	28.154
1978	2.234	13.722	29.189	137.994	216.356	392.509	403.6	278.895	215.544	124.633	37.158	0.127
1979	3.726	7.985	41.441	37.054	126.265	293.979	429.154	265.164	227.248	219.044	7.398	42.574
1980	32.138	7.138	59.453	163.172	250.516	307.572	448.28	428.365	196.583	82.23	1.414	0.127
1981	25.307	16.505	46.145	203.417	275.342	318.374	485.369	333.827	137.044	31.157	0.476	55.212
1982	0.577	16.752	27.762	249.204	127.476	269.831	248.187	258.711	146.778	28.56	50.988	21.019
1983	21.036	19.09	37.202	134.782	230.393	235.511	370.729	237.352	321.35	122.898	2.057	17.949
1984	7.703	3.463	21.813	159.853	237.471	273.085	446.563	202.367	291.442	59.054	4.624	22.018
1985	3.04	13.697	51.486	174.039	178.766	344.653	615.79	195.229	204.324	29.022	4.916	14.035
1986	2.614	7.858	18.491	228.167	58.033	222.126	530.298	250.93	247.699	211.405	13.852	1.792
1987	3.723	27.258	66.323	155.004	165.809	186.258	477.21	356.555	282.939	56.219	4.49	7.282
1988	6.03	13.893	44.507	164.183	328.658	189.176	435.254	468.269	245.426	135.749	72.955	10.905
1989	3.128	40.458	15.153	94.816	149.248	267.041	421.025	249.299	294.994	129.036	8.917	7.214
1990	3.855	18.096	58.209	155.76	145.794	495.436	529.096	219.123	324.254	171.565	0.635	4.733
1991	8.558	3.696	40.871	104.405	270.483	492.81	420.104	449.243	308.642	211.978	5.023	18.077
1992	14.386	37.926	52.651	285.246	163.577	289.584	360.656	289.241	199.511	124.226	3.358	7.501
1993	24.605	47.326	66.993	89.174	268.79	363.707	227.258	415.888	295.381	61.587	5.277	0.312
1994	15.66	20.92	73.658	206.52	175.861	262.024	314.128	274.487	156.598	147.479	12.939	0.234
1995	23.615	19.369	33.616	119.872	306.483	560.798	426.267	282.636	329.679	28.366	50.447	9.994
1996	10.745	18.446	67.852	84.133	466.718	257.071	366.973	224.978	157.19	135.132	0.166	0.127
1997	11.071	39.489	67.604	111.742	169.996	362.988	293.121	177.426	273.72	21.677	15.428	27.912
1998	6.078	23.858	81.104	131.418	224.112	550.963	412.203	346.053	172.189	130.107	6.773	0.127
1999	0.593	18.427	17.951	106.232	315.604	353.116	373.148	348.541	211.023	119.085	10.737	0.487
2000	18.882	8.129	71.15	122.901	326.908	321.195	322.998	430.69	250.337	35.776	4.914	0.512
2001	0.477	13.408	16.693	156.823	257.285	364.537	423.663	238.087	226.255	159.827	8.072	2.294
2002	13.9	21.404	41.322	224.858	307.899	349.409	422.404	276.037	283.603	39.56	25.681	0.127
2004	25	24.6	89.2	105.9	99	183.2	125.3	91.4	80.7	133	5.9	1.6
2005	60.5	88.2	83.2	71.3	120.4	46.1	199.6	144.6	63.7	65.9	19.8	NA
2006	3.8	48.2	28.4	122.7	145.1	122.2	163.4	70.8	72.6	0.4	35.6	12
2007	11.2	69.1	13.9	98.8	155.8	128.2	153.3	106.1	162.2	35.4	25.4	3.1
2008	42	34.5	63.8	97.5	95.8	169.4	208.4	138.7	83.4	38.9	NA	5.2
2009	5.6	25.4	114.2	61.4	124.2	80.6	146.9	173.2	53	51.2	1.2	3.6
2010	NA	3.6	109.7	87.8	128.8	80.4	104	68.6	75	30.7	18.2	NA

### Monthwise & Year wise Rainfall (in mm) in Upper Subansiri from 1901 to 2010

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	18.511	9.973	27.693	125.203	116.845	322.608	294.083	274.993	235.786	87.502	53.9	8.389
1902	9.774	8.816	55.558	154.268	174.552	316.871	454.347	303.916	309.29	46.455	6.308	2.641
1903	16.627	21.039	55.691	91.641	154.416	386.598	255.647	379.7	206.421	95.534	20.004	3.068
1904	8.724	19.211	54.396	187.848	185.893	180.192	306.043	341.802	147.185	44.777	21.545	2.807
1905	15.462	10.1	58.049	109.045	151.549	194.926	292.347	408.33	140.34	50.893	16.159	18.449
1906	10.117	27.957	51.034	215.461	124.851	290.049	303.23	291.587	143.873	75.451	14.676	2.419
1907	9.264	26.019	65.264	161.638	136.737	322.921	386.895	215.166	248.299	24.559	1.877	5.947
1908	9.827	17.125	21.575	169.907	212.942	375.764	436.729	189.764	220.331	53.372	6.516	3.186
1909	25.662	6.411	6.566	118.328	231.239	447.389	299.374	290.327	124.136	67.854	5.564	4.487
1910	7.534	20.171	67.737	106.334	114.417	371.402	367.241	234.596	106.463	150.972	11.954	14.894
1911	21.521	13.648	31.743	121.602	219.356	319.105	381.655	275.74	233.468	175.795	22.895	4.816
1912	7.187	36.7	39.21	155.608	141.147	312.107	459.256	333.601	218.988	64.936	17.504	6.504
1913	8.078	35.85	39.418	153.897	296.402	309.893	262.963	258.241	184.354	188.059	4.953	47.666
1914	4.21	23.678	34.441	108.175	138.681	236.562	371.485	316.938	166.109	47.06	11.684	4.112
1915	4.059	27.863	59.418	96.82	245.091	391.679	508.224	321.402	189.549	52.976	9.284	7.046
1916	13.076	13.37	48.983	115.793	212.242	333.959	348.963	284.404	129.494	65.107	11.072	5.096
1917	7.932	47.356	26.281	135.073	131.367	355.73	523.785	306.182	212.731	88.597	19.217	1.609
1918	4.667	16.809	52.393	75.234	150.537	476.383	403.939	289.671	196.609	56.358	5.051	2.736
1919	7.373	15.945	8.691	87.364	197.829	339.094	459.272	178.51	231.312	164.669	11.705	1.684
1920	8.442	23.369	78.498	89.771	143.963	323.804	304.57	274.075	186.918	49.43	3.909	9.661
1921	18.281	18.437	64.859	200.837	241.508	323.563	316.637	355.401	211.046	124.931	7.933	12.017
1922	14.752	7.403	19.612	74.843	148.944	288.372	375.865	333.82	173.089	69.379	7.447	5.229
1923	1.913	36.07	10.979	107.675	227.723	358.293	403.483	273.614	284.371	49.979	8.694	8.91
1924	7.699	16.198	19.528	86.963	229.461	310.742	470.425	317.57	218.443	98.029	31.876	3.186
1925	8.919	13.734	40.367	91.487	275.9	295.348	389.049	273.158	243.002	49.093	3.478	2.736
1926	8.373	8.624	49.833	96.711	187.529	240.145	411.83	184.713	109.091	136.766	19.5	8.143
1927	17.018	39.01	55.93	144.016	130.242	306.45	358.772	312.424	362.075	157.589	10.577	2.158
1928	9.011	11.925	43.6	87.041	250.356	349.505	314.126	326.92	181.357	119.524	20.635	5.096
1929	10.164	7.896	35.816	109.676	354.408	334.9	279.476	313.577	146.897	68.833	21.434	5.611
1930	8.221	21.153	48.926	158.28	91.676	348.103	252.611	372.779	346.835	188.459	39.978	5.422
1931	5.985	31.04	36.69	175.175	185.29	390.74	492.339	257.114	191.153	87.548	12.502	31.69
1932	14.997	21.504	32.573	91.039	246.835	345.435	309.674	276.417	194.456	101.329	48.226	26.25
1933	10.879	23.937	18.452	128.726	168.446	399.18	311.962	335.032	109.032	82.227	4.97	4.076
1934	11.333	28.446	13.686	181.397	260.385	453.898	329.975	195.114	174.67	85.533	20.612	5.096
1935	5.673	18.958	23.524	53.205	109.537	406.051	457.759	302.092	242.68	7.731	10.62	3.685
1936	14.123	27.77	27.876	131.003	228.093	402.546	476.467	247.331	235.532	75.934	21.641	16.732
1937	8.715	26.446	19.242	73.75	143.67	148.755	273.964	390.32	144.559	64.301	3.684	2.87
1938	23.393	61.482	95.957	94.786	111.608	352.421	570.642	297.111	183.021	123.648	38.45	5.101
1939	4.645	17.942	15.667	109.057	186.556	365.171	324.119	157.71	250.545	82.015	0.278	2.221
1940	1.563	28.279	87.213	57.212	200.792	372.362	264.589	190.765	224.804	65.949	10.063	30.168
1941	10.879	15.201	32.024	39.406	184.435	352.465	210.794	249.757	255.397	35.821	11.595	8.534
1942	1.393	10.719	110.47	124.91	245.864	392.146	304.732	255.377	266.863	5.564	3.731	0.066
1943	29.418	12.348	60.773	97.064	220.657	333.402	345.636	278.535	204.984	64.583	1.887	3.413

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1944	7.978	14.207	21.662	67.446	137.996	307.113	298.03	200.136	227.539	65.66	6.815	20.045
1945	20.93	18.493	36.115	53.52	198.862	360.977	445.492	249.789	241.534	153.771	1.877	12.019
1946	0.032	8.175	65.747	52.423	132.691	342.348	376.304	204.324	154.006	179.267	6.13	0.371
1947	5.141	6.658	20.854	142.041	196.688	209.655	488.587	275.472	316.971	150.914	4.654	5.064
1948	7.349	12.667	83.584	117.938	457.645	265.397	497.172	274.67	167.128	105.245	12.555	4.619
1949	13.274	8.44	40.144	149.326	244.968	311.71	316.122	312.596	325.712	106.47	8.896	10.951
1950	7.193	20.212	42.556	77.649	166.043	363.777	334.089	302.737	176.363	122.757	17.76	6.652
1951	5.087	25.38	62.325	102.695	140.321	469.468	351.994	237.082	166.456	95.372	53.697	22.531
1952	9.491	23.306	41.149	78.651	169.413	384.888	340.985	376.764	323.563	77.746	35.097	1.582
1953	7.718	28.018	76.459	102.222	221.911	288.797	331.924	127.366	178.585	58.913	1.147	7.165
1954	23.829	26.57	20.042	113.792	228.352	294.475	352.277	418.891	209.523	63.416	0.177	18.746
1955	7.736	14.588	64.516	88.083	129.718	356.652	562.885	331.564	108.441	50.607	4.544	24.218
1956	16.493	9.814	81.648	146.887	236.503	407.483	211.176	326.689	199.072	74.707	26.057	11.748
1957	16.288	28.82	16.736	160.277	229.535	374.053	455.226	198.693	243.493	61.579	13.082	13.138
1958	13.413	28.96	7.259	46.277	304.389	229.618	442.554	408.193	172.926	138.987	0.142	7.872
1959	10.403	20.743	61.648	89.554	293.429	447.254	278.039	143.775	216.964	146.839	8.877	7.488
1960	4.614	37.329	9.887	35.07	102.241	261.97	402.062	224.119	218.319	17.167	4.421	9.29
1961	6.397	7.606	57.741	82.697	234.739	228.833	279.435	261.323	295.059	66.372	11.372	2.878
1962	21.184	23.119	38.352	125.058	150.844	552.842	285.574	418.397	250.68	57.312	5.461	4.721
1963	6.583	16.509	28.367	68.352	218.997	268.387	397.265	323.712	93.362	102.556	21.21	2.982
1964	7.225	13.75	71.182	102.318	99.888	278.935	349.479	227.811	167.791	62.551	1.812	12.563
1965	1.97	16.186	19.118	104.373	203.577	243.144	394.094	346.362	202.968	32.562	87.653	2.319
1966	8.81	6.097	8.711	74.311	206.681	513.342	293.429	393.373	205.154	72.014	11.629	4.143
1967	5.98	8.136	72.217	107.342	119.676	313.021	222.233	154.828	188.852	15.103	9.806	1.648
1968	20.6	87.639	22.543	107.388	285.726	288.096	400.352	225.822	210.882	42.544	1.323	0.033
1969	16.508	1.185	118.24	46.572	130.268	304.728	348.037	362.777	161.643	69.518	4.739	1.342
1970	11.253	21.281	33.829	102.139	262.824	325.61	413.577	266.299	166.364	175.712	3.427	0.033
1971	7.928	16.886	75.858	85.879	131.32	383.982	352.686	283.066	125.069	164.524	55.822	5.013
1972	10.064	5.469	31.393	112.02	203.043	176.958	346.193	194.892	153.989	21.249	1.209	3.369
1973	7.885	19.901	14.987	168.208	157.448	497.327	245.342	294.613	223.057	35.331	14.932	36.353
1974	10.913	5.415	19.584	107.56	116.992	313.612	515.239	357.79	193.069	17.225	4.861	1.459
1975	6.048	86.545	23.421	90.695	172.631	242.654	342.695	302.264	214.631	96.194	3.081	5.124
1976	29.649	17.966	43.543	79.766	133.125	471.443	323.933	200.191	91.896	32.941	8.41	2.116
1977	5.424	14.211	35.489	231.83	277.897	326.496	310.618	342.731	230.026	90.202	19.817	27.152
1978	4.056	13.317	29.086	136.646	192.522	350.205	346.261	251.155	215.143	120.266	30.555	0.033
1979	5.068	9.462	56.889	32.797	84.279	277.919	404.598	273.104	218.49	195.386	4.287	34.6
1980	38.291	6.74	51.528	148.031	204.018	249.856	415.428	408.887	200.82	64.98	1.875	0.033
1981	21.145	14.002	39.839	249.56	239.219	299.936	439.717	283.9	121.232	27.484	1.116	54.659
1982	2.015	13.714	25.894	210.401	103.695	226.454	241.774	169.654	132.99	21.477	42.078	22.08
1983	21.773	17.669	28.958	114.751	170.638	184.108	332.514	194.728	272.589	96.458	3.604	11.486
1984	3.139	3.653	23.269	138.432	185.779	213.674	412.622	190.292	231.929	40.712	0.634	16.489
1985	3.114	9.6	43.334	150.401	155.351	309.241	580.45	175.927	177.275	34.054	5.129	10.737
1986	2.038	10.058	20.197	201.963	47.519	209.929	537.797	233.717	224.491	169.297	10.25	2.114
1987	0.695	25.832	48.23	116.646	139.901	168.58	447.123	387.515	232.381	48.398	5.176	6.289

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1988	5.291	7.685	31.514	142.38	222.44	131.753	370.99	426.673	230.249	120.749	61.59	4.418
1989	3.083	34.341	14.088	80.167	116.711	207.019	334.437	215.99	231.335	101.835	10.736	5.095
1990	3.679	15.512	46.214	103.377	141.24	466.608	443.301	220.058	304.8	161.034	1.001	4.406
1991	5.43	4.694	39.841	90.164	180.156	456.688	447.589	401.946	275.625	145.239	4.594	15.815
1992	12.917	31.972	53.377	265.89	111.737	214.157	314.234	249.494	148.18	116.406	3.188	3.887
1993	14.692	38.933	51.989	76.595	209.925	265.465	213.309	385.979	274.779	61.351	6.521	0.653
1994	12.334	15.423	69.863	190.103	149.354	214.839	298.543	239.608	154.517	107.339	11.394	1.371
1995	26.144	17.097	27.799	101.765	290.407	473.69	364.797	223.916	259.165	24.89	46.122	7.718
1996	8.797	11.941	64.413	81.204	378.726	255.811	324.126	164.309	153.634	98.491	0.176	0.033
1997	9.122	46.573	72.5	91.581	137.766	346.771	264.77	130.32	249.841	21.514	16.026	16.132
1998	6.552	23.214	69.089	121.147	192.475	550.676	398.231	329.375	138.566	95.327	5.194	0.38
1999	0.739	24.435	17.716	99.531	284.312	315.671	328.813	291.698	194.74	89.969	4.262	0.064
2000	20.772	4.598	78.652	119.719	264.877	261.051	309.594	387.141	238.043	25.29	5.274	0.157
2001	0.248	10.852	14.536	139.033	205.551	344.468	418.826	218.619	191.685	121.964	5.806	2.257
2002	11.871	24.703	25.771	187.287	272.703	288.057	410.33	260.852	287.46	35.681	16.684	0.125
2004	34	53	76.2	98.1	144.8	240.6	236.6	134	167.6	97.4	3	21.2
2005	21	112.8	181	83.4	196.6	398.2	225.6	225.8	N.A.	123.3	51	NA
2006	6.8	60.2	35.7	138.9	204.8	175.6	236.8	217.4	166.2	136.2	35	19.4
2007	22.8	123.8	53	190	123.6	338.4	391	239.8	352.4	155.8	20.3	15.2
2008	79.8	12.8	140	141.8	83.7	288.4	352.7	217.6	120.6	146.6	NA	1.6
2009	5.8	48.2	40.6	176.2	145.8	360	169.4	454.4	157.6	58.2	10.4	10.9
2010	NA	15	174.8	315.4	183.6	160.2	198.8	185.4	273.4	46.4	73.3	28.8



**Monthly and Annual Rainfall**





### Monthly and annual rainfall at Taliha (mm)

Year	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1968	83	167.9	183.4	169.1	353.1	258	530.1	346.6	113	128		3	
1969		75	1634.1	348.1	221.3		347.2	33.6	488.2	41.3			
1976			99.1	181.9	215.7	417.7	504	341.2	211.8	220.1	124.2	128	
1977	58.9	124.4	141.1	450.1	357.7	357.4	344.2	319.2	310.6	165.3	60	49.5	<b>2738.4</b>
1978	37.3	71.1	174.4	458.1	318.8	437	342.1	161.2	422.4	108.4	76.6		
1979	40.8	144.1	182.4	272.4	155.7	333	471.4	339.3	315.4	145.8	36.8	184.7	<b>2621.8</b>
1980		139.5	219.9	241.8	251.4	69.7	287.4	268			29.6	20.7	
1981	128.4	126.5	189.2	127.5	569.7	488.7	724.4	130.7	65.7	68.7	45.6	51.7	<b>2716.8</b>
1982	0.5	93.2	167.5	34	36.5	49.6	110.9	113.4	265.1	26.2	33.3		
1983	0	241.7	419.7	247.7	582.9	521.7							
1985						157.5	263.3	74			7.3	52.6	
1986	75.1	147.9											
1997		36.7	170	99.8	293.4	280.4	146.8	269.6	118.2	126.8	123.2		
2000								498.4	400	161.4	96.8	5	
2001	38.2	83.6	141	610	275.8	358.2	305.5	376	486.7	245.7	132.9	20	<b>3073.6</b>
2002	184.5	69.5	184	464.6	98.6	270.7	475.8	363.3	355	46.6	34	26.6	<b>2553.2</b>
2003	40.8	104.2	171.6	267.1	279.8	417							
<b>AVG</b>	<b>62.5</b>	<b>116.1</b>	<b>186.2</b>	<b>283.7</b>	<b>286.5</b>	<b>315.5</b>	<b>373.3</b>	<b>281</b>	<b>294.3</b>	<b>123.7</b>	<b>66.7</b>	<b>49.3</b>	<b>2438.8</b>

### Monthly and annual rainfall at Daporijo (mm)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>2001</b>	14	60.8	95.3	194.2	141	275.9	89	136.1	191	74.9	17	20	1309.2
<b>2002</b>	76.1	19.2	101.8	120.3	99	414.2	585.8	303.6	92.5	76.5	36.2	14.1	1939.3
<b>2003</b>	15	69.6	165.4	203.1	192.2	206.9	274.3	185.5	224.1	22	29	5.8	1592.9
<b>2004</b>	17.2	195	93.4	152.6	146.2	286.7	278.1	175.2	201.4	109.8	0.4	19	1675
<b>2005</b>	40.2	115.9	225.7	200	183.2	425.8	259.9	264.2	151.2	126.6	52.8	0	2045.5
<b>2006</b>	6.8	57.2	71.6	154.8	162	212.5	310.6	251.6	175.2	175.2	84.5	16	1678
<b>2007</b>	23	150.6	46.2	184.6	128.5	332	479	225.8	305.2	132.8	19	2.8	2029.5
<b>Avg</b>	27.5	95.5	114.2	172.8	150.3	307.7	325.2	220.3	191.5	102.5	34.1	11.1	1752.8

### Monthly and annual rainfall at Koloriang (mm)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>2001</b>	31	128	175	200.4	264.4	165.6	435.6	562.4	287.5	151.4	115.8	0	2517.1
<b>2002</b>	13	49.6	326.8	335.4	39.2	451.3	591	324.9	867.8	567.8	440	202	4208.8
<b>2003</b>	28.2	54.9	162.4	379.3	386.8	506.5	294.6	449.2	458.8	188.1	114.1	30.5	3053.4
<b>2004</b>	130	167.1	112.2	159.1	308.8	448.4	563.5	249.2	315.1	126.4	15.2	51.7	2646.7
<b>2005</b>	76	168.1	240.5	207	250.5	154.6	204.7	501.5	284.2	206.3	29	54.5	2376.9
<b>2006</b>	22	138.1	131.3	115.6	261.3	431.7	397.6	352	125.63	237	101.4	30.7	2344.3
<b>2007</b>	126.3	141.2	120.3	156.1	295.49	44.6	231.3	229	464.2	704.1	293.8	38.1	2844.5
<b>Avg</b>	60.9	121.0	181.2	221.8	258.1	314.7	388.3	381.2	400.5	311.6	158.5	58.2	2856.0

### Monthly and annual rainfall at Lemeking (mm)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1966	0	0	16	189.6	209	546	558.6	0	415.2	0	0	0	1934.4
1968	25	69	149	98	332	448.1	449	399	363	134	9	0	2475.1
1969	0	48.2	100	166.1	330	503.1	502	394.5	331	0	0	0	2374.9
1978	19.1	55.7	33.8	111.4	281.6	548.7	461.4	206	462.3	139	NA	NA	2319
2002	33.9	37.9	120.7	64.8	391.1	335.1	599.8	328.1	260.6	77.6	23.9	0	2273.5
<b>Avg</b>	15.6	42.16	83.9	125.98	308.74	476.2	514.16	265.52	366.42	70.12	8.225	0	2275.4

### Monthly and annual rainfall at Ziro (mm)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2001	15.2	51.4	59.2	106.2	115.6	117.4	167.4	143.6	99.2	99.6	36.6	32	1043.4
2002	28.8	18.4	123.5	153.2	135	159.1	400.5	300.6	82.6	36.4	37.2	21.8	1497.1
2003	20.8	74.4	80.3	179.7	166.4	238.6	140.5	79	78.73	91	25.2	15.6	1190.2
2004	30.2	22.5	140.2	159.8	148.9	247.4	227.3	175.6	64.5	115.7	25.9	5.2	1363.2
2005	17.7	128.6	102.7	80.7	116.7	75.2	212.1	177.7	90.8	111.2	42.6	2.5	1158.5
2006	7.2	50	27.8	111.52	119.1	162.8	208.2	92.2	140.3	44.6	52.4	17.6	1033.7
2007	19	92	38	163	162.6	181.4	277.4	152.7	269.6	42.8	25.4	5.8	1429.7
2008	63.8	48.4	77.8	0	196.2	194.8	470.5	196.2	78.24	90.8	3.9	17.8	1438.5
2009	13	9	71.24	61.28	148.2	77.32	116.8	164.1	66.4	49.8	14.3	20.4	811.8
Avg	24.0	55.0	80.1	112.8	145.4	161.6	246.7	164.6	107.8	75.8	29.3	15.4	1218.5

**Average Temperature in Subansiri Basin**



### Average Temperature Lower Subansiri

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	10.132	12.519	15.719	18.95	20.555	23.23	23.275	23.126	22.352	19.95	15.166	11.457
1902	11.049	12.4	16.517	16.879	21.168	22.307	23.373	23.101	22.024	18.406	14.366	10.845
1903	9.327	11.788	15.172	18.173	20.206	22.225	23.738	22.565	22.515	20.314	15.367	11.475
1904	10.02	12.325	15.572	17.057	19.834	23.212	23.235	23.122	22.255	19.461	14.321	10.798
1905	9.37	10.026	13.878	16.045	20.376	23.15	23.513	22.096	22.622	19.564	15.409	11.453
1906	10.034	11.597	14.626	17.559	20.517	23.042	23.862	22.077	23.128	19.44	15.367	11.576
1907	10.978	11.83	14.092	16.594	19.798	21.825	22.544	23.367	21.676	19.681	15.541	11.311
1908	10.154	12.283	16.056	19.269	19.98	22.809	22.998	22.968	22.07	19.383	14.651	10.92
1909	9.818	11.984	17.146	17.541	19.411	22.074	23.376	22.598	23.226	20.527	16.772	12.218
1910	10.515	12.214	15.161	17.642	20.028	21.888	22.028	22.709	22.734	19.481	15.361	11.614
1911	11.443	11.725	15.019	17.841	19.411	22.504	22.594	22.564	22.108	19.018	14.727	10.743
1912	10.587	12.396	14.445	16.006	20.157	22.281	22.524	22.513	22.201	19.058	15.318	11.618
1913	10.451	12.231	14.262	17.349	18.746	21.955	22.952	22.945	22.123	19.439	14.394	10.95
1914	10.273	12.004	15.536	16.392	20.034	23.122	23.485	22.151	21.856	18.185	15.023	11.939
1915	11.574	12.536	15.482	17.98	19.584	21.721	22.546	22.497	21.93	21.512	17.108	12.281
1916	10.732	12.324	16.612	17.423	19.917	23.038	22.037	22.864	22.604	19.511	16.218	11.332
1917	9.81	11.967	14.959	17.127	20.869	22.228	22.947	23.183	22.255	19.837	16.203	11.816
1918	9.926	12.022	15.523	17.666	21.632	21.438	22.494	22.523	22.352	19.764	15.156	11.158
1919	11.019	12.1	17.183	17.724	20.146	22.861	23.125	24.167	21.359	19.25	16.516	12.24
1920	11.546	11.763	14.575	16.99	19.383	22.099	23.776	22.509	22.173	20.038	15.838	13.289
1921	11.141	12.02	15.993	17.479	19.86	21.229	22.753	22.953	22.144	18.46	15.487	11.994
1922	10.738	12.947	16.643	19.291	20.713	22.082	22.831	22.706	22.516	19.511	15.92	11.818
1923	11.033	12.005	16.875	18.333	19.167	22.252	22.843	23.822	21.835	19.258	16.271	12.26
1924	10.484	12.252	17.53	18.591	19.167	22.604	22.721	22.41	21.737	20.79	15.7	12.466
1925	9.334	11.372	15.648	17.708	18.818	22.791	22.986	22.706	20.993	18.948	15.165	10.321
1926	10.273	12.345	14.639	17.184	19.987	21.981	22.577	23.115	22.882	19.995	14.854	12.097
1927	10.164	10.894	13.677	17.036	19.59	21.853	23.302	22.766	21.379	19.716	15.246	11.537
1928	10.219	13.115	16.284	18.939	19.744	22.51	23.433	22.657	22.563	18.68	14.266	11.232
1929	9.564	11.674	16.398	17.55	18.948	21.771	23.126	23.112	22.225	19.057	15.063	10.849
1930	9.058	11.789	15.213	17.467	20.516	21.31	24.018	23.151	22.129	18.48	14.76	11.118
1931	10.924	12.125	16.003	17.758	19.381	22.141	22.676	23.565	21.388	20.43	15.034	11.685
1932	10.385	10.56	16.083	18.654	18.756	22.183	23.273	22.685	22.174	19.817	16.209	11.934
1933	9.836	12.394	16.851	17.45	19.374	22.64	23.304	22.937	22.701	20.011	14.98	11.743
1934	10.419	12.519	16.052	18.054	19.061	21.122	23.278	23.051	22.88	18.977	14.77	11.311
1935	10.164	12.355	16.54	18.173	20.294	21.752	23.502	22.374	22.3	19.991	16.442	11.308
1936	9.702	11.032	16.48	18.444	20.945	22.456	23.372	23.156	22.673	18.912	16.524	12.096
1937	9.798	12.155	15.93	19.309	20.503	23.494	24.04	22.921	22.469	20.135	15.246	12.456
1938	11.03	11.882	16.182	19.194	21.011	22.957	22.677	23.27	22.355	20.284	14.162	11.828
1939	11.074	12.62	16.337	18.945	20.38	22.391	23.099	23.573	22.215	19.406	15.608	11.952
1940	10.312	12.186	13.896	18.32	20.026	22.891	23.396	23.534	22.203	19.951	15.283	12.38
1941	9.487	12.102	16.723	18.418	20.063	22.403	23.606	23.195	22.248	19.261	14.878	12.419
1942	10.736	13.499	15.922	18.233	20.23	22.516	24.012	23.269	22.324	20.366	16.066	11.607
1943	10.999	12.138	14.741	16.65	19.649	22.897	23.08	22.903	22.491	19.334	16.937	12.192
1944	10.077	11.68	16.517	17.653	20.324	23.259	23.808	23.647	21.999	20.302	15.673	13.32
1945	10.876	11.025	16.416	19.514	19.778	23.304	23.374	23.009	23.086	19.322	15.365	11.139
1946	11.206	13.876	16.176	18.326	20.453	22.722	22.995	23.785	22.742	19.303	16.518	12.413
1947	10.361	12.687	16.183	18.231	19.947	23.073	23.079	23.192	22.569	19.19	15.711	12.954
1948	10.845	11.693	15.294	18.604	19.168	22.534	23.022	23.163	23.147	18.941	16.494	11.208
1949	11.303	12.444	15.712	16.621	20.315	22.2	22.895	22.719	22.323	20.246	15.307	10.479
1950	10.889	12.121	15.762	18.376	20.409	21.91	23.363	22.364	22.465	19.568	15.652	12.273
1951	10.456	12.534	16.616	17.473	19.94	22.387	22.945	23.473	22.647	20.667	15.808	11.926
1952	10.987	13.711	15.006	19.305	20.222	23.219	23.278	22.872	21.964	20.35	16.483	12.561
1953	10.378	12.942	16.619	18.552	20.591	22.738	22.606	23.861	22.238	19.294	15.474	12.828
1954	9.837	13.706	16.959	18.434	20.28	22.018	22.534	22.223	22.854	19.383	15.058	11.814
1955	10.882	12.924	16.157	18.149	21.327	21.84	22.814	22.449	23.066	20.603	16.425	11.311
1956	10.643	13.188	16.248	19.553	20.983	22.393	22.689	22.748	22.39	19.933	16.106	12.396
1957	11.075	11.553	15.618	18.437	19.692	23.082	23.78	23.624	22.953	18.985	16.038	12.237
1958	11.392	11.96	17.006	19.452	20.036	24.489	24.463	22.606	23.161	20.517	16.261	12.602
1959	11.167	11.253	15.721	19.351	20.292	22.84	24.25	24.265	21.932	19.456	15.969	12.9
1960	10.06	14.187	16.246	19.877	21.941	23.379	23.13	23.533	21.869	19.865	15.108	12.629

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	11.716	12.149	15.395	19.153	20.706	23.595	24.326	24.322	22.857	20.275	14.319	9.658
1962	9.685	11.538	14.993	18.486	20.035	22.531	24.057	22.529	22.461	19.341	15.929	12.082
1963	10.081	12.629	15.883	17.883	19.818	22.411	23.394	22.836	22.868	19.075	14.237	11.788
1964	10.311	12.013	15.537	17.928	19.806	22.004	22.551	23.011	22.135	20.743	16.11	11.396
1965	9.851	11.29	14.288	18.195	20.363	22.875	22.905	22.128	21.916	18.991	13.551	12.32
1966	10.77	13.77	17.126	18.378	21.492	21.626	23.732	22.736	21.714	18.306	17.217	12.382
1967	11.376	12.796	15.12	17.821	20.29	22.197	23.223	23.938	22.235	18.507	13.653	11.995
1968	10.183	11.249	16.039	17.609	19.885	22.395	22.745	23.516	22.969	17.836	15.162	11.343
1969	10.359	13.057	16.693	18.765	21.185	22.763	23.516	22.688	22.287	19.009	15.771	12.27
1970	9.889	11.915	15.998	18.381	20.415	22.784	23.277	23.23	22.154	19.284	15.223	11.91
1971	10.508	11.915	16.12	18.346	20.226	22.88	22.993	22.559	22.45	19.298	13.959	11.066
1972	11.696	12.82	16.09	16.963	20.248	22.713	23.856	23.283	21.897	19.813	14.99	12.14
1973	11.659	13.17	16.452	19.541	21.292	22.569	23.658	23.447	22.598	19.507	15.06	11.448
1974	10.502	13.228	15.93	17.999	20.497	22.637	22.223	23.038	21.689	21.24	16.741	11.343
1975	10.732	12.779	16.393	19.136	19.956	23.494	22.607	22.949	22.031	20.961	16.181	11.466
1976	10.594	13.143	16.44	18.572	20.427	21.763	22.74	22.702	22.206	19.077	17.368	12.635
1977	10.548	13.532	17.21	17.367	19.159	21.274	23.674	22.732	22.588	18.332	14.995	11.551
1978	9.599	12.024	15.436	18.025	20.878	22.717	22.639	23.368	21.925	20.166	15.576	12.204
1979	11.165	12.375	15.867	19.534	21.406	23.651	22.737	23.371	21.619	18.982	17.286	12.145
1980	10.114	12.41	15.62	18.845	19.898	23.369	23.619	23.312	22.663	18.925	15.929	13.373
1981	10.561	13.722	15.527	17.673	20.502	23.345	23.229	23.589	22.513	20.569	15.979	10.553
1982	11.884	12.124	15.794	17.639	20.452	22.661	23.497	23.627	22.468	19.353	15.128	11.96
1983	8.95	10.699	15.325	16.894	19.803	22.99	23.599	23.355	22.209	20.393	15.814	11.526
1984	10.394	13.369	17.245	18.843	19.937	23.389	22.453	22.951	21.376	20.986	14.606	12.767
1985	10.765	12.723	17.255	18.928	20.655	22.895	21.824	23.66	22.39	20.27	15.402	13.22
1986	11.619	12.996	16.158	17.497	20.383	23.649	22.726	22.799	21.652	18.419	15.762	11.77
1987	11.119	13.385	15.743	18.037	20.415	23.315	22.945	22.332	22.293	19.889	16.681	12.959
1988	11.718	14.291	16.58	18.489	20.548	23.144	23.204	22.893	22.342	20.259	15.7	13.385
1989	10.961	12.277	16.812	18.124	21.599	22.852	22.61	23.049	22.752	20.469	15.136	10.972
1990	12.699	12.553	14.612	16.732	21.014	23.015	23.05	23.175	22.077	19.43	16.402	13.189
1991	10.268	13.845	16.996	18.246	19.838	22.426	23.396	22.851	22.101	20.048	15.12	11.409
1992	10.347	10.728	16.352	18.534	19.709	22.658	22.68	23.075	22.701	19.5	15.235	10.517
1993	10.583	13.424	15.29	18.272	20.048	22.211	23.678	23.154	22.221	20.424	16.312	13.553
1994	12.308	12.487	15.849	18.642	21.882	23.897	23.485	23.722	23.651	19.341	15.228	11.551
1995	10.188	12.731	17.182	18.666	21.855	23.548	23.113	23.472	22.482	20.511	16.444	12.489
1996	11.254	13.483	16.828	19.542	20.973	23.418	23.229	23.295	23.154	20.21	16.663	12.994
1997	10.463	11.704	15.668	17.443	20.678	22.593	23.876	24.169	21.815	19.065	16.188	12.029
1998	11.052	13.279	15.278	19.027	22.713	23.157	23.557	23.242	23.312	21.735	17.422	13.112
1999	11.499	16.14	18.369	21.321	21.834	24.089	23.547	23.155	23.015	20.404	17.066	12.901
2000	10.913	13.121	15.298	17.606	20.734	23.74	23.86	22.98	22.196	20.467	16.072	12.317
2001	12.115	14.087	16.596	18.43	21.196	23.585	23.48	23.791	23.051	19.922	16.765	12.716
2002	11.374	14.674	16.396	18.499	19.904	23.691	23.677	23.474	22.623	19.674	16.618	12.673

### Average Temperature Upper Subansiri

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	6.856	9.044	12.142	15.597	17.74	20.686	20.906	20.688	19.711	16.788	11.701	8.116
1902	7.692	8.934	12.827	13.541	18.355	19.741	21.007	20.514	19.395	15.169	10.867	7.476
1903	6.088	8.383	11.631	14.769	17.428	19.794	21.391	20.087	19.886	17.037	11.796	8.11
1904	6.692	8.994	11.787	13.641	17.161	20.826	20.941	20.672	19.607	16.327	10.852	7.433
1905	6.022	6.708	10.18	12.676	17.709	20.736	21.23	19.586	20.123	16.383	11.885	8.072
1906	6.776	8.166	11.118	14.159	17.775	20.643	21.493	19.604	20.458	16.285	11.796	8.181
1907	7.609	8.422	10.593	13.352	16.991	19.341	20.187	20.888	19.053	16.533	12.144	7.959
1908	6.844	8.88	12.523	15.808	17.192	20.298	20.47	20.487	19.409	16.172	11.068	7.52
1909	6.351	8.579	13.521	14.21	16.606	19.552	21.006	20.113	20.557	17.406	13.39	8.843
1910	7.196	8.639	11.526	14.347	17.334	19.356	19.66	20.243	20.084	16.34	11.827	8.256
1911	8.06	8.355	11.439	14.541	16.685	19.984	20.234	20.086	19.499	15.922	11.334	7.405
1912	7.249	8.929	10.859	12.798	17.339	19.788	20.166	20.047	19.565	15.81	11.886	8.244
1913	7.126	8.743	10.795	14.08	15.962	19.382	20.523	20.441	19.467	16.285	10.983	7.55
1914	6.963	8.557	12.033	13.192	17.091	20.601	21.076	19.61	19.243	15.058	11.59	8.577
1915	8.192	9.091	11.977	14.788	16.844	19.152	20.17	19.964	19.264	18.363	13.585	8.897
1916	7.369	8.877	12.981	14.097	17.089	20.499	19.584	20.387	19.971	16.405	12.759	8.01
1917	6.468	8.574	11.465	13.78	18.08	19.639	20.56	20.715	19.612	16.821	12.817	8.425
1918	6.641	8.637	11.942	14.436	18.825	18.778	20.193	20.137	19.744	16.622	11.683	7.845
1919	7.653	8.706	13.574	14.493	17.373	20.281	20.771	21.806	18.61	15.997	13.101	8.87
1920	8.278	8.337	10.891	13.748	16.598	19.585	21.406	19.987	19.598	16.886	12.4	9.838
1921	7.876	8.606	12.321	14.233	16.935	18.667	20.323	20.465	19.376	15.315	12.071	8.675
1922	7.223	9.49	12.981	15.761	17.853	19.567	20.459	20.154	19.886	16.34	12.486	8.426
1923	7.683	8.547	13.356	15.037	16.279	19.837	20.391	21.483	19.095	16.113	12.905	8.867
1924	7.11	8.845	13.928	15.11	16.238	20.099	20.288	19.898	19.11	17.634	12.288	9.168
1925	6.047	7.932	11.99	14.346	16.073	20.289	20.577	20.154	18.326	15.953	11.803	7.026
1926	6.942	8.96	11.174	13.877	17.134	19.487	20.176	20.673	20.301	16.873	11.488	8.609
1927	6.737	7.398	10.07	13.727	16.856	19.285	20.923	20.321	18.766	16.591	11.861	8.152
1928	6.854	9.692	12.727	15.679	16.971	19.985	21.092	20.219	19.793	15.452	10.798	7.705
1929	6.137	8.247	12.916	14.264	16	19.199	20.788	20.673	19.565	15.885	11.599	7.161
1930	5.638	8.329	11.689	14.178	17.774	18.872	21.741	20.672	19.428	15.251	11.312	7.675
1931	7.458	8.403	12.534	14.446	16.584	19.644	20.306	21.087	18.83	17.424	11.709	8.295
1932	7.248	7.301	12.578	15.483	15.972	19.687	20.906	20.094	19.451	16.642	12.713	8.611
1933	6.525	8.86	13.253	14.249	16.551	20.094	20.906	20.513	20.101	16.832	11.525	8.407
1934	6.986	9.149	12.473	14.639	16.26	18.551	20.948	20.573	20.206	15.776	11.242	8.027
1935	7.117	9.072	13.146	14.847	17.8	19.516	21.103	19.992	19.842	16.938	13.1	8.028
1936	6.641	7.58	13.018	15.214	18.282	19.934	21.091	20.716	20.133	15.853	13.167	8.791
1937	6.9	8.762	12.72	16.101	17.825	21.187	21.774	20.567	19.84	17.179	12.044	9.164
1938	7.723	8.479	12.648	15.763	18.361	20.597	20.219	20.968	19.715	17.19	10.865	8.543
1939	7.845	9.301	12.828	15.316	17.623	19.897	20.827	21.18	19.615	16.395	12.197	8.681
1940	7.059	8.822	10.538	14.92	17.259	20.594	21.165	21.09	19.668	16.892	11.796	8.953
1941	5.955	8.588	13.142	15.09	17.325	19.669	21.138	20.662	19.564	16.028	11.647	8.934
1942	7.406	10.225	12.349	15.068	17.656	20.121	21.623	20.876	19.716	17.184	12.599	8.373
1943	7.566	8.849	11.135	13.589	16.954	20.503	20.652	20.569	20.026	16.257	13.627	8.583
1944	6.653	8.102	12.859	14.1	17.317	20.814	21.425	21.118	19.367	17.156	12.247	9.99
1945	7.458	7.562	12.668	15.986	16.805	20.872	20.906	20.602	20.479	16.023	11.912	7.532
1946	7.893	10.597	12.614	15.218	17.785	20.388	20.697	21.403	20.36	16.343	13.204	9.131
1947	6.984	9.191	12.719	15.163	17.039	20.798	20.808	20.807	20.003	16.232	12.494	9.782
1948	7.543	8.145	11.704	15.481	16.466	20.366	20.779	20.88	20.724	15.938	13.361	7.835
1949	8.205	9.111	12.108	13.585	17.699	19.728	20.459	20.352	19.728	17.106	11.811	7.054
1950	7.702	8.733	12.258	14.971	17.61	19.47	21.018	19.992	19.822	16.44	12.201	8.87
1951	6.984	9.025	12.95	14.13	17.046	20.103	20.904	21.008	20.053	17.779	12.347	8.257
1952	7.511	10.221	11.373	15.857	17.819	20.542	20.828	20.33	19.239	17.203	13.061	8.983
1953	7.134	9.48	13.297	15.264	17.855	20.307	20.217	21.49	19.7	16.158	12.172	9.367
1954	6.57	10.43	13.526	15.262	17.447	19.704	20.318	19.734	20.29	16.489	11.504	8.223
1955	7.633	9.611	12.561	14.736	18.685	19.299	20.457	19.905	20.537	17.573	12.883	7.91
1956	6.898	9.36	12.29	16.026	18.231	20.006	19.856	19.92	19.258	16.694	12.659	8.832
1957	7.587	8.175	11.75	14.686	16.803	20.732	21.448	21.115	20.312	15.734	12.529	8.793
1958	7.828	8.344	13.178	16.271	17.363	22.142	22.119	20.053	20.53	17.496	12.863	9.06
1959	8.051	7.725	12.059	15.961	17.368	20.144	21.892	21.657	19.07	16.416	12.763	9.602
1960	6.35	10.471	12.53	16.001	18.952	20.722	20.652	20.847	19.098	16.401	11.575	8.907

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	8.129	8.555	11.687	15.615	17.722	21.202	21.877	21.971	20.097	17.157	10.635	6.292
1962	6.189	8.221	11.326	15.141	16.855	20.032	21.445	19.984	19.601	16.186	12.777	8.799
1963	6.658	9.049	12.05	14.425	16.989	19.783	20.95	20.353	20.217	15.975	10.606	8.171
1964	7.07	8.397	11.854	14.78	16.854	19.789	20.242	20.609	19.584	18.026	12.765	8.017
1965	6.466	7.602	10.549	14.984	17.665	20.529	20.505	19.629	19.275	15.615	10.007	8.921
1966	7.227	10.308	13.522	14.71	18.643	19.215	21.495	20.447	18.946	14.997	14.015	9.072
1967	7.891	9.15	11.541	14.507	17.598	19.797	20.988	21.689	19.788	15.274	10.053	8.591
1968	6.659	7.701	12.407	14.257	17.209	19.921	20.29	20.932	20.431	14.896	11.731	8.018
1969	7.01	9.611	13.088	15.242	18.301	20.232	21.194	20.342	19.558	15.647	12.556	8.992
1970	6.658	8.33	12.53	14.901	17.558	20.078	20.96	20.721	19.566	16.083	11.663	8.626
1971	7.152	8.411	12.742	15.218	17.362	20.388	20.687	20.212	20.002	16.291	10.487	7.576
1972	8.469	9.577	12.68	13.843	17.65	20.41	21.868	20.902	19.211	16.752	11.436	8.728
1973	8.384	9.706	12.875	16.263	18.46	20.095	21.383	20.975	20.217	16.394	11.543	8.276
1974	7.218	10.013	12.387	14.94	17.974	20.312	19.76	20.558	18.981	18.345	13.092	7.987
1975	7.281	9.281	12.704	15.723	17.054	21.08	20.345	20.58	19.503	18.114	12.957	8.241
1976	7.312	9.686	12.519	15.047	17.651	19.299	20.179	20.33	19.51	15.85	14.23	9.511
1977	7.253	10.23	13.625	14.512	16.314	18.803	21.307	20.435	19.77	15.129	11.518	7.971
1978	6.189	8.507	11.642	14.585	18.121	20.241	20.303	20.765	19.18	16.969	12.32	9.035
1979	7.965	8.885	12.104	16.048	18.806	21.067	20.44	20.831	18.889	15.833	14.121	8.807
1980	6.8	9.027	12.146	15.506	17.201	20.902	21.211	20.841	19.928	15.722	12.502	10.254
1981	7.134	10.578	11.9	14.495	17.646	20.861	20.998	21.245	19.848	17.643	12.367	6.804
1982	8.599	8.541	12.224	14.654	17.474	20.332	21.218	21.305	20.001	16.103	11.606	8.673
1983	5.387	7.129	11.889	13.564	17.194	20.611	21.45	21.072	19.84	17.264	12.237	8.282
1984	7.315	10.293	13.845	15.505	17.313	20.877	20.1	20.389	18.817	18.175	11.13	9.586
1985	7.4	9.352	13.953	15.737	17.887	20.486	19.286	21.249	19.756	16.998	12.047	9.841
1986	8.411	9.46	12.354	14.153	17.417	21.169	20.352	20.229	18.97	15.239	12.403	8.273
1987	7.697	9.835	12.328	14.74	17.505	20.99	20.661	19.713	19.676	16.742	13.275	9.554
1988	8.489	10.861	13.219	15.204	18.017	20.648	20.911	20.466	19.649	17.182	12.08	9.845
1989	7.632	8.731	13.365	14.76	18.769	20.454	20.386	20.547	20.236	17.384	11.699	7.46
1990	9.46	8.997	11.038	13.506	18.038	20.444	20.524	20.553	19.322	16.294	12.678	9.855
1991	6.636	10.34	13.292	14.896	17.297	19.837	20.987	20.222	19.408	16.903	11.596	7.861
1992	6.806	6.984	12.953	15.12	16.835	20.088	20.178	20.476	20.094	16.289	11.612	6.742
1993	7.219	9.837	11.762	14.999	17.292	19.704	21.38	20.588	19.49	17.287	12.627	9.859
1994	8.999	8.872	12.276	15.103	18.874	21.304	21.268	21.094	21.033	16.327	11.61	7.929
1995	6.667	9.082	13.433	15.043	19.088	21.19	20.661	20.888	19.854	17.326	12.884	9.095
1996	7.847	9.823	13.261	15.844	18.123	20.719	20.803	20.926	20.348	17.041	13.3	9.464
1997	6.846	8.298	11.659	13.84	17.676	19.764	21.489	21.849	19.106	15.755	12.929	8.556
1998	7.84	9.36	11.596	15.492	19.922	20.748	21.312	20.688	20.836	18.759	13.985	9.517
1999	8.04	12.526	15.013	17.99	19.024	21.544	21.124	20.674	20.327	17.341	13.576	9.23
2000	7.524	9.467	11.599	14.797	17.849	21.286	21.382	20.441	19.52	17.268	12.727	8.927
2001	9.059	10.702	12.798	15.031	18.243	20.723	20.904	21.142	20.455	16.716	13.3	9.426
2002	7.995	11.247	12.494	15.211	16.806	21.307	21.202	21.008	19.928	16.425	13.237	9.324



### Maximum Temperature Lower Subansiri

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	-0.346	2.36	5.542	9.544	12.364	15.996	16.543	16.221	15.097	10.988	5.02	1.056
1902	0.537	2.273	6.227	7.487	12.965	15.047	16.661	16.088	14.78	9.365	4.21	0.416
1903	-1.11	1.727	5.023	8.756	12.052	15.098	17.043	15.661	15.272	11.232	5.138	1.048
1904	-0.491	2.337	5.181	7.613	11.785	16.135	16.578	16.205	14.954	10.525	4.195	0.35
1905	-1.208	0.032	3.581	6.61	12.335	16.04	16.882	15.157	15.478	10.582	5.226	1.012
1906	-0.421	1.513	4.512	8.108	12.399	15.945	17.132	15.161	15.843	10.484	5.138	1.092
1907	0.397	1.763	3.984	7.333	11.616	14.645	15.841	16.46	14.403	10.73	5.487	0.857
1908	-0.328	2.226	5.923	9.798	11.804	15.605	16.109	16.06	14.794	10.369	4.411	0.446
1909	-0.822	1.896	6.916	8.199	11.229	14.862	16.659	15.672	15.905	11.608	6.732	1.76
1910	0.038	1.983	4.92	8.32	11.946	14.65	15.314	15.814	15.439	10.539	5.17	1.17
1911	0.872	1.696	4.835	8.487	11.297	15.28	15.888	15.659	14.86	10.118	4.674	0.321
1912	0.09	2.268	4.26	6.77	11.949	15.094	15.81	15.62	14.916	10.008	5.229	1.157
1913	-0.057	2.067	4.198	8.046	10.587	14.691	16.175	16.015	14.822	10.484	4.299	0.474
1914	-0.266	1.875	5.427	7.152	11.703	15.882	16.705	15.162	14.631	9.257	4.934	1.5
1915	1.034	2.409	5.37	8.762	11.454	14.432	15.825	15.538	14.651	12.559	6.927	1.811
1916	0.467	2.464	6.374	8.39	11.585	15.796	15.221	15.963	15.431	11.133	6.382	1.403
1917	-0.682	1.898	4.959	8.148	12.418	15.391	16.355	16.39	15.187	11.333	6.512	1.148
1918	-0.491	2.098	5.802	8.728	14.176	14.47	15.892	15.697	15.688	11.082	4.781	0.545
1919	0.507	2.153	6.969	8.389	11.556	15.583	16.543	17.454	13.959	10.288	6.974	2.053
1920	1.516	2.324	4.844	7.692	11.224	14.818	17.104	15.962	15.225	11.114	5.386	2.755
1921	0.629	1.924	5.884	8.176	11.814	14.01	16.11	16.291	15.174	9.512	5.447	1.615
1922	-0.064	2.519	6.669	10.191	12.606	15.104	16.302	16.076	15.363	11.179	6.244	1.627
1923	0.283	2.587	6.663	9.246	11.132	15.238	16.089	17.163	15.028	10.36	6.46	1.881
1924	-0.14	2.519	6.988	9.284	10.901	15.776	16.17	15.923	14.708	12.278	5.973	2.134
1925	-1.181	1.737	5.369	8.578	10.763	15.622	16.464	15.973	14.041	10.386	5.13	0.097
1926	-0.116	2.549	5.412	7.857	11.79	14.986	15.965	16.264	15.757	11.758	5.011	2.245
1927	-0.025	1.487	3.632	8.132	11.767	14.774	16.558	16.04	14.151	11.002	5.476	0.793
1928	-0.317	3.199	6.319	9.521	11.578	15.58	16.706	16.045	15.18	9.65	4.141	0.448
1929	-0.896	1.568	6.391	8.5	11.037	14.905	16.439	16.397	15.122	10.157	5.139	0.133
1930	-1.209	2.03	5.377	8.337	12.78	14.37	17.241	16.49	15.217	9.728	5.257	0.49
1931	0.181	2.142	6.027	8.267	11.452	15.066	15.96	16.68	14.517	12.292	5.208	1.579
1932	0.232	1.137	5.897	9.277	10.473	15.109	16.54	16.115	15.179	10.992	6.611	1.954
1933	-0.618	2.107	6.433	8.244	11.515	15.73	16.602	16.191	15.56	11.517	5.054	1.649
1934	-0.011	3.029	5.696	8.635	10.727	13.946	16.686	16.393	15.777	10.558	5.2	1.197
1935	-0.502	2.79	6.253	8.58	12.118	14.911	16.745	15.565	15.817	11.41	6.901	0.918
1936	-0.561	1.269	6.365	9.405	13.119	15.174	16.926	16.811	15.614	10.311	6.482	1.652
1937	-0.771	2.452	5.881	9.79	12.53	16.593	17.958	16.5	15.398	11.613	5.077	2.552
1938	0.792	1.716	6.497	9.495	14.097	16.301	16.02	16.956	15.546	11.98	4.773	1.504
1939	0.742	2.546	6.42	9.332	12.106	15.172	16.219	16.541	15.092	10.083	5.177	1.835
1940	-0.276	2.245	4.134	8.707	11.867	15.747	16.905	16.736	14.683	10.757	4.762	1.967
1941	-1.208	1.593	6.329	8.924	12.056	14.795	17.045	16.195	14.863	10.31	5.243	2.002
1942	0.162	3.539	5.854	9.069	12.43	15.398	17.305	16.534	14.947	11.665	6.048	1.042
1943	0.595	2.097	4.693	7.469	11.58	15.805	16.148	15.899	15.228	10.111	7.033	1.608
1944	-0.242	1.659	6.293	8.213	12.123	16.119	17.151	16.249	14.753	11.512	5.506	3.134
1945	0.008	0.88	5.883	9.828	11.566	16.103	16.557	16.187	15.842	10.198	5.155	0.186
1946	0.27	3.789	6.053	9.021	12.308	15.63	16.393	16.724	15.475	10.442	6.267	2.056
1947	-0.067	2.518	5.906	9.194	11.734	15.928	16.46	16.429	15.312	11.015	5.102	2.449
1948	0.093	1.7	4.754	9.259	11.434	15.566	16.43	16.239	15.793	9.845	7.252	0.443
1949	0.962	2.427	5.359	7.814	12.493	15.363	16.212	16.102	15.113	11.505	5.007	-0.288
1950	-0.337	1.953	5.217	8.121	12.124	14.596	16.72	15.093	14.699	10.746	5.445	1.242
1951	-1.316	1.823	5.156	8.257	10.474	14.948	16.462	16.039	14.953	12.183	4.162	0.206
1952	-0.722	3.363	3.871	8.915	11.158	15.292	15.788	15.608	14.286	10.477	4.619	1.277
1953	0.256	2.18	6.164	8.406	12.341	15.068	15.997	16.625	14.805	9.199	4.242	1.418
1954	-1.875	3.373	6.221	8.903	12.064	14.835	16.058	15.423	14.951	10.644	2.997	1.38
1955	0.438	2.045	5.246	8.956	13.483	15.064	16.668	15.207	15.836	11.715	5.526	-0.612
1956	-0.806	0.946	4.843	9.717	12.85	15.737	14.479	15.297	13.827	10.571	5.721	2.381
1957	0.543	2.297	4.489	8.763	11.468	16.172	17.305	16.498	15.042	9.677	4.674	1.164
1958	1.175	2.362	6.174	9.849	12.008	17.215	17.425	16.015	15.493	11.454	4.72	1.507
1959	1.52	1.83	4.855	9.714	11.959	15.541	17.409	16.602	14.18	11.638	5.657	1.787
1960	-1.157	3.817	5.741	9.124	13.182	15.852	16.483	16.421	14.897	11.057	4.988	1.441

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	1.141	2.174	5.439	9.153	12.906	16.141	17.142	17.798	15.476	11.568	4.753	-0.35
1962	-1.117	1.826	4.485	8.981	11.836	15.86	17.054	16.431	15.357	10.344	5.457	1.811
1963	-1.156	2.318	5.767	8.772	11.681	15.258	16.992	16.623	15.156	10.367	4.653	0.99
1964	-0.21	1.851	5.075	9.139	11.409	14.748	16.068	16.06	15.169	11.948	6.359	0.622
1965	-1.369	1.563	4.187	8.544	12.54	15.756	16.059	15.729	14.703	9.962	4.198	2.163
1966	0.309	2.912	6.049	8.383	13.041	14.776	16.955	16.588	14.469	9.398	7.386	2.411
1967	1.173	2.112	5.729	8.633	12.176	15.07	16.184	16.458	14.802	8.689	4.373	1.457
1968	-0.155	1.08	6.262	7.942	11.822	15.482	16.398	16.066	15.847	9.311	4.801	0.392
1969	-0.068	2.333	6.268	8.981	12.622	15.864	17.094	15.908	14.99	10.005	5.629	1.722
1970	-0.379	1.604	5.762	8.387	12.2	15.332	17.034	16.319	14.603	10.371	5.762	1.106
1971	0.164	1.539	5.69	8.964	12.099	15.903	15.927	15.575	14.914	10.656	4.528	0.314
1972	1.283	2.801	6.045	8.215	12.386	15.405	17.309	15.677	14.48	10.351	4.512	1.192
1973	1.269	3.431	5.404	9.6	13.203	15.633	16.165	16.251	15.346	10.795	4.794	1.752
1974	0.26	2.733	5.68	8.702	12.638	15.576	15.764	16.204	14.435	12.734	5.739	1.895
1975	0.246	2.935	6.011	9.141	11.67	16.332	15.95	15.735	15.159	12.495	5.549	0.907
1976	-0.198	3.463	5.922	8.609	12.581	14.771	15.315	15.662	14.083	9.575	7.192	1.878
1977	-0.186	2.674	6.854	9.352	11.235	14.294	16.865	15.997	15.254	9.83	5.281	1.761
1978	-0.744	1.82	4.871	8.178	13.007	15.661	15.649	16.443	14.85	11.38	6.656	1.367
1979	0.299	2.011	5.41	9.278	12.755	15.956	16.184	16.534	14.294	10.44	7.412	2.699
1980	-0.387	2.173	5.859	9.216	12.046	16.102	16.914	17.113	15.621	10.358	4.899	2.511
1981	0.72	3.508	5.84	8.985	12.456	16.361	17.034	17.05	14.805	11.002	5.579	-0.227
1982	0.928	2.46	5.756	9.134	11.569	16.027	16.941	16.143	14.474	9.892	5.258	1.52
1983	-1.499	1.152	5.605	7.952	11.969	15.444	16.363	15.943	15.327	11.443	5.224	0.85
1984	0.509	3.89	6.79	9.584	12.215	16.173	16.204	15.501	14.214	11.893	3.629	2.236
1985	0.712	2.993	7.029	9.797	12.656	16.056	15.54	16.499	15.08	10.969	5.659	2.727
1986	0.671	2.642	5.911	8.865	11.862	16.319	15.596	15.364	14.661	9.765	5.683	1.508
1987	0.364	2.853	6.028	9.061	11.456	16.132	16.688	16.153	15.656	10.972	5.407	1.89
1988	1.077	4.012	6.546	9.13	12.529	15.493	16.737	16.486	15.097	11.055	5.355	3.708
1989	0.957	2.448	6.803	8.689	12.784	15.65	16.037	16.127	16.131	11.715	5.146	0.32
1990	1.238	3.226	5.353	7.874	12.609	15.653	16.597	15.99	15.046	11.026	5.853	2.812
1991	-0.549	3.682	6.692	8.855	11.922	15.145	16.626	15.796	14.794	11.099	4.94	0.761
1992	-0.351	0.307	6.346	9.061	11.294	15.353	15.815	16.037	15.44	10.486	4.952	-0.342
1993	0.062	3.18	5.164	8.973	11.902	15.011	17.018	16.137	14.853	11.482	5.97	2.772
1994	1.798	2.215	5.669	9.059	13.483	16.606	16.92	16.669	16.378	10.53	4.954	0.845
1995	-0.531	2.399	7.254	8.946	13.78	16.657	16.184	16.365	14.231	11.522	6.657	2.165
1996	1.353	3.669	6.92	9.892	13.311	15.869	16.862	16.403	15.751	11.237	6.256	1.795
1997	-0.007	1.64	6.097	7.813	12.301	15.415	16.944	16.882	14.69	10.34	6.724	2.34
1998	1.141	3.562	6.136	10.297	14.648	16.097	17.666	16.806	16.048	13.061	7.178	3.163
1999	0.898	5.571	8.136	11.655	13.68	16.993	16.736	16.291	15.627	11.839	7.158	2.723
2000	0.669	3.906	6.391	9.057	12.961	16.731	17.289	16.288	15.139	11.666	5.623	1.581
2001	1.769	4.419	7.057	8.872	13.098	16.316	16.717	16.318	16.217	11.637	6.535	2.915
2002	0.807	4.564	5.895	9.198	11.431	16.616	16.831	16.581	15.313	10.622	6.579	2.24

## Maximum Temperature Upper Subansiri

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	14.084	15.722	18.749	21.647	23.145	25.436	25.289	25.165	24.379	22.588	18.399	15.216
1902	14.921	15.611	19.434	19.591	23.748	24.49	25.405	24.992	24.062	20.972	17.565	14.578
1903	13.316	15.067	18.237	20.848	22.833	24.546	25.788	24.562	24.55	22.84	18.491	15.209
1904	13.92	15.673	18.396	19.719	22.566	25.576	25.323	25.135	24.272	22.13	17.55	14.537
1905	13.247	13.393	16.786	18.755	23.116	25.486	25.628	24.063	24.784	22.187	18.581	15.173
1906	14.005	14.848	17.726	20.199	23.18	25.392	25.878	24.078	25.126	22.089	18.491	15.277
1907	14.838	15.103	17.199	19.432	22.398	24.092	24.583	25.363	23.721	22.336	18.844	15.044
1908	14.072	15.562	19.128	21.885	22.598	25.047	24.853	24.964	24.077	21.973	17.765	14.607
1909	13.578	15.262	20.131	20.29	22.011	24.303	25.403	24.589	25.187	23.21	20.091	15.945
1910	14.423	15.319	18.136	20.41	22.727	24.099	24.056	24.716	24.746	22.144	18.526	15.355
1911	15.287	15.031	18.047	20.592	22.092	24.734	24.63	24.56	24.14	21.723	18.032	14.509
1912	14.479	15.611	17.467	18.876	22.729	24.538	24.561	24.522	24.232	21.614	18.585	15.342
1913	14.352	15.428	17.405	20.137	21.367	24.134	24.919	24.916	24.105	22.089	17.656	14.635
1914	14.189	15.238	18.639	19.27	22.498	25.351	25.474	24.076	23.911	20.862	18.289	15.663
1915	15.419	15.773	18.584	20.853	22.249	23.903	24.567	24.441	23.934	24.164	20.285	15.996
1916	14.31	15.334	19.588	19.836	22.58	25.251	23.979	24.863	24.537	21.714	19.17	14.618
1917	13.616	15.257	17.989	19.414	23.757	23.944	24.815	25.09	24.081	22.324	19.176	15.753
1918	13.781	15.189	18.108	20.175	23.497	23.082	24.49	24.612	23.842	22.153	18.626	15.174
1919	14.799	15.285	20.183	20.568	23.249	25.03	25.067	26.231	23.278	21.785	19.311	15.725
1920	15.058	14.388	16.946	19.826	22.003	24.401	25.708	24.053	24.025	22.69	19.441	16.939
1921	15.125	15.284	18.78	20.34	22.096	23.369	24.62	24.676	23.58	21.116	18.697	15.76
1922	14.523	16.502	19.306	21.341	23.13	24.067	24.655	24.277	24.439	21.547	18.774	15.234
1923	15.123	14.505	20.073	20.86	21.415	24.443	24.771	25.837	23.167	21.917	19.416	15.874
1924	14.359	15.229	20.868	20.98	21.629	24.501	24.46	23.91	23.538	23.021	18.599	16.213
1925	13.273	14.142	18.645	20.169	21.417	24.978	24.753	24.396	22.636	21.563	18.53	13.981
1926	13.984	15.371	16.937	19.948	22.542	23.992	24.437	25.095	24.869	22.028	17.999	14.999
1927	13.523	13.309	16.567	19.358	21.945	23.876	25.305	24.656	23.432	22.184	18.22	15.534
1928	14.084	16.235	19.132	21.885	22.378	24.439	25.49	24.444	24.461	21.254	17.497	14.986
1929	13.185	14.929	19.524	20.052	20.999	23.505	25.184	24.984	24.062	21.611	18.093	14.22
1930	12.499	14.635	17.999	20.063	22.801	23.375	26.285	24.951	23.647	20.763	17.378	14.87
1931	14.778	14.698	19.042	20.627	21.691	24.29	24.703	25.538	23.182	22.582	18.232	15.011
1932	14.276	13.442	19.247	21.733	21.536	24.292	25.281	24.141	23.76	22.341	18.822	15.31
1933	13.67	15.613	20.1	20.261	21.643	24.488	25.254	24.862	24.633	22.219	18.009	15.213
1934	14.029	15.34	19.279	20.647	21.851	23.163	25.246	24.822	24.67	21.073	17.342	14.86
1935	14.734	15.376	20.04	21.168	23.557	24.141	25.466	24.46	23.893	22.533	19.326	15.193
1936	13.869	13.876	19.653	21.001	23.498	24.734	25.264	24.629	24.662	21.427	19.896	15.964
1937	14.598	15.104	19.615	22.467	23.121	25.823	25.634	24.641	24.358	22.78	19.045	15.785
1938	14.682	15.277	18.857	22.057	22.663	24.949	24.436	25.02	23.933	22.449	16.982	15.552
1939	14.978	16.057	19.235	21.326	23.175	24.663	25.491	25.829	24.13	22.734	19.208	15.541
1940	14.395	15.402	16.949	21.172	22.653	25.487	25.441	25.511	24.67	23.08	18.844	15.95
1941	13.158	15.633	19.956	21.272	22.624	24.614	25.296	25.116	24.318	21.763	18.067	15.883
1942	14.654	16.952	18.841	21.14	22.902	24.869	25.978	25.244	24.524	22.751	19.241	15.712
1943	14.537	15.596	17.601	19.769	22.36	25.254	25.195	25.261	24.842	22.404	20.253	15.568
1944	13.54	14.585	19.425	20.033	22.594	25.564	25.769	26.014	24.027	22.846	19.017	16.903
1945	14.945	14.24	19.462	22.159	22.051	25.703	25.254	25.054	25.1	21.904	18.712	14.861
1946	15.519	17.421	19.186	21.455	23.279	25.181	25.025	26.116	25.264	22.294	20.164	16.216
1947	14.068	15.889	19.612	21.184	22.356	25.743	25.204	25.272	24.695	21.534	19.898	17.127
1948	15.037	14.599	18.655	21.761	21.513	25.166	25.178	25.528	25.694	22.055	19.462	15.256
1949	15.516	15.792	18.887	19.416	22.942	24.124	24.757	24.635	24.38	22.718	18.644	14.379
1950	15.76	15.546	19.302	21.866	23.101	24.371	25.367	24.914	24.989	22.144	19	16.564
1951	15.313	16.231	20.77	20.071	23.657	25.284	25.379	26.021	25.16	23.444	20.533	16.309
1952	15.761	17.138	18.936	22.844	24.514	25.843	25.89	25.097	24.236	24.002	21.528	16.767
1953	13.995	16.833	20.44	22.123	23.392	25.57	24.461	26.393	24.635	23.133	20.106	17.295
1954	15.038	17.506	20.842	21.638	22.867	24.637	24.628	24.108	25.658	22.424	20.049	15.063
1955	14.861	17.198	19.916	20.557	23.906	23.562	24.306	24.621	25.243	23.472	20.308	16.476
1956	14.621	17.834	19.709	22.354	23.615	24.338	25.291	24.599	24.732	22.854	19.613	15.297
1957	14.672	14.096	19.059	20.65	22.169	25.33	25.613	25.756	25.663	21.794	20.438	16.43
1958	14.546	14.375	20.184	22.724	22.738	27.106	26.837	24.128	25.608	23.558	21.051	16.637
1959	14.595	13.623	19.249	22.267	22.79	24.755	26.408	26.717	23.983	21.24	19.865	17.462
1960	13.869	17.168	19.37	22.91	24.784	25.651	24.826	25.295	23.291	21.774	18.202	16.388

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	15.119	14.974	17.99	22.12	22.584	26.323	26.664	26.148	24.784	22.733	16.585	12.931
1962	13.525	14.638	18.178	21.359	21.948	24.256	25.896	23.55	23.912	22.076	20.135	15.826
1963	14.442	15.801	18.33	20.063	22.353	24.322	24.941	24.117	25.303	21.61	16.56	15.331
1964	14.346	14.944	18.634	20.475	22.318	24.879	24.443	25.185	23.998	24.103	19.183	15.455
1965	14.31	13.694	16.962	21.455	22.796	25.365	24.971	23.582	23.927	21.269	15.8	15.738
1966	14.164	17.701	21.032	21.092	24.279	23.697	26.057	24.348	23.478	20.61	20.658	15.767
1967	14.594	16.21	17.352	20.449	23.057	24.558	25.893	26.923	24.795	21.915	15.727	15.739
1968	13.518	14.322	18.619	20.617	22.669	24.386	24.204	25.813	25.039	20.454	18.691	15.631
1969	14.088	16.957	19.922	21.496	24.011	24.634	25.338	24.805	24.142	21.349	19.554	16.32
1970	13.72	15.075	19.313	21.479	22.937	24.821	24.943	25.139	24.55	21.775	17.595	16.136
1971	14.155	15.313	19.768	21.503	22.664	24.905	25.522	24.852	25.117	21.952	16.503	14.86
1972	15.681	16.383	19.349	19.533	22.946	25.432	26.48	26.146	23.993	23.216	18.431	16.302
1973	15.501	16.01	20.352	22.94	23.743	24.586	26.655	25.737	25.109	22.078	18.306	14.807
1974	14.204	17.319	19.111	21.215	23.364	25.07	23.796	24.911	23.528	24.016	20.496	14.081
1975	14.318	15.642	19.406	22.315	22.468	25.879	24.732	25.459	23.869	23.775	20.384	15.633
1976	14.828	15.964	19.167	21.559	22.731	23.861	25.053	25.023	25.026	22.107	21.313	17.171
1977	14.757	17.823	20.399	19.647	21.409	23.311	25.782	24.897	24.324	20.468	17.811	14.208
1978	13.135	15.235	18.442	21.009	23.22	24.855	24.967	25.138	23.516	22.605	18.016	16.769
1979	15.642	15.8	18.814	22.854	24.856	26.218	24.736	25.141	23.534	21.237	20.881	14.936
1980	14.002	15.88	18.463	21.831	22.391	25.763	25.551	24.58	24.304	21.132	20.132	18.052
1981	13.551	17.69	17.996	20.044	22.873	25.403	25.042	25.48	24.899	24.317	19.178	13.849
1982	16.287	14.618	18.692	20.197	23.447	24.687	25.574	26.496	25.522	22.305	17.958	15.847
1983	12.261	13.138	18.213	19.174	22.508	25.79	26.534	26.223	24.427	23.137	19.275	15.739
1984	14.177	16.722	20.932	21.454	22.462	25.619	24.008	25.307	23.468	24.452	18.629	16.952
1985	14.123	15.736	20.884	21.702	23.161	24.978	23.103	26.044	24.476	23.024	18.512	16.98
1986	16.193	16.345	18.818	19.484	23.019	26.069	25.091	25.15	23.285	20.715	19.117	15.048
1987	15.021	16.847	18.671	20.447	23.583	25.903	24.665	23.29	23.745	22.564	21.128	17.259
1988	15.929	17.694	19.934	21.262	23.518	25.838	25.107	24.479	24.217	23.369	18.794	15.986
1989	14.382	15.035	19.979	20.862	24.744	25.307	24.749	25.008	24.359	23.147	18.29	14.646
1990	17.681	14.781	16.682	19.225	23.481	25.331	24.473	25.161	23.669	21.594	19.497	16.938
1991	13.863	17.022	19.9	20.977	22.701	24.586	25.37	24.698	24.077	22.705	18.293	14.946
1992	14.034	13.668	19.56	21.154	22.369	24.838	24.558	24.954	24.756	22.09	18.311	13.842
1993	14.449	16.518	18.37	21.066	22.683	24.452	25.763	25.067	24.132	23.089	19.326	16.959
1994	16.227	15.551	18.883	21.149	24.278	26.055	25.666	25.57	25.698	22.13	18.309	15.029
1995	13.896	15.764	19.636	21.157	24.426	25.742	25.205	25.44	25.56	23.13	19.152	16.046
1996	14.377	16.002	19.632	21.86	22.966	25.634	24.802	25.478	24.956	22.843	20.366	17.142
1997	13.689	14.974	17.277	19.92	23.083	24.201	26.055	26.824	23.54	21.216	19.184	14.798
1998	14.596	15.141	17.093	20.717	25.254	25.434	25.011	24.607	25.637	24.455	20.825	15.853
1999	15.222	19.52	21.922	24.399	24.384	26.142	25.505	25.096	25.083	22.851	20.022	15.742
2000	14.41	15.049	16.82	20.599	22.776	25.889	25.512	24.622	23.95	22.867	19.847	16.281
2001	16.391	16.986	18.572	21.2	23.474	25.191	25.139	26.003	24.746	21.839	20.065	15.975
2002	15.224	17.928	19.101	21.29	22.211	26.057	25.598	25.482	24.593	22.228	19.933	16.423

### Minimum Temperature Lower Subansiri

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	3.306	6.093	9.273	13.236	15.508	18.968	19.333	19.092	18.106	14.595	8.978	4.886
1902	4.233	5.981	10.058	11.164	16.121	18.025	19.439	19.076	17.801	13.066	8.174	4.25
1903	2.477	5.329	8.711	12.458	15.177	17.944	19.785	18.529	18.275	14.974	9.196	4.904
1904	3.196	5.904	9.091	11.342	14.795	18.924	19.283	19.087	17.989	14.104	8.125	4.204
1905	2.534	3.598	7.432	10.318	15.339	18.885	19.57	18.058	18.364	14.21	9.232	4.883
1906	3.202	5.16	8.175	11.833	15.462	18.782	19.928	18.041	18.881	14.083	9.196	4.996
1907	4.151	5.395	7.639	10.868	14.761	17.543	18.607	19.348	17.395	14.346	9.385	4.701
1908	3.327	5.85	9.617	13.554	14.933	18.519	19.042	18.925	17.844	14.048	8.473	4.34
1909	2.996	5.558	10.692	11.832	14.373	17.806	19.441	18.557	18.965	15.174	10.614	5.602
1910	3.698	5.779	8.703	11.931	14.972	17.608	18.09	18.691	18.486	14.12	9.189	5.014
1911	4.625	5.275	8.54	12.128	14.373	18.207	18.639	18.529	17.856	13.665	8.548	4.128
1912	3.772	5.978	7.983	10.294	15.123	17.998	18.573	18.473	17.916	13.699	9.126	5.018
1913	3.627	5.789	7.822	11.623	13.689	17.673	19.017	18.906	17.869	14.083	8.189	4.37
1914	3.443	5.577	9.044	10.678	14.978	18.854	19.541	18.097	17.607	12.849	8.865	5.353
1915	4.758	6.11	8.989	12.266	14.536	17.458	18.604	18.464	17.688	16.156	10.949	5.68
1916	4.183	6.088	10.16	12.022	14.74	18.746	18.083	18.832	18.458	14.666	10.31	5.219
1917	3.019	5.523	8.579	11.838	15.573	18.359	19.133	19.27	18.16	14.809	10.34	5.042
1918	3.197	5.732	9.551	12.275	17.294	17.529	18.575	18.509	18.669	14.677	8.696	4.314
1919	4.259	5.754	10.724	11.956	14.686	18.579	19.283	20.215	17.088	13.966	10.824	5.846
1920	5.124	5.923	8.733	11.276	14.354	17.726	19.91	18.939	18.147	14.723	9.261	6.7
1921	4.268	5.595	9.698	11.734	15.115	16.998	18.921	19.21	18.357	13.098	9.338	5.426
1922	3.82	6.216	10.471	14.06	15.773	18.037	19.055	19.025	18.374	14.845	10.184	5.508
1923	3.961	6.27	10.312	12.878	14.328	18.029	18.91	19.931	18.151	13.932	10.267	5.76
1924	3.627	6.114	10.743	13.104	14.141	18.638	18.993	18.849	17.726	15.889	9.867	5.923
1925	2.484	5.412	9.184	12.291	13.833	18.526	19.226	18.944	17.064	13.805	8.965	3.858
1926	3.605	6.116	9.006	11.459	14.94	17.893	18.74	19.144	18.749	15.382	8.825	6.208
1927	3.773	5.153	7.361	11.778	14.832	17.745	19.362	18.92	17.127	14.612	9.31	4.63
1928	3.395	6.826	10.007	13.095	14.712	18.527	19.488	18.917	18.339	13.344	8.064	4.463
1929	2.922	5.203	9.979	12.11	14.26	17.897	19.15	19.266	18.12	13.775	9.029	4.282
1930	2.593	5.662	9.022	11.94	15.838	17.225	19.889	19.398	18.307	13.452	9.194	4.408
1931	4.038	6.118	9.655	11.971	14.592	17.974	18.684	19.636	17.481	15.756	9.069	5.5
1932	3.806	4.641	9.539	12.721	13.68	18.015	19.366	19.126	18.313	14.658	10.574	5.781
1933	3.115	5.897	10.122	11.767	14.657	18.728	19.384	19.046	18.58	15.14	8.955	5.448
1934	3.825	6.526	9.393	12.388	13.863	16.945	19.451	19.296	18.85	14.184	9.213	5.032
1935	2.975	6.304	9.822	12.222	14.914	17.575	19.578	18.382	18.602	14.89	10.62	4.571
1936	2.87	4.947	9.947	12.975	16.143	18.12	19.642	19.689	18.566	13.866	10.339	5.475
1937	2.479	6.046	9.177	13.268	15.588	19.352	20.601	19.289	18.39	14.996	8.711	6.353
1938	4.457	5.376	10.229	13.213	17.069	19.112	18.923	19.709	18.55	15.512	8.574	5.235
1939	4.266	6.162	10.029	13.282	15.197	18.128	18.96	19.437	18.094	13.707	9.156	5.635
1940	3.418	5.892	7.781	12.411	14.989	18.452	19.559	19.624	17.631	14.357	8.797	5.905
1941	2.723	5.385	10.109	12.583	15.199	17.915	19.939	19.21	17.988	14.061	8.97	6.031
1942	3.902	7.042	9.614	12.581	15.358	18.251	20.07	19.393	18.039	15.295	10.031	4.816
1943	4.509	5.625	8.501	10.809	14.619	18.622	18.988	18.722	18.103	13.721	10.789	5.699
1944	3.625	5.512	10.083	12.097	15.433	18.994	19.958	19.31	17.786	15.17	9.35	6.934
1945	3.822	4.569	9.814	13.748	14.837	19.001	19.454	19.007	18.911	13.986	9.058	4.309
1946	3.955	7.283	9.639	12.507	15.332	18.451	19.156	19.591	18.31	13.862	10.087	5.827
1947	3.613	6.25	9.562	12.657	14.945	18.615	19.124	19.199	18.339	14.375	8.799	6.155
1948	3.755	5.489	8.495	12.661	14.454	18.123	19.086	19.018	18.598	13.32	10.897	4.372
1949	4.379	6.019	9.055	11.18	15.45	18.296	19.053	18.888	18.086	15.105	8.865	3.584
1950	3.123	5.489	8.723	11.779	15.286	17.408	19.477	17.913	17.661	14.314	9.328	5.007
1951	2.482	5.443	8.974	11.7	13.75	17.697	18.955	19.017	17.987	15.598	8.308	4.449
1952	3.104	7.054	7.763	12.806	14.089	18.441	18.775	18.636	17.486	14.236	8.763	5.415
1953	3.755	5.962	9.901	12.095	15.461	17.95	18.804	19.476	17.787	13.033	8.011	5.523
1954	1.9	6.983	9.758	12.47	15.222	17.644	18.639	18.395	17.992	13.967	7.186	5.433
1955	3.946	5.43	9.001	12.558	16.386	17.968	19.353	18.295	18.744	15.24	9.736	3.473
1956	3.258	4.987	9.093	13.506	16.042	18.534	17.856	18.576	17.415	14.345	9.626	6.323
1957	4.494	5.795	8.406	12.667	14.601	18.891	20.016	19.353	18.041	13.277	8.36	4.892
1958	4.893	6.121	10.043	13.34	14.801	19.904	20.155	18.874	18.5	14.918	8.492	5.487
1959	4.91	5.541	8.674	13.303	15.03	18.597	20.119	19.608	17.467	15.38	9.147	5.615
1960	3.121	7.894	9.635	12.888	16.398	18.627	19.406	19.496	18.008	14.901	8.87	5.668

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	4.897	5.712	9.186	12.96	15.913	19.075	20.115	20.472	18.87	15.043	8.906	3.332
1962	2.558	5.384	8.268	12.617	14.988	18.719	20.072	19.345	18.574	14.059	8.883	5.516
1963	2.772	6.205	9.909	12.494	14.878	18.37	19.723	19.422	18.228	13.884	9.043	5.367
1964	3.088	5.706	9.067	12.79	14.717	17.16	18.785	18.879	18.064	15.251	10.237	4.468
1965	2.485	5.581	8.072	12.02	15.561	18.334	18.883	18.454	17.638	13.968	8.584	6.105
1966	4.521	6.805	9.576	12.197	16.079	17.737	19.729	19.404	17.641	13.303	10.695	6.145
1967	5.034	6.083	9.728	12.319	15.281	17.732	18.812	19.283	17.831	12.358	8.334	5.354
1968	3.872	4.658	10.117	11.671	14.914	18.421	19.217	19.096	18.866	12.724	8.705	4.196
1969	3.434	5.66	10.118	12.89	15.813	18.655	19.737	18.616	18.084	14.005	9.244	5.474
1970	3.253	5.438	9.196	12.214	15.254	18.478	19.637	19.356	17.717	14.471	9.929	4.889
1971	3.968	5.337	9.216	12.61	15.181	18.806	18.638	18.553	17.851	14.208	8.471	4.426
1972	5.001	6.406	9.818	11.758	15.441	18.275	19.778	18.648	17.515	13.85	8.656	4.804
1973	4.878	6.978	9.252	13.202	16.389	18.595	18.946	19.193	18.263	14.288	8.906	5.302
1974	4.08	6.126	9.461	12.221	15.485	18.281	18.616	19.065	17.516	15.874	10.002	5.351
1975	3.847	6.605	9.729	12.817	14.829	19.141	18.621	18.625	18.023	15.813	9.199	4.537
1976	3.31	7.285	10.021	12.24	15.676	17.698	18.527	18.566	17.188	13.316	10.934	5.496
1977	3.534	6.343	10.541	12.694	14.466	17.311	19.557	18.8	18.407	13.387	9.263	5.895
1978	2.973	5.479	8.611	11.845	16.074	18.59	18.429	19.358	17.933	14.875	10.226	5.003
1979	3.762	5.572	9.055	12.94	15.777	18.775	18.817	19.361	17.336	13.971	11.035	6.626
1980	3.214	5.865	9.54	12.817	15.213	19	19.615	19.813	18.581	13.875	8.783	6.105
1981	4.733	6.908	9.755	12.608	15.779	19.293	19.674	19.556	17.884	14.039	9.492	3.904
1982	4.77	6.472	9.492	12.543	14.844	18.633	19.428	18.926	17.023	13.618	9.297	4.855
1983	2.627	5.006	9.129	11.467	14.941	18.129	18.818	18.716	18.133	15.055	9.263	4.464
1984	3.815	6.81	10.191	13.125	15.25	19.289	18.874	18.646	17.175	15.143	7.721	5.631
1985	4.407	6.657	10.353	13.378	15.882	18.831	18.46	19.375	18.02	14.72	9.249	6.514
1986	4.055	6.329	9.675	12.552	15.244	19.363	18.562	18.375	17.633	13.557	9.65	5.429
1987	4.5	6.643	9.666	12.823	14.719	18.795	19.041	19.05	18.535	14.275	9.272	5.84
1988	4.582	7.74	9.904	12.799	15.572	18.529	19.428	19.187	18.096	14.656	9.646	8.27
1989	4.681	6.163	10.266	12.031	15.745	18.407	18.711	19.03	18.987	15.199	8.899	4.531
1990	4.831	7.121	9.309	11.339	15.962	18.671	19.541	18.999	18.049	14.535	9.983	6.862
1991	3.444	7.425	10.511	12.529	14.809	18.138	19.457	18.836	17.874	14.695	8.94	4.822
1992	3.562	4.284	9.898	12.818	14.476	18.298	18.745	19.057	18.457	14.139	9.055	3.936
1993	3.768	7.005	8.849	12.559	15.01	17.924	19.698	19.122	17.985	15.062	10.145	6.953
1994	5.484	6.068	9.389	12.927	16.825	19.615	19.549	19.697	19.378	14.005	9.021	4.972
1995	3.352	6.304	11.125	13.032	16.886	19.472	19.041	19.369	17.298	15.157	10.709	6.058
1996	5.099	7.495	10.59	13.84	16.407	18.969	19.672	19.22	18.96	14.851	9.965	5.822
1997	3.897	5.285	10.095	11.731	15.649	18.628	19.767	19.667	17.774	14	10.45	6.366
1998	4.681	7.727	9.927	14.192	17.768	18.913	20.273	19.768	18.895	16.529	11.156	7.243
1999	4.714	9.467	11.538	15.265	16.807	19.922	19.602	19.203	18.721	15.335	11.122	6.953
2000	4.441	7.819	10.221	12.158	16.163	19.58	20.18	19.219	18.233	15.329	9.462	5.476
2001	5.185	8.013	11.007	12.662	16.357	19.615	19.699	19.399	19.085	15.367	10.621	6.65
2002	4.558	8.215	9.929	12.783	14.866	19.408	19.689	19.458	18.38	14.312	10.449	6.094

### Minimum Temperature Upper Subansiri

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1901	-0.346	2.36	5.542	9.544	12.364	15.996	16.543	16.221	15.097	10.988	5.02	1.056
1902	0.537	2.273	6.227	7.487	12.965	15.047	16.661	16.088	14.78	9.365	4.21	0.416
1903	-1.11	1.727	5.023	8.756	12.052	15.098	17.043	15.661	15.272	11.232	5.138	1.048
1904	-0.491	2.337	5.181	7.613	11.785	16.135	16.578	16.205	14.954	10.525	4.195	0.35
1905	-1.208	0.032	3.581	6.61	12.335	16.04	16.882	15.157	15.478	10.582	5.226	1.012
1906	-0.421	1.513	4.512	8.108	12.399	15.945	17.132	15.161	15.843	10.484	5.138	1.092
1907	0.397	1.763	3.984	7.333	11.616	14.645	15.841	16.46	14.403	10.73	5.487	0.857
1908	-0.328	2.226	5.923	9.798	11.804	15.605	16.109	16.06	14.794	10.369	4.411	0.446
1909	-0.822	1.896	6.916	8.199	11.229	14.862	16.659	15.672	15.905	11.608	6.732	1.76
1910	0.038	1.983	4.92	8.32	11.946	14.65	15.314	15.814	15.439	10.539	5.17	1.17
1911	0.872	1.696	4.835	8.487	11.297	15.28	15.888	15.659	14.86	10.118	4.674	0.321
1912	0.09	2.268	4.26	6.77	11.949	15.094	15.81	15.62	14.916	10.008	5.229	1.157
1913	-0.057	2.067	4.198	8.046	10.587	14.691	16.175	16.015	14.822	10.484	4.299	0.474
1914	-0.266	1.875	5.427	7.152	11.703	15.882	16.705	15.162	14.631	9.257	4.934	1.5
1915	1.034	2.409	5.37	8.762	11.454	14.432	15.825	15.538	14.651	12.559	6.927	1.811
1916	0.467	2.464	6.374	8.39	11.585	15.796	15.221	15.963	15.431	11.133	6.382	1.403
1917	-0.682	1.898	4.959	8.148	12.418	15.391	16.355	16.39	15.187	11.333	6.512	1.148
1918	-0.491	2.098	5.802	8.728	14.176	14.47	15.892	15.697	15.688	11.082	4.781	0.545
1919	0.507	2.153	6.969	8.389	11.556	15.583	16.543	17.454	13.959	10.288	6.974	2.053
1920	1.516	2.324	4.844	7.692	11.224	14.818	17.104	15.962	15.225	11.114	5.386	2.755
1921	0.629	1.924	5.884	8.176	11.814	14.01	16.11	16.291	15.174	9.512	5.447	1.615
1922	-0.064	2.519	6.669	10.191	12.606	15.104	16.302	16.076	15.363	11.179	6.244	1.627
1923	0.283	2.587	6.663	9.246	11.132	15.238	16.089	17.163	15.028	10.36	6.46	1.881
1924	-0.14	2.519	6.988	9.284	10.901	15.776	16.17	15.923	14.708	12.278	5.973	2.134
1925	-1.181	1.737	5.369	8.578	10.763	15.622	16.464	15.973	14.041	10.386	5.13	0.097
1926	-0.116	2.549	5.412	7.857	11.79	14.986	15.965	16.264	15.757	11.758	5.011	2.245
1927	-0.025	1.487	3.632	8.132	11.767	14.774	16.558	16.04	14.151	11.002	5.476	0.793
1928	-0.317	3.199	6.319	9.521	11.578	15.58	16.706	16.045	15.18	9.65	4.141	0.448
1929	-0.896	1.568	6.391	8.5	11.037	14.905	16.439	16.397	15.122	10.157	5.139	0.133
1930	-1.209	2.03	5.377	8.337	12.78	14.37	17.241	16.49	15.217	9.728	5.257	0.49
1931	0.181	2.142	6.027	8.267	11.452	15.066	15.96	16.68	14.517	12.292	5.208	1.579
1932	0.232	1.137	5.897	9.277	10.473	15.109	16.54	16.115	15.179	10.992	6.611	1.954
1933	-0.618	2.107	6.433	8.244	11.515	15.73	16.602	16.191	15.56	11.517	5.054	1.649
1934	-0.011	3.029	5.696	8.635	10.727	13.946	16.686	16.393	15.777	10.558	5.2	1.197
1935	-0.502	2.79	6.253	8.58	12.118	14.911	16.745	15.565	15.817	11.41	6.901	0.918
1936	-0.561	1.269	6.365	9.405	13.119	15.174	16.926	16.811	15.614	10.311	6.482	1.652
1937	-0.771	2.452	5.881	9.79	12.53	16.593	17.958	16.5	15.398	11.613	5.077	2.552
1938	0.792	1.716	6.497	9.495	14.097	16.301	16.02	16.956	15.546	11.98	4.773	1.504
1939	0.742	2.546	6.42	9.332	12.106	15.172	16.219	16.541	15.092	10.083	5.177	1.835
1940	-0.276	2.245	4.134	8.707	11.867	15.747	16.905	16.736	14.683	10.757	4.762	1.967
1941	-1.208	1.593	6.329	8.924	12.056	14.795	17.045	16.195	14.863	10.31	5.243	2.002
1942	0.162	3.539	5.854	9.069	12.43	15.398	17.305	16.534	14.947	11.665	6.048	1.042
1943	0.595	2.097	4.693	7.469	11.58	15.805	16.148	15.899	15.228	10.111	7.033	1.608
1944	-0.242	1.659	6.293	8.213	12.123	16.119	17.151	16.249	14.753	11.512	5.506	3.134
1945	0.008	0.88	5.883	9.828	11.566	16.103	16.557	16.187	15.842	10.198	5.155	0.186
1946	0.27	3.789	6.053	9.021	12.308	15.63	16.393	16.724	15.475	10.442	6.267	2.056
1947	-0.067	2.518	5.906	9.194	11.734	15.928	16.46	16.429	15.312	11.015	5.102	2.449
1948	0.093	1.7	4.754	9.259	11.434	15.566	16.43	16.239	15.793	9.845	7.252	0.443
1949	0.962	2.427	5.359	7.814	12.493	15.363	16.212	16.102	15.113	11.505	5.007	-0.288
1950	-0.337	1.953	5.217	8.121	12.124	14.596	16.72	15.093	14.699	10.746	5.445	1.242
1951	-1.316	1.823	5.156	8.257	10.474	14.948	16.462	16.039	14.953	12.183	4.162	0.206
1952	-0.722	3.363	3.871	8.915	11.158	15.292	15.788	15.608	14.286	10.477	4.619	1.277
1953	0.256	2.18	6.164	8.406	12.341	15.068	15.997	16.625	14.805	9.199	4.242	1.418
1954	-1.875	3.373	6.221	8.903	12.064	14.835	16.058	15.423	14.951	10.644	2.997	1.38
1955	0.438	2.045	5.246	8.956	13.483	15.064	16.668	15.207	15.836	11.715	5.526	-0.612
1956	-0.806	0.946	4.843	9.717	12.85	15.737	14.479	15.297	13.827	10.571	5.721	2.381
1957	0.543	2.297	4.489	8.763	11.468	16.172	17.305	16.498	15.042	9.677	4.674	1.164
1958	1.175	2.362	6.174	9.849	12.008	17.215	17.425	16.015	15.493	11.454	4.72	1.507
1959	1.52	1.83	4.855	9.714	11.959	15.541	17.409	16.602	14.18	11.638	5.657	1.787
1960	-1.157	3.817	5.741	9.124	13.182	15.852	16.483	16.421	14.897	11.057	4.988	1.441

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	1.141	2.174	5.439	9.153	12.906	16.141	17.142	17.798	15.476	11.568	4.753	-0.35
1962	-1.117	1.826	4.485	8.981	11.836	15.86	17.054	16.431	15.357	10.344	5.457	1.811
1963	-1.156	2.318	5.767	8.772	11.681	15.258	16.992	16.623	15.156	10.367	4.653	0.99
1964	-0.21	1.851	5.075	9.139	11.409	14.748	16.068	16.06	15.169	11.948	6.359	0.622
1965	-1.369	1.563	4.187	8.544	12.54	15.756	16.059	15.729	14.703	9.962	4.198	2.163
1966	0.309	2.912	6.049	8.383	13.041	14.776	16.955	16.588	14.469	9.398	7.386	2.411
1967	1.173	2.112	5.729	8.633	12.176	15.07	16.184	16.458	14.802	8.689	4.373	1.457
1968	-0.155	1.08	6.262	7.942	11.822	15.482	16.398	16.066	15.847	9.311	4.801	0.392
1969	-0.068	2.333	6.268	8.981	12.622	15.864	17.094	15.908	14.99	10.005	5.629	1.722
1970	-0.379	1.604	5.762	8.387	12.2	15.332	17.034	16.319	14.603	10.371	5.762	1.106
1971	0.164	1.539	5.69	8.964	12.099	15.903	15.927	15.575	14.914	10.656	4.528	0.314
1972	1.283	2.801	6.045	8.215	12.386	15.405	17.309	15.677	14.48	10.351	4.512	1.192
1973	1.269	3.431	5.404	9.6	13.203	15.633	16.165	16.251	15.346	10.795	4.794	1.752
1974	0.26	2.733	5.68	8.702	12.638	15.576	15.764	16.204	14.435	12.734	5.739	1.895
1975	0.246	2.935	6.011	9.141	11.67	16.332	15.95	15.735	15.159	12.495	5.549	0.907
1976	-0.198	3.463	5.922	8.609	12.581	14.771	15.315	15.662	14.083	9.575	7.192	1.878
1977	-0.186	2.674	6.854	9.352	11.235	14.294	16.865	15.997	15.254	9.83	5.281	1.761
1978	-0.744	1.82	4.871	8.178	13.007	15.661	15.649	16.443	14.85	11.38	6.656	1.367
1979	0.299	2.011	5.41	9.278	12.755	15.956	16.184	16.534	14.294	10.44	7.412	2.699
1980	-0.387	2.173	5.859	9.216	12.046	16.102	16.914	17.113	15.621	10.358	4.899	2.511
1981	0.72	3.508	5.84	8.985	12.456	16.361	17.034	17.05	14.805	11.002	5.579	-0.227
1982	0.928	2.46	5.756	9.134	11.569	16.027	16.941	16.143	14.474	9.892	5.258	1.52
1983	-1.499	1.152	5.605	7.952	11.969	15.444	16.363	15.943	15.327	11.443	5.224	0.85
1984	0.509	3.89	6.79	9.584	12.215	16.173	16.204	15.501	14.214	11.893	3.629	2.236
1985	0.712	2.993	7.029	9.797	12.656	16.056	15.54	16.499	15.08	10.969	5.659	2.727
1986	0.671	2.642	5.911	8.865	11.862	16.319	15.596	15.364	14.661	9.765	5.683	1.508
1987	0.364	2.853	6.028	9.061	11.456	16.132	16.688	16.153	15.656	10.972	5.407	1.89
1988	1.077	4.012	6.546	9.13	12.529	15.493	16.737	16.486	15.097	11.055	5.355	3.708
1989	0.957	2.448	6.803	8.689	12.784	15.65	16.037	16.127	16.131	11.715	5.146	0.32
1990	1.238	3.226	5.353	7.874	12.609	15.653	16.597	15.99	15.046	11.026	5.853	2.812
1991	-0.549	3.682	6.692	8.855	11.922	15.145	16.626	15.796	14.794	11.099	4.94	0.761
1992	-0.351	0.307	6.346	9.061	11.294	15.353	15.815	16.037	15.44	10.486	4.952	-0.342
1993	0.062	3.18	5.164	8.973	11.902	15.011	17.018	16.137	14.853	11.482	5.97	2.772
1994	1.798	2.215	5.669	9.059	13.483	16.606	16.92	16.669	16.378	10.53	4.954	0.845
1995	-0.531	2.399	7.254	8.946	13.78	16.657	16.184	16.365	14.231	11.522	6.657	2.165
1996	1.353	3.669	6.92	9.892	13.311	15.869	16.862	16.403	15.751	11.237	6.256	1.795
1997	-0.007	1.64	6.097	7.813	12.301	15.415	16.944	16.882	14.69	10.34	6.724	2.34
1998	1.141	3.562	6.136	10.297	14.648	16.097	17.666	16.806	16.048	13.061	7.178	3.163
1999	0.898	5.571	8.136	11.655	13.68	16.993	16.736	16.291	15.627	11.839	7.158	2.723
2000	0.669	3.906	6.391	9.057	12.961	16.731	17.289	16.288	15.139	11.666	5.623	1.581
2001	1.769	4.419	7.057	8.872	13.098	16.316	16.717	16.318	16.217	11.637	6.535	2.915
2002	0.807	4.564	5.895	9.198	11.431	16.616	16.831	16.581	15.313	10.622	6.579	2.24



## **Annexure – 5.1**

**Compliance to the 68<sup>th</sup> Minutes to Meeting of EAC on Cumulative Environmental Impact Assessment of Subansiri Sub-Basin in Arunachal Pradesh held on 24<sup>th</sup> September 2013; comments and suggestions made in Minutes of the Meeting of TAC's meeting held on June 11, 2014 and comments and suggestions received on Lower Subansiri HEP from NHPC**



Serial no.	EAC observation	Response
1	The Consultants shall provide the report on downstream impact study. Cross section of river is also to be provided to facilitate visualizing the rise of water level in the downstream area.	The downstream impact assessment is given in Chapter 9 titled "Impact study for Subansiri and Brahmaputra river due to hydroelectric project in Subansiri Basin"  Cross section of river is provided in Annexure 9.1 (Volume – II)
2	Soil erosion including type/class and intensity may touched upon including soil conservation aspects.	Soils of Subansiri basin is given in Chapter 2 "Basin Characteristics", section 2.6 (Volume – I).
3	Not only the big & medium sized projects, but micro HEPs are also to be included in the study. Data/information on these has to be obtained by the consultants and CWC is to help getting such information from State Government. This is important for a holistic and integrated examination/study.	Data on existing small and micro HEPs in Subansiri is provided in Annexure 3.1 (Volume – II) titled "Details of Hydro Electric Projects Allotted to CPSUs & IPPs for Implementation in Subansiri Basin" as provided by Department of Hydropower Development, Government of Arunachal Pradesh.
4	As far as possible, effect of sediment may be reported.	Soil aspects are given in Chapter 2 "Basin Characteristics", section 2.6 (Volume – I).
5	The primary data have to be highlighted.	Primary data are provided in Chapter 6 "Terrestrial Ecology"  Section 6.9 "Floristic diversity in Subansiri Basin, Arunachal Pradesh" section 6.10 "Community Structure" and 6.19 "Primary survey results"  Chapter 7 Aquatic Ecology, section 7.1.1 Physico-Chemical Water Quality, Section 7.3.1 "Plankton" 7.3.2 "Primary Productivity", 7.4.3 Fishes of Subansiri Basin, 7.4.5 Fishes Found During Study
6	Selection of size and number of HEPs to also factor as to whether migration / movement of animals will be impeded.	Chapter 10, section 10.7, provides impacts on Terrestrial Fauna with reference to elephant and its corridor in the basin.
7	Migration of fish is also to be factored and measures for conservations to be proposed.	Chapter 10, Section 10.9, describes Impacts on Aquatic Ecology including migratory aquatic species.  Chapter 11- Conclusions and Recommendations section 11.1.2 Integrated biodiversity conservation plan, chapter 11.
8.	Pictorial presentation rather than tabular may be done as far as possible.	The report contains graphical representation of data given in tables.

## Section 2

Issues raised by South Asia Network on Dam, a copy of which was handed over to consultant are to be replied / explained properly.

The report has been revised in line with the issues raised by South Asia Network on Dam as appropriate and to the extent possible (in reference to the ToR provided by CWC for the study).

## Section 3

Serial no.	The EAC asked the Consultants to also comply with the following:	Response
1	Optimal number and locations of HEPs and similar projects to be planned in the basin conforming strictly to ecological and environmental sustainability is to be clearly delineated.	<p>Chapter 6 defines ecological and environmental parameters for ascertaining locations of proposed/under construction HEPs in ecologically and environmentally sensitive areas ( Table 6.3)</p> <p>Further, ecological and environmental sustainability considerations have been factored into cumulative impact assessment. The Ecological and environmental parameters included are forest cover and type, location of HEPs with in 10 kms of the protected area or outside, Important Bird Area, migratory corridors, routes of terrestrial and aquatic animals</p> <p>Chapter 10: Section 10.2 Cumulative Impact Assessment on Terrestrial Biodiversity includes parameters like fragmentation, disturbance index and biological richness at Subansiri basin level.</p> <p>Table 10.2: assesses proposed HEPs and their location in Subansiri basin in the context of biological and ecological importance.</p>
2	Major parameters of the proposed projects such as approximate capacity, TRT & HRT lengths, their locations, height of dam/barrage, incorporation of flood moderation component, extent of submergence including forests land, loss of habitation & bio-diversity etc are to be indicated project wise.	Given in chapter 3 “Hydropower Development in Subansiri Basin”, Table 3.4 & Table 10.7.
3	If found essential for the overall interest of environment certain projects may be	The earlier proposed Oju I and Oju II have been recommended to be

Serial no.	The EAC asked the Consultants to also comply with the following:	Response
	recommended to be dropped.	<p>merged as one project namely Oju (with installed capacity of 1878 MW), at the location of earlier proposed Oju I.</p> <p>Environment flow computation for Tammu indicates 55% flow in pre and post monsoon season and 60% release in monsoon. Therefore, it is recommended that Tammu project may therefore be dropped (see section 11.2. "Environment Flows in Subansiri Basin" and Table 11.1).</p>
4	<p>The recommendations of optimal number and size have to be based on the outcome of cumulative impact assessment study on riverine ecology, loss of bio-diversity in the catchment/submergence, environmental flow requirement for different identified stretches/Dam locations, unaffected river stretches to be left out for free flowing purposes, presence of tribal population and likely socio-economic impact on them, location sanctuary/ biosphere, animal/elephant corridor for their safe and unhindered movement, Migratory fish and their conservation. The basis for recommendations have to be in line with cost and likely benefit to be accrued from the projects and to be clearly articulated</p>	<p>The recommendations have emerged from Chapter 8, section 8.8 "Environmental Flow Assessment"</p> <p>Tammu HEP is recommended to be dropped in view of the consideration of the environment flows.</p> <p>Chapter 3 discusses Hydropower Development in Subansiri Basin. Gradient analysis of the proposed cascade development of nineteen projects has been summarized in Table 3.5. Since the distance between TWL and FRL of the projects starting from Oju-I and Oju-II; Oju-II and Niare; Niare and Naba are less than 1 km, these HEPs may be reconsidered.</p> <p>Oju-I was proposed on right bank and Oju-II on left bank. Oju I and Oju II have been recommended to be merged as single scheme to avoid loss of forest on the left bank.</p> <p>It is recommended to have only one dam (at Oju-I location) and one power house (at Oju-II location) in place of two dams and two power houses. The recommendation to merge Oju I and Oju II will keep the left bank forests intact thus reducing/eliminating the impact arising out of loss of forest area</p>

Serial no.	The EAC asked the Consultants to also comply with the following:	Response
		<p>and dependent species. Further, single scheme will lead to substantial savings in land requirement for the project.</p> <p>Perennial streams joining the main Subansiri River between the dam and power house of the single Oju scheme at regular intervals will augment the flow. This along with the provision of recommended minimum flow shall take care of the intermediate river stretch for aquatic fauna and sustenance of ecological functions.</p> <p>Chapter 10 Cumulative Impact Assessment. Section 10.2 includes parameters like fragmentation, disturbance index and biological richness at Subansiri basin level.</p>
5	Also, the draft report has to be uploaded in the portal and published suitably for seeking comments/opinion from general public. Only after incorporating public opinion, the final report is submitted for further consideration.	CWC to take action

## **Annexure – 6 .1**

### **Pteridophytes of Subansiri Basin, Arunachal Pradesh and their uses**





Sr. No.	Name of Species	Family	Remarks
1.	<i>Adiantum capillus veneris</i>	Adiantaceae	It is used as a stimulant, febrifuge, expectorant, purgative, demulcent, emollient tonic and hair tonic. It has anticancerous, hypoglycaemic, aphrodisiac, antibacterial, antifungal and antiviral properties.
2.	<i>Adiantum lunulatum</i>	Adiantaceae	It used in blood related diseases, in epileptic fits and in rabies; rhizomes prescribed for strangery and in fever due to elephantiasis.
3.	<i>Adiantum caudatum</i>	Adiantaceae	It is used in skin diseases, diabetes, cough and fever.
4.	<i>Ampelopteris prolifera</i>	Thelypteridaceae	The fresh tender fronds and eaten cooked as vegetable in Arunachal Pradesh. Fronds are aperients, alterative.
5.	<i>Angiopteris evecta</i>	Angiopteridaceae	Leaf extract is used in the treatment of dysentery and diseases of blood ulcers. Spores and said to be effective in the treatment of leprosy and other skin diseases.
6.	<i>Asplenium nidus</i>	Aspleniaceae	The rootstock is considered effective against fever and elephantiasis. It is used as an emollient, in coughs and diseases of the chest. Leaf is smoked to treat colds.
7.	<i>Blechnum orientale</i>	Blechnaceae	Fresh fronds are used as a poultice for boils in Malaya; rhizome is used as an anthelmintic in China, as cure for intestinal wounds. Fronds are also used for urinary bladder complaints in India and Polynesia and as a diaphoretic, aromatic and aperative in Philippines.
8.	<i>Botrychum lanuginosum</i>	Botrychiaceae	Plant is antidysentric and antibacterial.
9.	<i>Ceratopteris thalictroides</i>	Parkeriaceae	The fronds are used as poultice in skin diseases. They are reported to be toxic and styptic.
10.	<i>Cheilanthes tenuifolia</i>	Cheilantheaceae	Tribals use the extract of rhizome and roots as a general tonic.
11.	<i>Cheilanthes frainosa</i>	Cheilantheaceae	Roots are used to treat eczema and stomachache; fronds are used to treat menstrual disorders.
12.	<i>Cibotium barometz</i>	Dicksoniaceae	Rhizomes are vermifuge, roots used as tonic and in lumbago; paleae have the property of rapidly coagulating blood and have been used as styptic.
13.	<i>Thelyopteris arida</i>	Thelypteridaceae	Roots are used in veterinary medicine and fronds are used as vegetable.

Sr. No.	Name of Species	Family	Remarks
14.	<i>Thelypteris parasitica</i>	Thelypteridaceae	Fronds are used medicinally to treat gout and rheumatism.
15.	<i>Cyrtomium falcatum</i>	Dryopteridaceae	Rhizomes have anthelmintic properties and are chiefly used for expulsion of tapeworms.
16.	<i>Dicranopteris linearis</i>	Gleicheniaceae	Rhizome are anthelmintic; fronds used for asthma; rachis used for making mats, chairs, seats, pouches, cape, fishing traps, baskets, belts, etc. Fronds are used as an ingredient for making local beverages.
17.	<i>Diplazium esculentum</i>	Athyriaceae	Decoction prepared from rhizome and young leaves are used for haemoptysis and cough in Philippines. In Arunachal Pradesh tender fronds are sold in markets as vegetables.
18.	<i>Drynaria quericifolia</i>	Polypodiaceae	The rhizome is bitter, it is used as an antibacterial, anodyne, constipating, anti-inflammatory tonic, in the treatment of typhoid fever, phthisis, dyspepsia, cough, arthralgia, cephalalgia, diarrhea, foul ulcers and other inflammations. It is very specific in the treatment Migraine. The decoction of the plant is used in typhoid fever and is also used as an anthelmintic, pectoral, expectorant, tonic, dyspepsia and astringent. Fronds are useful in poulticing swellings.
19.	<i>Dryopteris cochleata</i>	Dryopteridaceae	The whole plant is crushed in a bowl and the extract is given (twice a day) orally in case of snake-bite, besides, a paste of the plant is also applied on the antibacterial and antiepileptic. The rhizome of the plant is powdered and taken with water (twice a day) in rheumatism, epilepsy and leprosy. Juice of roots (about 2 tea spoonful twice a day before meal) is given to treat amoebic dysentery.
20.	<i>Dryopteris sparsa</i>	Dryopteridaceae	Plant is used as an anthelmintic.
21.	<i>Equisetum ramosissimum</i>	Equisetaceae	Powdered stem dissolved in water is used for enema during stomach disorders in children. Barren women drink rhizome decoction to facilitate fertilization in South Africa. Plant is known to have diuretic, haemostatic, haemorrhagic, antirheumatic, antifungal and antiviral properties. A few pieces of the branches mixed with leaves of other specific plants and made into a paste is used as local application for the

Sr. No.	Name of Species	Family	Remarks
			treatment of fracture and the dislocation of bones.
22.	<i>Helminthostachys zeylanica</i>	Helminthostachya ceae	The fronds are reported to be aperients, intoxicant, anodyne, also used in sciatica, as an antiviral, antipyretic, anti-inflammatory and intoxicant. The rhizome is used in dysentery, catarrh, sciatica, malaria and also as a tonic and mild aperients. A decoction of the plant is given for curing impotency and the juice of the leaves is used to relieve blisters on the tongue.
23.	<i>Hypodematium crenatum</i>	Dryopteridaceae	The plant is used to cure gynecological disorders. There is a superstition among the tribals of Central India that the scales of the fern are useful against witchcraft or the evil eye. Rhizome is used as an antibacterial agent.
24.	<i>Hypolepis punctata</i>	Hypolepidaceae	Fronds are used for poultice boils.
25.	<i>Lycopodiella cernua</i>	Lycopodiaceae	The decoction of the plant is given in beri beri, cough, chest complaints; embrocation of the ashes in vinegar for skin eruptions. The rhizome is used for nervous disorders, rheumatism and also given in fever and dropsy.
26.	<i>Lycopodium pseudoclavatum</i>	Lycopodiaceae	Spores are used as dusting powder, for sound experiments in physics, absorbent in excoriation of the skin, base for medicated snuff, covering pills for prevent adhesion, for dyspepsia, in constipation with flatulence, hepatic congestion and pustular skin eruptions. In homeopathy it is used against disorders of chest, urinary passage, against rheumatism, cramps and varices. The powders are employed in fireworks, flash lights on the stage, as dusting powder for sand moulds for fine casting. It contains fatty oil. The alkaloids lycopodine, clavatine and clavotoxine have been isolated.
27.	<i>Lygodium flexuosum</i>	Lygodiaceae	Plant is used as an expectorant. Rhizome boiled with mustard oil locally applied to carbuncle and in the treatment of rheumatism, sprains, scabies, ulcers, eczema and coughs. The aqueous extract of the rhizome is used for the treatment of gonorrhoea. The part of the rhizome is applied on piles and rhizome is also tied on waist. The plant is used to pleurisy.

Sr. No.	Name of Species	Family	Remarks
28.	<i>Lygodium microphyllum</i>	Lygodiaceae	Leaf decoction is given in dysentery. It is used as one of the ingredients in may lotions. Leaves are applied in the form of poultices for skin diseases and swelling. Crushed leaves are used to cure cough.
29.	<i>Microsorium punctatum</i>	Polypodiaceae	Leaf juice is used as a purgative, diuretic and for healing wound.
30.	<i>Nephrolepis auriculata</i>	Nephrolepidaceae	Tubers are edible and decotion of the fresh frond given in cough.
31.	<i>Nephrolepis cordifolia</i>	Nephrolepidaceae	The rhizome is reported to be antibacterial and is used in cough, rheumatism, chest congestion, nose blockage and loss of appetites. Pinnae are anti-tussive, styptic, antifungal used in coughs, wounds and for the treatment of jaundice, a decoction of the fresh frond is given as a drink.
32.	<i>Nephrolepis biserrata</i>	Nephrolepidaceae	Young shoots and rhizome are eaten as vegetable.
33.	<i>Osmunda regalis</i>	Osmundaceae	FronDs are used as tonic, styptic and also for rickets, rheumatism and for intestinal gripping. The rhizome is used as abortifacient.
34.	<i>Oleandra wallichii</i>	Oleandraceae	Rhizome is rejuvenating, used by the aged.
35.	<i>Onychium siliculosum</i>	Pteridiaceae	Decoction of the fronds is used in dysentery.
36.	<i>Onychium japonicum</i>	Pteridiaceae	Juice of crushed leaves prevent falling of hairs. Leaves and rhizomes contain glycoside which yields kaempferol and rhamnose on hydrolysis and used for indoor decoration.
37.	<i>Odontosoria chinensis</i>	Lindsaeaceae	Leaves are used internally for chronic enteritis in Mauritius.
38.	<i>Pityrogramma calomelanos</i>	Pteridiaceae	Plant decoction is used for kidney in the Philippines, tea prepared out of frond is used as a cure for flu, hypertension, fever and cough in Trinidad. The rhizomes are considered anthelmintic in South Africa. A decoction of the frond is taken for boils in the mouth and nose. The fronds are also used for asthma and cold and chest congestion.
39.	<i>Psilotum nudum</i>	Psilotaceae	The oily spores are given to infants to arrest diarrhea. The juice of the herb showed antibacterial activity against <i>Miocroccus pyogenes</i> and <i>Pseudomonas nerugionasa</i> and also used as a purgative.

Sr. No.	Name of Species	Family	Remarks
40.	<i>Pteridium revolutum</i>	Pteridiaceae	Rhizome is astringent, anthelmintic and is useful in diarrhea and for the treatment of inflammation in the gastric and intestinal mucous membranes.
41.	<i>Pteris cretica</i>	Pteridaceae	The fronds are antibacterial, which are made into a paste and applied in wounds.
42.	<i>Pteris vittata</i>	Pteridaceae	Plant extract is used as demulcent, hypotensive, tonic; antiviral and as antibacterial.
43.	<i>Pteris wallichiana</i>	Pteridaceae	Fresh leaves are crushed and applied to stop bleeding and healing of wounds.
44.	<i>Pteris ensiformis</i>	Pteridaceae	Young fronds are eaten as a flavouring; decoction of fresh frond is given against dysentery; juice of rhizome is applied to glandular swelling of the neck.
45.	<i>Pyrosia adnascens</i>	Polypodiaceae	Fronds are used medicinally to treat dysentery and burn injuries.
46.	<i>Selaginella involvens</i>	Selaginellaceae	The ladies use powder of the spore as a substitute to vermilion powder, the 'Sindoor' Nepali language. Plant is considered to help to rejuvenate life, also used in the prolapse of rectum, prevents cough, bleeding piles, gravel amenorrhea and as an antibacterial.
47.	<i>Stenochlaena Palustris</i>	Stenochlaenaceae	Fronds are antibacterial, given for the treatment of fever, skin diseases, throat and gastric ulcers. Leaves and rhizomes are used as a cooling agent and in the treatment of burns and ulcers.
48.	<i>Thelypteris caudipinna</i>	Thelypteridaceae	Juice of rhizome (about 3 teaspoonfull thrice a day) is given in case of fever by Nepalese.
49.	<i>Tectaria coadunata</i>	Dryopteridaceae	The plant is antibacterial, used in asthma, bronchitis, stings of honeybee. Extract from fresh rhizome is used for preventing diarrhea in children in Darjeeling District. The cooked tender portion is used for the curing stomach trouble.
50.	<i>Tectaria polymorpha</i>	(Dryopteridaceae)	The plants are considered as anthelmintic.
51.	<i>Vittaria elongata</i>	Vittariaceae	Fronds are used to treat rheumatism.

Source: Benniamin A, 2011: Medicinal ferns of North Eastern India with special reference to Arunachal Pradesh, Indian Journal of Traditional Knowledge Vol. 10(3), July 2011, pp. 516-522.



## **Annexure – 6.2**

### **Bryophytes Reported to Occur in Arunachal Pradesh/ Eastern Himalaya, their Threatened and Endemism Status**





**LIST OF MOSSES**

	SPECIES	DISTRIBUTION	STATUS
	FAMILY- SPHAGNACEA E		
	GENUS- <i>Sphagnum</i>		
1.	<i>S. teres</i>	Eastern Himalaya	
ORDER- POLYTRICHALES			
	FAMILY- POLYTRICHACEAE		
	GENUS- <i>Atrichum</i>		
2.	<i>L. crispata</i>	Arunachal Pradesh	
3.	<i>F. hygrometrica</i> <i>var. calvescens</i>	Arunachal Pradesh	
4.	<i>P. coorgense</i>	Eastern Himalaya	
5.	<i>P. pulchellum</i>	Arunachal Pradesh	
6.	<i>P. repandum</i>	Arunachal Pradesh	
7.	<i>E. mangiferae</i>	Eastern Himalayas	Endemic
	GENUS- <i>Solmsiella</i>		
8.	<i>S. reinwardtii</i>	Arunachal Pradesh	
	GENUS- <i>Dicranoloma</i>		
9.	<i>D. gymnostomum</i>	Eastern Himalaya	
	FAMILY- CALYMPERACEAE		
	GENUS- <i>Calymperes</i>		
10.	<i>C. burmense</i>	Arunachal Pradesh	
11.	<i>C. hampei</i>	Arunachal Pradesh	
	GENUS- <i>Octoblepharum</i>		
12.	<i>O. albidum</i>	Arunachal Pradesh	
	GENUS- <i>Thyridium</i>		
13.	<i>T. piluliferum</i>	Arunachal Pradesh	Endemic
ORDER- POTTIALES			
	FAMILY- POTTIACEAE		
	GENUS- <i>Barbula</i>		
14.	<i>B. gracilentata</i>	Eastern Himalaya	Endemic
15.	<i>B. gregaria</i>	Arunachal Pradesh	
16.	<i>B. indica</i>	Eastern Himalaya	
17.	<i>B. javanica</i>	Eastern Himalaya	
18.	<i>B. reflexa</i>	Eastern Himalaya	
	GENUS- <i>Chionoloma</i>		
19.	<i>C. induratum</i>	Eastern Himalaya	
	GENUS- <i>Hydrogonium</i>		
20.	<i>H. arcuatum</i>	Arunachal Pradesh	
	GENUS- <i>Hyophila</i>		
21.	<i>H. involuta</i>	Arunachal Pradesh	
	GENUS- <i>Semibarbula</i>		
22.	<i>S. orientalis</i>	Arunachal Pradesh	
	GENUS- <i>Splachnobryum</i>		
23.	<i>S. indicum</i>	Eastern Himalaya	
ORDER- SPLACHNALES			
	FAMILY-		

	SPECIES	DISTRIBUTION	STATUS
	SPLACHNACEAE		
	GENUS- <i>Tayloria</i>		
24.	<i>T. indica</i>	Arunachal Pradesh	
ORDER- BRYALES			
	FAMILY- BRYACEAE		
	GENUS- <i>Anomobryum</i>		
25.	<i>A. filiforme</i> <i>var. concinnatum</i>	Arunachal Pradesh	
	GENUS- <i>Bryum</i>		
26.	<i>B. argenteum var.</i> <i>lanatum</i>	Arunachal Pradesh	
27.	<i>B. cellulare</i>	Arunachal Pradesh	
	GENUS- <i>Rhodobryum</i>		
28.	<i>R. giganteum</i>	Arunachal Pradesh	
	FAMILY- MNIACEAE		
	GENUS- <i>Mnium</i>		
29.	<i>M. heterophyllum</i>	Arunachal Pradesh	
30.	<i>M. laevinerve</i>	Arunachal Pradesh	
31.	<i>M. lycopodioides</i>	Arunachal Pradesh	
32.	<i>M. rostratum</i>	Arunachal Pradesh	
33.	<i>M. vesicatum</i>	Eastern Himalaya	
	GENUS- <i>Orthomniopsis</i>		
34.	<i>O. dilalata</i>	Arunachal Pradesh	
	GENUS- <i>Orthomnium</i>		
35.	<i>O. bryoides</i>	Arunachal Pradesh	
	GENUS- <i>Pohlia</i>		
36.	<i>P. cruda</i>	Arunachal Pradesh	
37.	<i>P. elongata</i>	Arunachal Pradesh	
38.	<i>P. flexuosa</i>	Arunachal Pradesh	
ORDER- BARTRAMIALES			
	FAMILY- BARTRAMIACEAE		
	GENUS- <i>Anacolia</i>		
39.	<i>A. menziesii</i>	Eastern Himalaya	
	GENUS- <i>Bartramia</i>		
40.	<i>B. halleriana</i>	Arunachal Pradesh	
41.	<i>B. leptodonta</i>	Arunachal Pradesh	
	GENUS- <i>Philonotis</i>		
42.	<i>P. angusta</i>	Arunachal Pradesh	
	GENUS- <i>Macromitrium</i>		
43.	<i>M. calymperoideum</i>	Arunachal Pradesh	
44.	<i>M. nepalense</i>	Arunachal Pradesh	
45.	<i>M. rigbyanum</i>	Arunachal Pradesh	Endemic
46.	<i>M. sulcatum</i>	Arunachal Pradesh	
47.	<i>M. turgidum</i>	Arunachal Pradesh	
ORDER- HEDWIGIALES			
	FAMILY- HEDWIGIACEAE		
	GENUS- <i>Bryowijkia</i>		
48.	<i>B. ambigua</i>	Arunachal Pradesh	
ORDER-RHIZOGONIALES			

	SPECIES	DISTRIBUTION	STATUS
	FAMILY- RHIZOGONIACEAE		
	GENUS- <i>Pyrrhobryum</i>		
49.	<i>P. spiniforme</i>	Arunachal Pradesh	
	GENUS- <i>Rhizogonium</i>		
50.	<i>R. spiniforme</i>	Arunachal Pradesh	
ORDER – HOOKERIALES			
	FAMILY- HYOPTERYGIACEAE		
	GENUS- <i>Cyathophorella</i>		
51.	<i>C. burkillii</i>	Arunachal Pradesh	Endemic
52.	<i>C. intermedia</i>	Arunachal Pradesh	Endemic in Himalayas
53.	<i>D. paradoxum</i>	Arunachal Pradesh	
	GENUS- <i>Hypopterygium</i>		
54.	<i>H. flavolimbatum</i>	Arunachal Pradesh	Endemic in Himalayas
	FAMILY- HOOKERIAACEAE		
	GENUS- <i>Daltonia</i>		
55.	<i>D. marginata</i>	Arunachal Pradesh	Endemic
56.	<i>D. perlaxiretis</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Distichophyllum</i>		
57.	<i>D. griffithii</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Hookeria</i>		
58.	<i>H. acutifolia</i>	Arunachal Pradesh	
ORDER- HYPNALES			
	FAMILY- AMBLYSTEGIACEAE		
	GENUS- <i>Ortholimnobia</i>		
59.	<i>O. borii</i>	Arunachal Pradesh	Endemic
	FAMILY- LESKEACEAE		
	GENUS- <i>Claopodium</i>		
60.	<i>C. assurgens</i>	Arunachal Pradesh	
61.	<i>C. prionophyllum</i>	Arunachal Pradesh,	
	GENUS- <i>Leskea</i>		
62.	<i>L. perstricta</i>	Arunachal Pradesh	
	GENUS- <i>Pseudoleskeopsis</i>		
63.	<i>P. zippelii</i>	Arunachal Pradesh,	
	FAMILY- THUIDIACEAE		
	GENUS- <i>Pelekium</i>		
64.	<i>P. bifarium</i>	Arunachal Pradesh	
	GENUS- <i>Thuidium</i>		
65.	<i>T. brotheri</i>	Arunachal Pradesh	Endemic
66.	<i>T. cymbifolium</i>	Arunachal Pradesh	
67.	<i>T. glaucinum</i>	Arunachal Pradesh	
68.	<i>T. kiasense</i>	Arunachal Pradesh	
69.	<i>T. meyenianum</i>	Arunachal Pradesh	
70.	<i>T. minusculum</i>	Arunachal Pradesh	
71.	<i>T. orientale</i>	Arunachal Pradesh	
72.	<i>T. sparsifolium</i>	Arunachal Pradesh	
73.	<i>T. venustum</i>	Arunachal Pradesh	

	SPECIES	DISTRIBUTION	STATUS
	FAMILY- BRACHYTHECIACEAE		
	GENUS- <i>Eurhynchium</i>		
74.	<i>E. dumosum</i>	Arunachal Pradesh	
75.	<i>E. muelleri</i>	Arunachal Pradesh	
	GENUS- <i>Rhynchostegiella</i>		
76.	<i>R. assamica</i>	Arunachal Pradesh	Endemic
77.	<i>R. menadensis</i>	Arunachal Pradesh	
78.	<i>R. scabriseta</i>	Arunachal Pradesh	Endemic in Himalayas
	GENUS- <i>Rhynchostegium</i>		
79.	<i>R. duthiei</i>	Arunachal Pradesh	Endemic in Himalayas
80.	<i>R. herbaceum</i>	Arunachal Pradesh	
81.	<i>R. hookeri</i>	Arunachal Pradesh	
	FAMILY- METEORIACEAE		
	GENUS- <i>Aerobryopsis</i>		
82.	<i>A. membranacea</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Aerobryum</i>		
83.	<i>A. speciosum</i>	Arunachal Pradesh	
	GENUS- <i>Barbella</i>		
84.	<i>B. cubensis</i>	Arunachal Pradesh	
85.	<i>B. stevensii</i>	Arunachal Pradesh	
	GENUS- <i>Diaphanodon</i>		
86.	<i>D. blandus</i>	Arunachal Pradesh	
	GENUS- <i>Floribundaria</i>		
87.	<i>F. floribunda</i>	Arunachal Pradesh	
	GENUS- <i>Meteoriella</i>		
88.	<i>M. soluta</i>	Arunachal Pradesh	
	GENUS- <i>Meteoriopsis</i>		
89.	<i>M. reclinata</i>	Arunachal Pradesh	
90.	<i>M. squarrosa</i>	Arunachal Pradesh	
	GENUS- <i>Pseudobarbella</i>		
91.	<i>P. niitakayamensis</i>	Eastern Himalaya	
	GENUS- <i>Pseudospiridentopsis</i>		
92.	<i>P. horrida</i>	Arunachal Pradesh	
	GENUS- <i>Trachypodopsis</i>		
93.	<i>T. serrulata</i>	Arunachal Pradesh	
94.	<i>T. uriculata</i>	Arunachal Pradesh	
	GENUS- <i>Trachypus</i>		
95.	<i>T. bicolor</i>	Arunachal Pradesh	
	FAMILY- FABRONIACEAE		
	GENUS- <i>Ectropothecium</i>		
96.	<i>E. buitenzorgii</i>	Arunachal Pradesh	
97.	<i>E. cyperoides</i>	Arunachal Pradesh	
98.	<i>E. dealbatum</i>	Arunachal Pradesh	

	<b>SPECIES</b>	<b>DISTRIBUTION</b>	<b>STATUS</b>
99.	<i>E. rumaligerum</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Taxiphyllum</i>		
100.	<i>T. taxirameum</i>	Arunachal Pradesh	
	GENUS- <i>Vesicularia</i>		
101.	<i>V. montagnei</i>	Arunachal Pradesh	
102.	<i>V. reticulata</i>	Arunachal Pradesh	
103.	<i>V. succosa</i>	Arunachal Pradesh	
104.	<i>V. vesicularis</i>	Arunachal Pradesh	
	FAMILY- PTERIGYNANDRACEAE		
	GENUS- <i>Campylodontium</i>		
105.	<i>C. flavescens</i>	Arunachal Pradesh	
	GENUS- <i>Macrothamnium</i>		
106.	<i>M. macrocarpum</i>	Arunachal Pradesh	
	FAMILY- SYMPHYDONTACEAE		
	GENUS- <i>Symphydon</i>		
107.	<i>S. complanatus</i>	Arunachal Pradesh	Endemic in the Eastern Himalaya
108.	<i>S. scabrisetus</i>	Arunachal Pradesh	Endemic
	FAMILY- ENTODONTACEAE		
	GENUS- <i>Entodon</i>		
109.	<i>E. ovicarpus</i>	Arunachal Pradesh	Endemic
110.	<i>E. luridus</i>	Arunachal Pradesh	
111.	<i>E. plicatus</i>	Arunachal Pradesh	
	FAMILY- PYLAISIADELPHACEAE		
	GENUS- <i>Aptychella</i>		
112.	<i>A. tenuiramea</i>	Eastern Himalaya	
	GENUS- <i>Brotherella</i>		
113.	<i>B. amblystegia</i>	Arunachal Pradesh	Endemic
114.	<i>B. erythrocaulis</i>	Arunachal Pradesh	Endemic
115.	<i>B. falcate</i>	Arunachal Pradesh	
	GENUS- <i>Isopterygium</i>		
116.	<i>I. albescens</i>	Arunachal Pradesh	
117.	<i>I. longitheca</i>	Arunachal Pradesh	Endemic
118.	<i>I. seligeri</i>	Eastern Himalayas	
	GENUS- <i>Wijkia</i>		
119.	<i>W. penicillata</i>	Arunachal Pradesh	Endemic in the Eastern Himalayas
120.	<i>W. surcularis</i>	Arunachal Pradesh	
	FAMILY- SEMATOPHYLLACEAE		
	GENUS- <i>Meiothecium</i>		
121.	<i>M. microcarpum</i>	Eastern Himalaya	
	GENUS- <i>Taxithelium</i>		
122.	<i>T. arnotii</i>	Eastern Himalaya	
123.	<i>T. kerianum</i>	Arunachal Pradesh	

	<b>SPECIES</b>	<b>DISTRIBUTION</b>	<b>STATUS</b>
124.	<i>T. laeviuscolum</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Trichosteleum</i>		
125.	<i>T. hamatum</i>	Arunachal Pradesh	
	GENUS- <i>Pilotrichopsis</i>		
126.	<i>P. dentata</i>	Arunachal Pradesh	
	FAMILY- LEUCODONTACEAE		
	GENUS- <i>Leucodon</i>		
127.	<i>L. secundus</i>	Arunachal Pradesh	
	FAMILY- PTEROBRYACEAE		
	GENUS- <i>Endotrichella</i>		
128.	<i>E. elegans</i>	Arunachal Pradesh	
	GENUS- <i>Symphysodontella</i>		
129.	<i>S. borii</i>	Arunachal Pradesh	Endemic
130.	<i>S. pilifolia</i>	Arunachal Pradesh	Endemic
131.	<i>S. subulata</i>	Arunachal Pradesh	
	FAMILY- NECKERACEAE		
	GENUS- <i>Calypothecium</i>		
132.	<i>C. urvilleanum</i>	Arunachal Pradesh	
	GENUS- <i>Chaetomitriopsis</i>		
133.	<i>C. glaucocarpa</i>	Arunachal Pradesh	
	GENUS- <i>Handeliobryum</i>		
134.	<i>H. setschwanicum</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Himantocladium</i>		
135.	<i>H. plumula</i>	Arunachal Pradesh	
	GENUS- <i>Homaliiodendron</i>		
136.	<i>H. exiguum</i>	Arunachal Pradesh	
137.	<i>H. flabellatum</i>	Arunachal Pradesh	
138.	<i>H. scalpellifolium</i>	Arunachal Pradesh	
	GENUS- <i>Neckeropsis</i>		
139.	<i>N. crinata</i>	Arunachal Pradesh	
	GENUS- <i>Thamnobryum</i>		
140.	<i>T. fruticosum</i>	Arunachal Pradesh	

**LIST OF LIVERWORTS**

	<b>SPECIES</b>	<b>DISTRIBUTION</b>	<b>STATUS</b>
ORDER- TREUBIALES			
	FAMILY- TREUBIACEAE		
	GENUS- <i>Apotreubia</i>		
1.	<i>A. nana</i>	Eastern Himalaya	Rare
	FAMILY- HAPLOMITRIACEAE		
	GENUS- <i>Haplomitrium</i> Subg. <i>Calobryum</i>		
2.	<i>H. kashyapii</i>	Arunachal Pradesh	Vulnerable
	FAMILY- AYTONIACEAE		
	GENUS- <i>Asterella</i>		
3.	<i>A. anguta</i>	Eastern Himalaya	Endemic
	FAMILY- CYATHODIACEAE		
	GENUS- <i>Cyathodium</i>		
4.	<i>C. cavernarum</i>	Arunachal Pradesh	
5.	<i>C. mehranum</i>	Eastern Himalaya	Endemic
6.	<i>C. tuberculatum</i>	Eastern Himalaya	Endemic
	FAMILY- EXORMOTHECACEAE		
	GENUS- <i>Ricciocarpus</i>		
7.	<i>R. natans</i>	Eastern Himalaya	Rare
	FAMILY- WIESNERELLACEAE		
	GENUS- <i>Wiesnerella</i>		
8.	<i>W. denudata</i>	Eastern Himalaya	Rare
	FAMILY- CALYCULARIACEAE		
	GENUS- <i>Calycularia</i>		
9.	<i>C. crispula</i>	Eastern Himalaya	Rare
	FAMILY- METZGERIACEAE		
	GENUS- <i>Metzgeria</i>		
10.	<i>M. crispula</i>	Eastern Himalaya	Endemic and endangered
11.	<i>M. decipiens</i>	Eastern Himalaya	
12.	<i>M. longisexla</i>	Eastern Himalaya	Rare
	GENUS- <i>Riccardia</i>		
13.	<i>R. multifida</i>	Eastern Himalaya	
14.	<i>R. sikkimensis</i>	Eastern Himalaya	Endemic and rare
	FAMILY- PORELLACEAE		

	SPECIES	DISTRIBUTION	STATUS
	GENUS- <i>Porella</i>		
15.	<i>P. campylophylla</i>	Arunachal Pradesh	
	FAMILY- JUBULACEAE		
	GENUS- <i>Jubula</i>		
16.	<i>J. hattori</i>	Eastern Himalaya	Endemic and rare
	FAMILY- LEJEUNIACEAE		
	GENUS- <i>Caudejeunia</i>		
17.	<i>C. lehmanniana</i>	Arunachal Pradesh	
18.	<i>C. lanciloba</i>	Eastern Himalaya	
19.	<i>C. trichomanis</i>	Eastern Himalaya	
	GENUS- <i>Drepanolejeunea</i>		
20.	<i>D. angustifolia</i>	Eastern Himalaya	
21.	<i>D. erecta</i>	Eastern Himalaya	
22.	<i>D. vesiculosa</i>	Eastern Himalaya	
	GENUS- <i>Lejeunea</i>		
23.	<i>L. boninensis</i>	Eastern Himalaya	
24.	<i>L. cavifolia</i>	Eastern Himalaya	
25.	<i>L. discreta</i>	Eastern Himalaya	
26.	<i>L. flava</i>	Eastern Himalaya	
27.	<i>L. indica</i>	Eastern Himalaya	
28.	<i>L. neelgherriana</i>	Eastern Himalaya	
29.	<i>L. perrottetii</i>	Eastern Himalaya	
	GENUS- <i>Leptolejeunea</i>		
30.	<i>L. elliptica</i>	Eastern Himalaya	
31.	<i>L. latifolia</i>	Eastern Himalaya	
32.	<i>L. sikkimensis</i>	Eastern Himalaya	
33.	<i>L. subacuta</i>	Eastern Himalaya	
	GENUS- <i>Lopholejeunea</i>		
34.	<i>L. applanata</i>	Eastern Himalaya	
35.	<i>L. indica</i>	Eastern Himalaya	Endemic
36.	<i>L. kashyapii</i>	Eastern Himalaya	
37.	<i>L. nigricans</i>	Eastern Himalaya	
38.	<i>L. sikkimensis</i>	Eastern Himalaya	
39.	<i>L. sikkimense</i> var. <i>dentata</i>	Eastern Himalaya	
40.	<i>L. subfusca</i>	Eastern Himalaya	
	GENUS- <i>Mastigolejeunea</i>		
41.	<i>M. repleta</i>	Eastern Himalaya	
	GENUS- <i>Microlejeunea</i>		
42.	<i>M. aligera</i>	Eastern Himalaya	



	<b>SPECIES</b>	<b>DISTRIBUTION</b>	<b>STATUS</b>
43.	<i>M. punctiformis</i>	Eastern Himalaya	
	GENUS- <i>Spruceanthus</i>		
44.	<i>S. semirepandus</i>	Eastern Himalayas	
	GENUS- <i>Taxilejeunea</i>		
45.	<i>T. eckloniana</i>	Eastern Himalaya	
46.	<i>T. himalayensis</i>	Eastern Himalaya	
	GENUS- <i>Trocholejeunea</i>		
47.	<i>T. infusate</i>	Eastern Himalaya	
	FAMILY- TRICHO-COLEACEAE		
	GENUS- <i>Trichocolea</i>		
48.	<i>T. indica</i>	Eastern Himalaya	
	FAMILY- LEPIDOZIACEAE		
	GENUS- <i>Bazzania</i>		
49.	<i>B. assamica</i>	Eastern Himalaya	Endangered
	FAMILY- CEPHALOZIELLACEAE		
	GENUS- <i>Cephaloziella</i>		
50.	<i>C. indica</i>	Eastern Himalaya	Endemic
	FAMILY – JUNGERMANNIACEAE		
	GENUS- <i>Jungermannia</i>		
51.	<i>J. lanigera</i>	Eastern Himalaya	
52.	<i>J. macrocarpa</i>	Eastern Himalaya	
	FAMILY- GEOCALYCACEAE		
	GENUS- <i>Geocalyx</i>		
53.	<i>G. graveolens</i>	Eastern Himalaya	

**LIST OF HORNWORTS**

	<b>SPECIES</b>	<b>DISTRIBUTION</b>	<b>STATUS</b>
	ANTHOCEROTACEAE		
	GENUS- <i>Anthoceros</i>		
1.	<i>A. angustus</i>	Eastern Himalaya	
2.	<i>A. bharadwajii</i>	Arunachal Pradesh	Endemic
	GENUS- <i>Phaeoceros</i>		
3.	<i>P. carolinianus</i>	Arunachal Pradesh	
4.	<i>P. himalayensis</i>	Arunachal Pradesh	
5.	<i>P. laevis</i>	Arunachal Pradesh	

Source: Checklist of the bryophytes of India, Divya Dandotiya, H. Govindaparyari, Shantanu Suman and Prem L. Uniyal, Department of Botany, University of Delhi- 110007, Archive for Bryology 88 (2011).

## **Annexure – 6.3**

### **Endemic Angiosperm Taxa of Arunachal Pradesh**



Sr. No.	Species	Family
1.	<i>Acanthus leucostachyus</i>	Acanthaceae
2.	<i>Acer oblongum</i> var. <i>microcarpum</i>	Aceraceae
3.	<i>Acer sikkimensis</i> var. <i>serrulatum</i>	Aceraceae
4.	<i>Aconitum assamicum</i>	Ranunculaceae
5.	<i>Aconitum lethale</i>	Ranunculaceae
6.	<i>Aconogonum pangianum</i>	Polygonaceae
7.	<i>Aeschynanthus parasiticus</i>	Gesneriaceae
8.	<i>Agapetes aborensis</i>	Ericaceae
9.	<i>Agapetes refracta</i>	Ericaceae
10.	<i>Agapetes subansirica</i>	Ericaceae
11.	<i>Aglaia edulis</i>	Meliaceae
12.	<i>Albizia arunachalensis</i>	Mimosaceae
13.	<i>Anemone howellii</i>	Ranunculaceae
14.	<i>Anemone trullifolia</i>	Ranunculaceae
15.	<i>Baliospermum micranthum</i>	Euphorbiaceae
16.	<i>Bauhinia khasiana</i>	Caesalpiniaceae
17.	<i>Bauhinia ovalifolia</i>	Caesalpiniaceae
18.	<i>Begonia aborensis</i>	Begoniaceae
19.	<i>Begonia iridescens</i>	Begoniaceae
20.	<i>Begonia scintillans</i>	Begoniaceae
21.	<i>Begonia silhetensis</i>	Begoniaceae
22.	<i>Beilschmiedia aborensis</i>	Lauraceae
23.	<i>Beilschmiedia deomalica</i>	Lauraceae
24.	<i>Berberis dasyclada</i>	Berberidaceae
25.	<i>Boehmeria tirapensis</i>	Urticaceae
26.	<i>Bulbophyllum orratissimum</i>	Orchidaceae
27.	<i>Bulleyia yunnanensis</i>	Orchidaceae
28.	<i>Calamus leptospadix</i>	Arecaceae
29.	<i>Calanthe densiflora</i>	Orchidaceae
30.	<i>Caltha palustris</i> var. <i>purpurea</i>	Ranunculaceae
31.	<i>Camellia siangensis</i>	Theaceae
32.	<i>Capparis acutifolia</i>	Capparidaceae
33.	<i>Capparis pachyphylla</i>	Capparidaceae
34.	<i>Cardamine scoriarum</i>	Brassicaceae
35.	<i>Ceratostylis subulata</i>	Orchidaceae
36.	<i>Cheirostylis munnacampensis</i>	Orchidaceae
37.	<i>Cheirostylis sessanica</i>	Orchidaceae
38.	<i>Chirita macrophylla</i>	Gesneriaceae
39.	<i>Chirita mishmiensis</i>	Gesneriaceae
40.	<i>Cissus assamica</i>	Orchidaceae
41.	<i>Cleisostoma tricallosum</i>	Orchidaceae
42.	<i>Clerodendrum lasiocephalum</i>	Verbenaceae
43.	<i>Coffea khasiana</i>	Rubiaceae
44.	<i>Coptis teeta</i>	Ranunculaceae
45.	<i>Corydalis oligacantha</i>	Fumariaceae
46.	<i>Cotoneaster assamensis</i>	Rosaceae
47.	<i>Cymbidium eburneum</i>	Orchidaceae
48.	<i>Dalbergia oliveri</i>	Fabaceae
49.	<i>Dendrobium cathcartii</i>	Orchidaceae
50.	<i>Dendrobium hookerianum</i>	Orchidaceae

Sr. No.	Species	Family
51.	<i>Dendrobium nareshbahadurii</i>	Orchidaceae
52.	<i>Dendrobium sulcatum</i>	Orchidaceae
53.	<i>Desmodium dioicum</i>	Fabaceae
54.	<i>Desmodium likabaliium</i>	Fabaceae
55.	<i>Dicentra roylei</i>	Fumariaceae
56.	<i>Didymosperma nana</i>	Arecaceae
57.	<i>Dioscorea wattii</i>	Dioscoreaceae
58.	<i>Diplomeris pulchella</i>	Orchidaceae
59.	<i>Dumasia villosa</i>	Fabaceae
60.	<i>Dysoxylum pallens</i>	Meliaceae
61.	<i>Dysoxylum reticulatum</i>	Meliaceae
62.	<i>Echinocarpus tomentosus</i>	Elaeocarpaceae
63.	<i>Elaeocarpus dubius</i>	Elaeocarpaceae
64.	<i>Embelia subcoriacea</i>	Myrsinaceae
65.	<i>Epipogium indicum</i>	Orchidaceae
66.	<i>Epipogium sessanum</i>	Orchidaceae
67.	<i>Eranthemum leptanthus</i>	Acanthaceae
68.	<i>Eria clausa</i>	Orchidaceae
69.	<i>Eria ferruginea</i>	Orchidaceae
70.	<i>Eria lohitensis</i>	Orchidaceae
71.	<i>Euonymus fortunei</i>	Celastraceae
72.	<i>Euonymus glaber</i>	Celastraceae
73.	<i>Eurya arunachalensis</i>	Theaceae
74.	<i>Galeola falconeri</i>	Orchidaceae
75.	<i>Garcinia acuminata</i>	Clusiaceae
76.	<i>Gastrodia arunachalensis</i>	Orchidaceae
77.	<i>Gleditsia assamica</i>	Caesalpiniaceae
78.	<i>Globba multiflora</i>	Zingiberaceae
79.	<i>Glycosmis boreana</i>	Rutaceae
80.	<i>Glycosmis cymosa</i>	Rutaceae
81.	<i>Gomphogyne macrocarpa</i>	Cucurbitaceae
82.	<i>Gomphostemma aborensis</i>	Lamiaceae
83.	<i>Grewia denticulata</i>	Tiliaceae
84.	<i>Haematocarpus validus</i>	Menispermaceae
85.	<i>Hedychium longipedunculatum</i>	Zingiberaceae
86.	<i>Hedychium radiatum</i>	Zingiberaceae
87.	<i>Hedychium robustum</i>	Zingiberaceae
88.	<i>Hedychium wardii</i>	Zingiberaceae
89.	<i>Herminium longilobatum</i>	Orchidaceae
90.	<i>Hopea shingkeng</i>	Dipterocarpaceae
91.	<i>Hypericum griffithii</i>	Hypericaceae
92.	<i>Hypericum wightianum</i>	Hypericaceae
93.	<i>Impatiens assamensis</i>	Balsaminaceae
94.	<i>Impatiens bracteolata</i>	Balsaminaceae
95.	<i>Impatiens citrina</i>	Balsaminaceae
96.	<i>Impatiens laevigata</i>	Balsaminaceae
97.	<i>Impatiens latiflora</i>	Balsaminaceae
98.	<i>Impatiens mishmiensis</i>	Balsaminaceae
99.	<i>Impatiens porrecta</i>	Balsaminaceae
100.	<i>Impatiens racemulosa</i>	Balsaminaceae
101.	<i>Indigofera nigrescens</i>	Fabaceae

Sr. No.	Species	Family
102.	<i>Jasminum lanceolarium</i>	Oleaceae
103.	<i>Lagenandra undulata</i>	Araceae
104.	<i>Lasianthus sikkimensis</i>	Rubiaceae
105.	<i>Lasianthus tubiflorus</i>	Rubiaceae
106.	<i>Leycesteria dibangvalliensis</i>	Caprifoliaceae
107.	<i>Liparis assamica</i>	Orchidaceae
108.	<i>Liparis distans</i>	Orchidaceae
109.	<i>Liparis plantaginea</i>	Orchidaceae
110.	<i>Lithocarpus kamengeni</i>	Fagaceae
111.	<i>Litsea membranifolia</i>	Lauraceae
112.	<i>Litsea mishmiensis</i>	Lauraceae
113.	<i>Livistona jenkinsiana</i>	Arecaceae
114.	<i>Lobelia mishmica</i>	Campanulaceae
115.	<i>Loxostigma griffithii</i>	Cyrtandraceae
116.	<i>Luculia pinceana</i>	Rubiaceae
117.	<i>Lysimachia santapau</i>	Primulaceae
118.	<i>Maesa arunachalensis</i>	Myrsinaceae
119.	<i>Maesa nayarii</i>	Myrsinaceae
120.	<i>Maesa truncata</i>	Myrsinaceae
121.	<i>Magnolia bailloni</i>	Magnoliaceae
122.	<i>Magnolia caveana</i>	Magnoliaceae
123.	<i>Magnolia griffithii</i>	Magnoliaceae
124.	<i>Magnolia gustavi</i>	Magnoliaceae
125.	<i>Magnolia insignis</i>	Magnoliaceae
126.	<i>Michelia doltsopa</i>	Magnoliaceae
127.	<i>Michelia wardii</i>	Magnoliaceae
128.	<i>Miliusa dolicantha</i>	Annonaceae
129.	<i>Musa velutina</i>	Musaceae
130.	<i>Mycetia listeri</i>	Rubiaceae
131.	<i>Mycetia mukerjiana</i>	Rubiaceae
132.	<i>Oberonia acaulis</i>	Orchidaceae
133.	<i>Oberonia sulcata</i>	Orchidaceae
134.	<i>Ophiorrhiza calcarata</i>	Rubiaceae
135.	<i>Ophiorrhiza hispida</i>	Rubiaceae
136.	<i>Ophiorrhiza talevalliensis</i>	Rubiaceae
137.	<i>Orthosiphon wattii</i>	Lamiaceae
138.	<i>Paphiopedilum fairrieianum</i>	Orchidaceae
139.	<i>Paravatia elliptica</i>	Lardizabalaceae
140.	<i>Pauia belladona</i>	Solanaceae
141.	<i>Peliosanthes teta</i> ssp. <i>humilis</i>	Liliaceae
142.	<i>Petasites kamengicus</i>	Asteraceae
143.	<i>Phanera khasiana</i>	Leguminosae
144.	<i>Phlogacanthus gracilis</i>	Acanthaceae
145.	<i>Phlogacanthus parviflorus</i>	Acanthaceae
146.	<i>Phlogacanthus tubiflorus</i>	Acanthaceae
147.	<i>Pholidota convallariae</i>	Orchidaceae
148.	<i>Pholidota pygmaea</i>	Orchidaceae
149.	<i>Pholidota wattii</i>	Orchidaceae
150.	<i>Pilea insolens</i>	Urticaceae
151.	<i>Pileostegia subansiriana</i>	Hydrangeaceae
152.	<i>Piper anisotis</i>	Piperaceae

Sr. No.	Species	Family
153.	<i>Piper petiolatum</i>	Piperaceae
154.	<i>Podochilus khasianus</i>	Orchidaceae
155.	<i>Polyura geminata</i>	Rubiaceae
156.	<i>Pratia longipedicellata</i>	Campanulaceae
157.	<i>Premna milleflora</i>	Verbenaceae
158.	<i>Prenanthes scandens</i>	Asteraceae
159.	<i>Primula euosma</i>	Primulaceae
160.	<i>Primula mishmiensis</i>	Primulaceae
161.	<i>Primula subansirica</i>	Primulaceae
162.	<i>Psychotria aborensis</i>	Rubiaceae
163.	<i>Psychotria burkillii</i>	Rubiaceae
164.	<i>Pternopetalum senii</i>	Apiaceae
165.	<i>Pueraria bella</i>	Fabaceae
166.	<i>Pyrenaria barringtoniaefolia</i>	Theaceae
167.	<i>Renanthera imschootiana</i>	Orchidaceae
168.	<i>Rhaphidophora hookeri</i>	Araceae
169.	<i>Rhododendron beanianum</i>	Ericaceae
170.	<i>Rhododendron dalhousiae</i> var. <i>rhabdatum</i>	Ericaceae
171.	<i>Rhododendron falconeri</i> ssp. <i>eximium</i>	Ericaceae
172.	<i>Rhododendron megacalyx</i>	Ericaceae
173.	<i>Rhododendron nuttallii</i>	Ericaceae
174.	<i>Rhododendron pemakoense</i>	Ericaceae
175.	<i>Rhododendron pocophorum</i>	Ericaceae
176.	<i>Rhododendron pruniflorum</i>	Ericaceae
177.	<i>Rhododendron santapau</i>	Ericaceae
178.	<i>Rhododendron subansiriense</i>	Ericaceae
179.	<i>Rhododendron tanastylum</i>	Ericaceae
180.	<i>Rhododendron tawangensis</i>	Ericaceae
181.	<i>Rhododendron tephropeplum</i>	Ericaceae
182.	<i>Rhododendron walongense</i>	Ericaceae
183.	<i>Rhynochoglossum lazulinum</i>	Gesneriaceae
184.	<i>Rubus burkillii</i>	Rosaceae
185.	<i>Rubus ghanakantae</i>	Rosaceae
186.	<i>Sadiria boweri</i>	Myrsinaceae
187.	<i>Sadiria erecta</i>	Myrsinaceae
188.	<i>Sadiria subsessilifolia</i>	Myrsinaceae
189.	<i>Sapria himalayana</i>	Rafflesiaceae
190.	<i>Sarcoglyphis arunachalensis</i>	Orchidaceae
191.	<i>Sauroupus stiputatus</i>	Euphorbiaceae
192.	<i>Schisandra pleana</i>	Magnoliaceae
193.	<i>Senecio mishmi</i>	Asteraceae
194.	<i>Shorea assamica</i>	Dipterocarpaceae
195.	<i>Silene chodatii</i>	Caryophyllaceae
196.	<i>Skimmia arborescens</i>	Rutaceae
197.	<i>Sonerila arunachalensis</i>	Melastomataceae
198.	<i>Spiraea arunachalensis</i>	Rosaceae
199.	<i>Strobilanthes aborensis</i>	Acanthaceae
200.	<i>Strobilanthes secundus</i>	Acanthaceae
201.	<i>Strychnos quintuplinervis</i>	Strychnaceae



Sr. No.	Species	Family
202.	<i>Symplocos glauca</i>	Symplocaceae
203.	<i>Synotis borii</i>	Asteraceae
204.	<i>Synotis brevipappa</i>	Asteraceae
205.	<i>Synotis saluenensis</i>	Asteraceae
206.	<i>Syzygium mishmiense</i>	Myrtaceae
207.	<i>Tetrastigma obovatum</i>	Vitaceae
208.	<i>Tricarpelema glanduliferum</i>	Commelinaceae
209.	<i>Trichodesma khasianum</i>	Boraginaceae
210.	<i>Trichosanthes khasiana</i>	Cucurbitaceae
211.	<i>Trollius farreri</i>	Ranunculaceae
212.	<i>Viburnum corylifolium</i>	Caprifoliaceae
213.	<i>Viola pogonantha</i>	Violaceae
214.	<i>Vitis planicaulis</i>	Vitaceae
215.	<i>Wallichia triandra</i>	Arecaceae
216.	<i>Xanthophyllum burkillii</i>	Xanthophyllaceae
217.	<i>Zalacca secunda</i>	Araceae
218.	<i>Zanthoxylum burkillianum</i>	Rutaceae
219.	<i>Zanthoxylum pseudoxyphyllum</i>	Rutaceae
220.	<i>Zeuxine lindleyana</i>	Orchidaceae

Source: <http://bsienvic.nic.in/Forms/subjectwisearea.aspx?MID=29>



## **Annexure – 6.4**

### **Economically Important Species of Arunachal Pradesh**



Sr. No.	Name of Species	Habit	Forest Type
1.	<i>Abies densa</i>	Tree	TCF, Fir
2.	<i>Abies webbiana</i>	Tree	TBL, TCF
3.	<i>Abutilon indicum</i>	Herb	STE
4.	<i>Acacia catechu</i>	Tree	TSEV
5.	<i>Acacia pennata</i>	Climber	TSEV
6.	<i>Acacia sp.</i>	Tree	STE
7.	<i>Acacia pruinescens</i>	Shrub	STE
8.	<i>Acanthopanax trifoliatum</i>	Tree/Shrub	STE
9.	<i>Acer hookeri</i>	Tree	TBL
10.	<i>Acer laevigatum</i>	Tree	TSEV, TBL
11.	<i>Acer oblongum.</i>	Tree	STE, TBL
12.	<i>Acer thomsonii</i>	Tree	STE
13.	<i>Achyranthes aspera</i>	Herb	TSEV, MMD, AJHU, HLK, RVN
14.	<i>Achyranthes bidentata</i>	Herb	STE
15.	<i>Aconitum ferox</i>	Herb	TBL, RDN, Fir
16.	<i>Acronychia pedunculata</i>	Tree	TSEV, HLK
17.	<i>Actephila excelsa</i>	Shrub	MMD, STE
18.	<i>Actinidia callosa</i>	Climber	TSEV, STE
19.	<i>Actinodaphne angustifolia</i>	Tree	TSEV
20.	<i>Actinodaphne obovata</i>	Tree	MMD, DEGR, RVN
21.	<i>Adiantum flabellulatum</i>	Herb	TCF
22.	<i>Adiantum pedatum</i>	Herb	TBL
23.	<i>Ageratum conyzoides</i>	Herb	TSEV, MMD, STE, TBL, AJHU, DEGR
24.	<i>Ageratum houstonianum</i>	Herb	MMD
25.	<i>Aglaia hiernii</i>	Tree	TSEV, MMD, TEV, STE, TCF
26.	<i>Aglaonema hookerianum</i>	Herb	MMD, TEV, STE, RVN
27.	<i>Ailanthus excelsa</i>	Tree	TSEV
28.	<i>Ailanthus integrifolia</i> ssp. <i>calycina</i>	Tree	TSEV, MMD, TEV, STE, TBL, BAMB
29.	<i>Alangium chinense</i>	Tree	TBL, AJHU, RVN
30.	<i>Albizia lebbek</i>	Tree	TSEV, MMD, TEV, STE, TCF, AJHU, HLK, RVN
31.	<i>Albizia lucidior</i>	Tree	TSEV, TBL, DEGR
32.	<i>Albizia procera</i>	Tree	TSEV, TEV, STE, AJHU, Pine
33.	<i>Aleurites moluccana</i>	Tree	TSEV, STE
34.	<i>Allamanda cathartica</i>	Shrub	TSEV
35.	<i>Alnus nepalensis</i>	Tree	TSEV, TBL, TCF, RDN, Pine
36.	<i>Alocasia fornicata</i>	Herb	STE
37.	<i>Alpinia nigra</i>	Herb	AJHU
38.	<i>Alseodaphne petiolaris</i>	Tree	TSEV
39.	<i>Alstonia scholaris</i>	Tree	TSEV, TEV, TBL
40.	<i>Altingia excelsa</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, HLN, RVN
41.	<i>Amaranthus viridis</i>	Herb	TBL
42.	<i>Amischotolype mollissima</i>	Herb	TSEV
43.	<i>Amomum dealbatum</i>	Herb	TSEV, STE
44.	<i>Amomum subulatum</i>	Herb	TSEV

Sr. No.	Name of Species	Habit	Forest Type
45.	<i>Amoora rohituka</i>	Tree	HLK
46.	<i>Ampelocissus latifolia</i>	Herb	RVN
47.	<i>Ampelopteris prolifera</i>	Herb	GRA
48.	<i>Anacardium occidentale</i>	Tree	TSEV
49.	<i>Anemone vitifolia</i>	Herb	STE, TBL, AJHU
50.	<i>Angiopteris evecta</i>	Herb	TSEV, MMD, STE, AJHU, DEGR
51.	<i>Anisomeles indica</i>	Herb	AJHU
52.	<i>Anthocephalus chinensis</i>	Tree	TSEV, MMD, TEV, STE, RVN
53.	<i>Antidesma acuminatum</i>	Tree	TSEV, TEV, TBL
54.	<i>Antidesma buniis</i>	Tree	TSEV
55.	<i>Antidesma acidum</i>	Shrub/Tree	TSEV
56.	<i>Aphanamixis chittagonga</i>	Tree	TSEV, STE
57.	<i>Aphanamixis polystachya</i>	Tree	TSEV, AJHU
58.	<i>Aporusa aurea</i>	Tree	STE
59.	<i>Aporusa octandra</i>	Tree	TBL
60.	<i>Aquilaria malaccensis</i>	Tree	TEV, STE
61.	<i>Ardisia crispa</i>	Shrub	TSEV, STE, BAMB
62.	<i>Ardisia griffithii</i>	Shrub/Tree	TSEV
63.	<i>Ardisia macrocarpa</i>	Shrub	BAMB
64.	<i>Ardisia solanacea</i>	Shrub	TSEV, TBL
65.	<i>Ardisia thyrsoiflora</i>	Shrub	TSEV, STE, AJHU
66.	<i>Areca nagensis</i>	Tree	TSEV
67.	<i>Argemone mexicana</i>	Herb	TSEV, Pine
68.	<i>Aristida setacea</i>	Herb	GRA
69.	<i>Aristolochia cathcartii</i>	Climber	TSEV
70.	<i>Aristolochia platanifolia</i>	Climber	TSEV
71.	<i>Aristolochia tagala</i>	Climber	TSEV
72.	<i>Artemisia nilagirica</i>	Herb	MMD, GRA
73.	<i>Artemisia vulgaris</i>	Herb	TSEV, STE, TBL, DEGR, RVN
74.	<i>Artocarpus chama</i>	Tree	TSEV, MMD, TEV
75.	<i>Artocarpus heterophyllus</i>	Tree	TSEV
76.	<i>Arundinaria callosa</i>	Shrub	TSEV, AJHU
77.	<i>Arundinella nepalensis</i>	Shrub	TCF
78.	<i>Asplenium ensiforme</i>	Herb	TBL
79.	<i>Asplenium nidus</i>	Herb	TSEV, MMD, TEV, STE, AJHU, HLK, HLN, RVN
80.	<i>Azadirachta indica</i>	Tree	TEV, STE
81.	<i>Baccaurea sapida</i>	Tree	TSEV, MMD, TEV, STE, HLN, BAMB
82.	<i>Baliospermum sp.</i>	Shrub	TBL
83.	<i>Bambusa arundinacea</i>	Shrub	TSEV, STE, TBL
84.	<i>Bambusa balcooa</i>	Shrub	TSEV, TEV, STE, AJHU
85.	<i>Bambusa sp.</i>	Shrub	TBL, AJHU
86.	<i>Bambusa tulda</i>	Shrub	TSEV, TEV, STE, TBL, TCF, AJHU, Pine, HLK

Sr. No.	Name of Species	Habit	Forest Type
87.	<i>Bauhinia malabarica</i>	Tree	TSEV
88.	<i>Bauhinia purpurea</i>	Tree	TBL
89.	<i>Bauhinia scandens</i> var. <i>horsfieldii</i>	Shrub	MMD
90.	<i>Bauhinia variegata</i>	Tree	TSEV, MMD
91.	<i>Begonia annulata</i>	Herb	TSEV, STE
92.	<i>Begonia palmata</i>	Herb	TSEV, TEV, STE, AJHU
93.	<i>Begonia picta</i>	Herb	TSEV, MMD, STE
94.	<i>Begonia rex</i>	Herb	TSEV, STE, TBL, AJHU
95.	<i>Begonia roxburghii</i>	Herb	STE
96.	<i>Beilschmiedia assamica</i>	Tree	AJHU
97.	<i>Beilschmiedia brandisii</i>	Tree	TSEV, MMD, AJHU
98.	<i>Beilschmiedia pseudo-microcarpa</i>	Tree	TSEV, STE
99.	<i>Beilschmiedia roxburghiana</i>	Tree	TSEV
100.	<i>Berberis asiatica</i>	Shrub	Pine
101.	<i>Berberis insignis</i>	Shrub	TBL
102.	<i>Berberis wallichiana</i>	Shrub	TBL, Fir, GRA
103.	<i>Betula alnoides</i>	Tree	TBL, TCF
104.	<i>Betula cylindrostachys</i>	Tree	STE, TCF
105.	<i>Bhesa robusta</i>	Tree	TSEV, MMD, TEV, STE, TBL
106.	<i>Bidens pilosa</i>	Herb	DEGR, Pine
107.	<i>Bidens tripartita</i>	Herb	DEGR
108.	<i>Bischofia javanica</i>	Tree	TSEV, MMD, TEV, RVN
109.	<i>Blechnum orientale</i>	Herb	STE, AJHU, DEGR
110.	<i>Boehmeria macrophylla</i>	Shrub	TEV, STE, TBL, TCF
111.	<i>Boehmeria malabarica</i>	Shrub	TSEV, TEV, STE
112.	<i>Boehmeria nivea</i>	Shrub	TSEV
113.	<i>Bombax ceiba</i>	Tree	TSEV, MMD, DEGR, RVN
114.	<i>Brassica</i> sp.	Herb	AJHU
115.	<i>Arundinaria callosa</i>	Shrub	TSEV, AJHU
116.	<i>Breynia retusa</i>	Shrub/Tree	STE
117.	<i>Bridelia assamica</i>	Tree	TSEV
118.	<i>Bridelia montana</i>	Tree	TSEV, STE, TBL
119.	<i>Bridelia squamosa</i>	Tree	TSEV
120.	<i>Buddleja asiatica</i>	Shrub	TSEV, STE
121.	<i>Butea monosperma</i>	Tree	STE
122.	<i>Butea parviflora</i>	Tree	TSEV
123.	<i>Byttneria grandiflora</i>	Tree	TSEV
124.	<i>Caesalpinia cucullata</i>	Woody Climber	STE, TBL
125.	<i>Casearia kurzii</i>	Tree	TSEV
126.	<i>Casearia vareca</i>	Shrub/Tree	TSEV, STE, DEGR
127.	<i>Calamus erectus</i>	Shrub	TSEV, MMD, TEV, STE, TBL, DEGR
128.	<i>Calamus flagellum</i>	Shrub	TSEV, TEV, STE, TBL

Sr. No.	Name of Species	Habit	Forest Type
129.	<i>Calamus floribundus</i>	Shrub	TSEV, TEV, STE, DEGR, BAMB
130.	<i>Calamus latifolius</i>	Shrub	TSEV, TEV, GRA
131.	<i>Calamus tenuis</i>	Shrub	TSEV, TEV, STE, DEGR
132.	<i>Calanthe triplicata</i>	Herb	Pine
133.	<i>Callicarpa arborea</i>	Tree	TSEV, STE, TBL, AJHU, DEGR
134.	<i>Callicarpa macrophylla</i>	Shrub	AJHU
135.	<i>Callicarpa rubella</i>	Shrub	STE
136.	<i>Callicarpa vestita</i>	Tree	STE
137.	<i>Caltha palustris</i>	Herb	TBL
138.	<i>Camellia caduca</i>	Tree/Shrub	TSEV, TBL
139.	<i>Cananga odorata</i>	Tree	TEV
140.	<i>Canarium bengalense</i>	Tree	TSEV, MMD, TEV, STE
141.	<i>Canarium strictum</i>	Tree	TSEV, MMD, STE
142.	<i>Cardamine hirsuta</i>	Herb	MMD, TEV
143.	<i>Cardamine scoriarum</i>	Herb	TBL
144.	<i>Cardiopteris lobata</i>	Herb	HLK
145.	<i>Carex baccans</i>	Herb	STE
146.	<i>Careya arborea</i>	Tree	TSEV, STE
147.	<i>Carica papaya</i>	Tree	STE
148.	<i>Carissa carandas</i>	Shrub/Tree	TEV
149.	<i>Caryota obtusa</i>	Tree	TSEV, TEV, STE
150.	<i>Caryota urens</i>	Tree	TSEV, STE, TBL, AJHU, DEGR
151.	<i>Casearia glomerata</i>	Tree	TSEV, AJHU
152.	<i>Cassia occidentalis</i>	Shrub	TSEV
153.	<i>Cassia tora</i>	Shrub	STE
154.	<i>Castanopsis armata</i>	Tree	STE
155.	<i>Castanopsis indica</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, RDN
156.	<i>Castanopsis lanceaefolia</i>	Tree	TSEV, AJHU
157.	<i>Castanopsis purpurella</i>	Tree	TBL
158.	<i>Castanopsis tribuloides</i>	Tree	TSEV, TEV, STE, TBL, TCF, AJHU
159.	<i>Catimbum malaccenses</i>	Herb	TSEV, MMD, STE
160.	<i>Catunaregum spinosa</i>	Tree/Shrub	TSEV
161.	<i>Cayratia trifolia</i>	Climber	TSEV, AJHU
162.	<i>Celastrus paniculata</i>	Climber	AJHU
163.	<i>Celtis australis</i>	Tree	STE, TBL, AJHU, HLK
164.	<i>Centella asiatica</i>	Herb	MMD, TBL, AJHU, DEGR, RVN
165.	<i>Centotheca lappacea</i>	Herb	AJHU
166.	<i>Cephalotaxus griffithii</i>	Tree	STE, TBL, TCF
167.	<i>Chasalia curviflora</i>	Shrub	TSEV, TEV, TBL, AJHU
168.	<i>Chasalia ophioxylodes</i>	Shrub	TSEV
169.	<i>Chimonobambusa callosa</i>	Shrub	TBL
170.	<i>Chisocheton cumingianus</i> ssp. <i>balansae</i>	Tree	STE



Sr. No.	Name of Species	Habit	Forest Type
171.	<i>Chloranthus elatior</i>	Shrub	TSEV
172.	<i>Choerospondias axillaris</i>	Tree	TSEV, TEV, STE
173.	<i>Christella acuminata</i>	Herb	MMD
174.	<i>Christella dentata</i>	Herb	STE, DEGR
175.	<i>Christella parasitica</i>	Herb	TSEV, MMD, TEV, STE, TBL, TCF, AJHU, DEGR, HLK, RVN, GRA
176.	<i>Chromolaena odorata</i>	Shrub	MMD
177.	<i>Chukrasia tabularis</i>	Tree	TSEV, MMD, TEV, STE, AJHU
178.	<i>Cinnamomum bejolghota</i>	Tree	TSEV, TEV, TBL, AJHU, STE
179.	<i>Cinnamomum glanduliferum</i>	Tree	TSEV, TEV, STE, AJHU, BAMB
180.	<i>Cinnamomum glaucescens</i>	Tree	TEV, STE
181.	<i>Cinnamomum tamala</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, HLN
182.	<i>Cissampelos pareira</i>	Climber	MMD, TEV, STE, RVN
183.	<i>Cissus javana</i>	Climber	STE
184.	<i>Cissus repens</i>	Climber	STE, DEGR
185.	<i>Citrus limetta</i>	Tree/Shrub	TSEV
186.	<i>Citrus medica</i>	Tree/Shrub	TSEV, STE
187.	<i>Clausena excavata</i>	Tree	MMD
188.	<i>Clausena heptaphylla</i>	Shrub	MMD, TBL, AJHU
189.	<i>Clematis acuminata</i>	Climber	STE, TBL, Pine
190.	<i>Clerodendrum colebrookianum</i>	Shrub	TEV, STE
191.	<i>Clerodendrum serratum</i>	Shrub	TSEV, TEV, DEGR
192.	<i>Clerodendrum squamatum</i>	Shrub	TSEV, STE
193.	<i>Clerodendrum viscosum</i>	Shrub	TSEV, TEV, STE, AJHU, DEGR, HLK
194.	<i>Clinogyne dichotoma</i>	Shrub	STE
195.	<i>Cocculus hirsutus</i>	Climber	AJHU
196.	<i>Coffea bengalensis</i>	Shrub	TSEV, STE, TBL
197.	<i>Colocasia esculenta</i>	Herb	MMD, TEV, RVN
198.	<i>Combretum acuminatum</i>	Climber	TSEV
199.	<i>Combretum pilosum</i>	Climber	STE
200.	<i>Combretum roxburghii</i>	Climber	TSEV
201.	<i>Combretum wallichii</i> var. <i>flagrocarpum</i>	Climber	STE
202.	<i>Coptis teeta</i>	Herb	MMD, TBL, TCF
203.	<i>Cordia dichotoma</i>	Tree	AJHU
204.	<i>Cordia grandis</i>	Tree	STE
205.	<i>Coriaria nepalensis</i>	Shrub	TCF, Pine
206.	<i>Cornus macrophylla</i>	Tree	STE, AJHU
207.	<i>Cornus oblonga</i>	Tree	STE
208.	<i>Crassocephalum crepidioides</i>	Herb	TCF
209.	<i>Crotalaria striata</i>	Shrub	GRA
210.	<i>Croton caudatus</i>	Shrub	TSEV, MMD, STE
211.	<i>Croton joufra</i>	Tree	TSEV, STE

Sr. No.	Name of Species	Habit	Forest Type
212.	<i>Croton tiglium</i>	Tree	AJHU
213.	<i>Cryptocarya amygdalina</i>	Tree	TSEV, STE, DEGR, RVN
214.	<i>Cucurma zedoaria</i>	Herb	TSEV
215.	<i>Curculigo capitulata</i>	Herb	TSEV, MMD, TEV, STE, TBL, TCF, AJHU, DEGR, Pine, RVN
216.	<i>Curculigo orchioides</i>	Herb	AJHU
217.	<i>Cyathea brunoniana</i>	Tree	TSEV, AJHU, DEGR
218.	<i>Cyclostemon lancifolius</i>	Tree	TSEV
219.	<i>Cyclostemon macrophyllus</i>	Tree	TSEV
220.	<i>Cyclostemon subsessilis</i>	Tree	TSEV
221.	<i>Cymbidium aloifolium</i>	Herb	TBL, TCF
222.	<i>Cymbopogon intermedius</i>	Herb	TCF, Pine
223.	<i>Cynodon dactylon</i>	Herb	TSEV, STE, TBL, Pine
224.	<i>Cynoglossum glochidiatum</i>	Herb	TBL
225.	<i>Cyperus rotundus</i>	Herb	TSEV, AJHU, DEGR
226.	<i>Cyrtococcum accrescens</i>	Herb	DEGR
227.	<i>Dalbergia lanceolaria</i>	Tree	STE
228.	<i>Dalbergia pinnata</i>	Climber	TSEV, DEGR
229.	<i>Dalbergia sissoo</i>	Tree	TSEV, RVN
230.	<i>Dalbergia stipulacea</i>	Tree	TSEV
231.	<i>Dalhousiea bracteata</i>	Climber	TSEV
232.	<i>Daphniphyllum himalayense</i>	Tree	TSEV, STE, TBL
233.	<i>Daphniphyllum glaucescens</i>	Tree	TSEV
234.	<i>Daphne bholuta</i>	Shrub	TBL
235.	<i>Debregeasia longifolia</i>	Shrub	TSEV, MMD, TBL, DEGR
236.	<i>Dendrocalamus hamiltonii</i>	Shrub	TSEV, TEV, STE, DEGR, BAMB
237.	<i>Derris marginata</i>	Climber	TSEV
238.	<i>Derris robusta</i>	Tree	Pine
239.	<i>Derris indica</i>	Climber	TSEV
240.	<i>Desmodium gangeticum</i>	Herb	DEGR
241.	<i>Desmodium heterocarpum</i>	Herb	TSEV
242.	<i>Desmodium pulchellum</i>	Shrub	TSEV
243.	<i>Desmodium triangulare</i>	Herb	STE
244.	<i>Desmos cochinchinensis</i>	Spreading Shrub	TSEV, STE, AJHU
245.	<i>Desmos dumosus</i>	Woody Climber	AJHU
246.	<i>Desmos longiflorus</i>	Shrub/Tree	TSEV
247.	<i>Dicranopteris linearis</i>	Herb	TSEV, STE, AJHU
248.	<i>Dillenia indica</i>	Tree	TSEV, MMD, TEV, AJHU
249.	<i>Dillenia pentagyna</i>	Tree	TSEV, TEV, STE, TBL
250.	<i>Dillenia scabrella</i>	Tree	TSEV, STE, TCF, AJHU, DEGR
251.	<i>Dimeria sp.</i>	Herb	GRA
252.	<i>Dioscorea bulbifera</i>	Climber	TEV, DEGR
253.	<i>Dioscorea deltoidea</i>	Climber	TSEV

Sr. No.	Name of Species	Habit	Forest Type
254.	<i>Dioscorea glabra</i>	Climber	HLK
255.	<i>Dioscorea sativa</i> .	Climber	MMD, RVN
256.	<i>Diospyros lanceaefolia</i>	Tree	TSEV, DEGR
257.	<i>Dipterocarpus retusus</i>	Tree	TSEV, MMD, TEV, STE, AJHU, HLN, BAMB
258.	<i>Drimycarpus racemosus</i>	Tree	MMD
259.	<i>Drymaria cordata</i>	Herb	TSEV, STE, DEGR
260.	<i>Dryopteris barbigera</i>	Herb	TBL, TCF
261.	<i>Dryopteris odontoloma</i>	Herb	TBL, TCF
262.	<i>Duabanga grandiflora</i>	Tree	TSEV, MMD, TEV, STE, HLK
263.	<i>Duranta repens</i>	Shrub	TSEV
264.	<i>Dysoxylum binectariferum</i>	Tree	TSEV, MMD, TEV, STE
265.	<i>Dysoxylum gobara</i>	Tree	TSEV, TEV, STE, Pine, BAMB
266.	<i>Dysoxylum grande</i>	Tree	TSEV, TEV
267.	<i>Edgeworthia gardneri</i>	Shrub	TSEV
268.	<i>Ehretia acuminata</i> var. <i>serrata</i>	Tree	TSEV, STE
269.	<i>Elaeocarpus aristatus</i>	Tree	TSEV
270.	<i>Elaeocarpus floribundus</i>	Tree	TSEV
271.	<i>Elaeocarpus lanceaefolius</i>	Tree	DEGR, Pine
272.	<i>Elaeocarpus rugosus</i>	Tree	TSEV, TEV, TBL
273.	<i>Elaeocarpus sphaericus</i>	Tree	TSEV, TEV, STE
274.	<i>Elaeocarpus tectorius</i>	Tree	TSEV, TEV, STE, TBL, AJHU
275.	<i>Elatostema dissectum</i>	Herb	TSEV, TEV, AJHU
276.	<i>Elatostema sessile</i>	Herb	TEV, STE, AJHU
277.	<i>Eleutherococcus trifolius</i>	Tree/Shrub	TSEV, TEV, STE
278.	<i>Elsholtzia blanda</i>	Shrub	MMD, TCF, AJHU, RDN, RVN
279.	<i>Endospermum diadenum</i>	Tree	TSEV, MMD, TEV, STE
280.	<i>Engelhardtia roxburghiana</i>	Tree	STE
281.	<i>Engelhardtia roxburghiana</i>	Tree	TSEV
282.	<i>Engelhardtia spicata</i>	Tree	TSEV, MMD, STE, AJHU
283.	<i>Erianthus ravennae</i>	Herb	Pine
284.	<i>Eriobotrya angustissima</i>	Tree	TSEV, STE, TBL
285.	<i>Eriobotrya bengalensis</i>	Tree	TSEV, STE, AJHU, DEGR
286.	<i>Eriobotrya elliptica</i>	Tree	STE
287.	<i>Erythrina stricta</i>	Tree	TSEV, TEV, STE, RVN
288.	<i>Erythrina suberosa</i>	Tree	TSEV
289.	<i>Erythroxylum kunthianum</i>	Shrub	STE
290.	<i>Eucalyptus tereticornis</i>	Tree	STE
291.	<i>Euodia fraxinifolia</i>	Tree	TBL
292.	<i>Euodia trichotoma</i>	Tree	TSEV, STE
293.	<i>Euonymus glaber</i>	Tree	Pine
294.	<i>Euonymus grandiflorus</i>	Tree/Shrub	TSEV
295.	<i>Euphoria longan</i>	Tree	TSEV, TEV, STE, TBL
296.	<i>Eurya acuminata</i>	Tree	TSEV, TEV, STE, TBL, AJHU, DEGR,

Sr. No.	Name of Species	Habit	Forest Type
			Fir
297.	<i>Eurya japonica</i>	Shrub	STE, TBL, AJHU
298.	<i>Fagopyrum esculentum</i>	Herb	MMD, STE, BAMB, RVN
299.	<i>Ficus sp.</i>	Tree	TSEV
300.	<i>Ficus semicordata</i>	Tree	TSEV, TEV, STE, TCF
301.	<i>Ficus drupacea</i>	Tree	TSEV, TEV
302.	<i>Ficus elastica</i>	Tree	TSEV, TEV
303.	<i>Ficus fistulosa</i>	Shrub	TSEV, MMD, TEV, RVN
304.	<i>Ficus gibbosa</i>	Tree	TBL
305.	<i>Ficus hirta</i>	Tree	TSEV, STE, AJHU, DEGR
306.	<i>Ficus hispida</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU
307.	<i>Ficus microcarpa</i>	Tree	TBL
308.	<i>Ficus oligodon</i>	Tree	TSEV, HLN
309.	<i>Ficus retusa.</i>	Tree	TBL
310.	<i>Ficus roxburghii</i>	Tree	TBL
311.	<i>Ficus rumphii</i>	Tree	TSEV
312.	<i>Ficus scandens</i>	Shrub	TBL
313.	<i>Fioria vitifolia</i>	Herb	TSEV
314.	<i>Firmiana colorata</i>	Shrub	TSEV, MMD
315.	<i>Fissistigma polyanthum</i>	Shrub	STE
316.	<i>Fissistigma rubiginosum</i>	Shrub	TSEV
317.	<i>Flacourtia jangomas</i>	Tree	TSEV
318.	<i>Floscopa scandens</i>	Herb	TSEV, HLK, RVN
319.	<i>Fragaria vesca</i>	Herb	TBL, TCF
320.	<i>Galinsoga parviflora</i>	Herb	TSEV, MMD
321.	<i>Galium aparine</i>	Climber	DEGR
322.	<i>Galium sp.</i>	Herb	TBL
323.	<i>Garcinia cowa</i>	Tree	TSEV, TEV, STE, TBL, AJHU, DEGR
324.	<i>Garcinia acuminata</i>	Tree	TSEV, STE, TBL
325.	<i>Garcinia lancifolia</i>	Tree	TEV, AJHU
326.	<i>Garcinia mangostana</i>	Tree	STE
327.	<i>Garcinia pedunculata</i>	Tree	TSEV, STE, TBL, AJHU
328.	<i>Garcinia sopsopia</i>	Tree	TSEV, AJHU
329.	<i>Gardenia campanulata</i>	Shrub	MMD
330.	<i>Gardenia sessiliflora</i>	Tree	STE
331.	<i>Garuga pinnata</i>	Tree	TEV
332.	<i>Geranium nepalense</i>	Herb	Pine
333.	<i>Girardinia heterophylla</i>	Herb	HLK
334.	<i>Glochidion velutinum</i>	Tree/Shrub	DEGR
335.	<i>Glochidion acuminatum</i>	Shrub	TEV
336.	<i>Glochidion arborescens</i>	Tree	TSEV, STE
337.	<i>Glochidion lanceolarium</i>	Shrub	TSEV, TEV, STE, AJHU
338.	<i>Glycosmis pentaphylla</i>	Tree/Shrub	TSEV, TEV, STE, TBL, AJHU
339.	<i>Gmelina arborea</i>	Tree	TSEV, MMD, DEGR, HLK

Sr. No.	Name of Species	Habit	Forest Type
340.	<i>Gnaphalium luteo-album</i>	Herb	TCF
341.	<i>Grewia hirsuta</i>	Shrub	TEV
342.	<i>Grewia laevigata</i>	Tree	STE, TBL, AJHU
343.	<i>Grewia multiflora</i>	Tree	TBL, AJHU
344.	<i>Gymnema acuminatum</i>	Shrub	STE
345.	<i>Gynocardia odorata</i>	Tree	TSEV
346.	<i>Haldina cordifolia</i>	Tree	TSEV
347.	<i>Fernandoa adenophylla</i>	Tree	TSEV
348.	<i>Hedera nepalensis</i>	Herb	TBL, TCF
349.	<i>Hedychium coronarium</i>	Herb	TSEV, TEV, STE, AJHU, DEGR
350.	<i>Hemiphragma heterophyllum</i>	Herb	TBL, TCF
351.	<i>Hodgsonia macrocarpa.</i>	Climber	STE, HLN
352.	<i>Holmskioldia sanguinea</i>	Shrub	TSEV
353.	<i>Holarrhena pubescens</i>	Tree	Pine
354.	<i>Homonoia riparia</i>	Shrub	STE, AJHU, Pine
355.	<i>Horsfieldia amygdalina</i>	Tree	TBL
356.	<i>Horsfieldia kingii</i>	Tree	TSEV, STE, TBL
357.	<i>Hovenia dulcis</i>	Tree	RVN
358.	<i>Hydnocarpus kurzii</i>	Tree	TEV, STE, TBL, Pine
359.	<i>Hyptianthera stricta</i>	Shrub	TSEV
360.	<i>Ichnocarpus frutescens</i>	Climbing Shrub	Pine
361.	<i>Ilex excelsa</i>	Tree	TSEV
362.	<i>Ilex insignis</i>	Shrub	STE, HLK
363.	<i>Illicium griffithii</i>	Shrub	TBL
364.	<i>Impatiens balsamina</i>	Herb	AJHU
365.	<i>Imperata cylindrica</i>	Herb	TEV
366.	<i>Indigofera tinctoria</i>	Shrub	AJHU
367.	<i>Ipomoea cymosa</i>	Climber	TSEV, AJHU
368.	<i>Isachne albens</i>	Herb	GRA
369.	<i>Ixora acuminata</i>	Shrub	TSEV, STE
370.	<i>Jasminum lanceolaria</i>	Climber	TSEV, STE, TBL
371.	<i>Jasminum scandens</i>	Scandent Herb	TBL
372.	<i>Juglans regia</i>	Tree	TBL
373.	<i>Juniperus recurva</i>	Shrub	Fir
374.	<i>Justicia vasculosa</i>	Herb	STE
375.	<i>Kleinhovia hospita</i>	Tree	HLK
376.	<i>Knema cinerea</i> var. <i>andamanica</i>	Tree	TSEV, STE
377.	<i>Knema linifolia</i>	Tree	TSEV, MMD, STE, TBL
378.	<i>Kydia calycina</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, RVN
379.	<i>Lagerstroemia reginae</i>	Tree	TSEV
380.	<i>Lagerstroemia parviflora</i>	Tree	TSEV

Sr. No.	Name of Species	Habit	Forest Type
381.	<i>Lannea coromandelica</i>	Tree	MMD, STE
382.	<i>Leea aequata</i>	Shrub	TSEV
383.	<i>Leea asiatica</i>	Shrub/Herb	TSEV, DEGR
384.	<i>Leea indica</i>	Shrub	TSEV, STE, TBL
385.	<i>Lepisanthes rubiginosa</i>	Tree	TSEV
386.	<i>Lindenbergia indica</i>	Herb	MMD, TEV
387.	<i>Lindera neesiana</i>	Tree	STE, TBL
388.	<i>Lindera pulcherrima</i>	Tree	TBL
389.	<i>Lithocarpus dealbata</i>	Tree	TSEV, TBL
390.	<i>Lithocarpus elegans</i>	Tree	TBL
391.	<i>Lithocarpus fenestrata</i>	Tree	TBL, AJHU
392.	<i>Lithocarpus pachyphylla</i>	Tree	AJHU
393.	<i>Lithocarpus xylocarpa</i>	Tree	TSEV
394.	<i>Litsea cubeba</i>	Tree	STE
395.	<i>Litsea glutinosa</i>	Tree	Pine
396.	<i>Litsea lancifolia</i>	Tree	TSEV, DEGR
397.	<i>Litsea monopetala</i>	Tree	TSEV, TEV, STE, TBL, AJHU, DEGR
398.	<i>Litsea salicifolia</i>	Tree	TSEV, MMD, TEV, STE, TBL, HLK
399.	<i>Livistona jenkinsiana</i>	Tree	TSEV, TEV, STE, TSEV, AJHU
400.	<i>Lonicera japonica</i>	Climber	TSEV, TBL
401.	<i>Lophopetalum wightianum</i>	Tree	TSEV, TEV
402.	<i>Lycopodium selago</i>	Herb	RDN
403.	<i>Lygodium flexuosum</i>	Climber	TSEV, TEV, STE, TBL, HLN
404.	<i>Lyonia ovalifolia</i>	Shrub	TEV, TCF, GRA
405.	<i>Lyonia villosa</i>	Shrub	RDN, Fir
406.	<i>Macaranga denticulata</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR
407.	<i>Macaranga pustulata</i>	Tree	STE, AJHU
408.	<i>Macaranga tanarius</i>	Tree	STE, TBL, AJHU
409.	<i>Machilus villosa</i>	Tree	STE
410.	<i>Macropanax undulatum</i>	Tree	TEV, TBL
411.	<i>Maesa argentea</i>	Shrub	TEV
412.	<i>Maesa chisia</i>	Shrub	TSEV, TEV, STE, TBL, TCF, AJHU
413.	<i>Maesa indica</i>	Tree/Shrub	TSEV, STE, TBL, AJHU, DEGR, Pine
414.	<i>Maesa macrophylla</i>	Shrub	TSEV
415.	<i>Maesa montana</i>	Shrub	TSEV, MMD
416.	<i>Maesa ramentacea</i>	Tree/Shrub	MMD, DEGR, RVN
417.	<i>Maesa rugosa</i>	Shrub	TEV, TBL, DEGR
418.	<i>Magnolia campbellii</i>	Tree	STE
419.	<i>Magnolia griffithii</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR
420.	<i>Magnolia gustavi</i>	Tree	TSEV
421.	<i>Magnolia hodgsonii</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, Pine, RVN

Sr. No.	Name of Species	Habit	Forest Type
422.	<i>Magnolia rabaniana</i>	Tree	TSEV, STE, TBL
423.	<i>Mahonia napaulensis</i>	Shrub	TBL, TCF, BAMB
424.	<i>Mallotus ferrugineus</i>	Tree	TSEV, STE
425.	<i>Mallotus philippensis</i>	Tree	TSEV, MMD, STE, DEGR
426.	<i>Mallotus tetracoccus</i>	Tree	TEV, DEGR
427.	<i>Mangifera indica</i>	Tree	TSEV, TEV, STE
428.	<i>Mangifera sylvatica</i>	Tree	TSEV, MMD, TEV, STE
429.	<i>Manglietia hookeri</i>	Tree	TSEV
430.	<i>Monsonia dipikae</i>	Tree	TSEV, MMD
431.	<i>Meconopsis</i> sp.	Herb	TBL
432.	<i>Meconopsis wallichii</i>	Herb	RDN
433.	<i>Medinilla erythrophylla</i>	Shrub	TEV, STE
434.	<i>Melastoma malabathricum</i>	Shrub	TSEV, AJHU, DEGR
435.	<i>Melia dubia</i>	Tree	DEGR
436.	<i>Meliosma dilleniifolia</i>	Tree	AJHU
437.	<i>Meliosma pinnata</i>	Tree	TSEV, STE, TBL, HLK
438.	<i>Meliosma simplicifolia</i>	Tree	TSEV, TEV, STE, TBL
439.	<i>Meliosma simplicifolia</i> ssp. <i>thomsonii</i>	Tree	STE
440.	<i>Melocanna bambusoides</i>	Shrub	STE, TSEV
441.	<i>Melodinus monogynus</i>	Climber	TSEV, STE, TBL
442.	<i>Memecylon cerasiforme</i>	Tree	STE
443.	<i>Mesua ferrea</i>	Tree	TSEV, TEV, STE
444.	<i>Michelia baillonii</i>	Tree	TSEV, STE, TBL, AJHU
445.	<i>Michelia champaca</i>	Tree	TSEV, MMD, TEV, AJHU, RVN
446.	<i>Michelia doltsopa</i>	Tree	TSEV, MMD, TEV, STE, HLN
447.	<i>Michelia excelsa</i>	Tree	TBL, AJHU
448.	<i>Michelia montana</i>	Tree	TEV, AJHU
449.	<i>Michelia oblonga</i>	Tree	TSEV, STE
450.	<i>Mikania micrantha</i>	Climber	TSEV, MMD, TEV, STE, AJHU, DEGR, HLK, RVN
451.	<i>Milium roxburghiana</i>	Tree/Shrub	TSEV
452.	<i>Millettia pachycarpa</i>	Climber	TSEV, AJHU
453.	<i>Millettia auriculata</i>	Climber	TSEV
454.	<i>Mimosa pudica</i>	Herb	TSEV, TEV
455.	<i>Mimosa rubicaulis</i> ssp. <i>himalayana</i>	Shrub	TSEV, MMD, TEV, STE, TBL, AJHU, HLN
456.	<i>Mitragyna rotundifolia</i>	Tree	TEV, STE
457.	<i>Morinda angustifolia</i>	Shrub	TSEV, STE
458.	<i>Moringa oleifera</i>	Tree	TSEV
459.	<i>Morus laevigata</i>	Tree/Shrub	TSEV
460.	<i>Morus macroura</i>	Tree	TSEV, MMD, TEV, STE, TBL, RVN
461.	<i>Mucuna imbricata</i>	Climber	STE
462.	<i>Mucuna pruriens</i>	Climber	STE, HLN

Sr. No.	Name of Species	Habit	Forest Type
463.	<i>Murraya koenigii</i>	Shrub	TSEV, TEV, STE
464.	<i>Murraya paniculata</i>	Tree	TSEV, MMD, TEV, STE
465.	<i>Musa balbisiana</i>	Herb	TSEV, STE, AJHU, DEGR
466.	<i>Musa paradisiaca</i>	Herb	TSEV, TEV, STE
467.	<i>Musa superba</i>	Herb	TEV
468.	<i>Musa velutina</i>	Herb	TEV
469.	<i>Mussaenda glabra</i>	Shrub	TSEV, STE, TBL
470.	<i>Mussaenda roxburghii</i>	Shrub	TSEV, MMD, TEV, STE
471.	<i>Mycetia longifolia</i>	Shrub	TSEV, STE
472.	<i>Myristica angustifolia</i>	Tree	STE
473.	<i>Myristica longifolia</i>	Tree	STE, TBL, DEGR
474.	<i>Myrsine capitellata</i>	Tree/Shrub	STE
475.	<i>Myrsine semiserrata</i>	Tree/Shrub	STE, TBL, TCF, Pine
476.	<i>Myxopyrum smilacifolium</i>	Climber	STE, TBL
477.	<i>Naravelia zeylanica</i>	Climbing Shrub	STE, TCF
478.	<i>Natsiatum herpeticum</i>	Shrub	TSEV, AJHU
479.	<i>Neocinnamomum caudatum</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR
480.	<i>Neolitsea cassia</i>	Tree	TSEV
481.	<i>Nephrolepis cordifolia</i>	Herb	TSEV, MMD, TEV, STE, TBL, AJHU, Pine
482.	<i>Ochna squarrosa</i>	Shrub	STE
483.	<i>Olax acuminata</i>	Shrub	TSEV, MMD
484.	<i>Olax nana</i>	Herb	STE
485.	<i>Olax scandens</i>	Climber	TSEV, STE, TBL
486.	<i>Oldenlandia auricularia</i>	Herb	STE
487.	<i>Olea dioica</i>	Tree	TSEV, MMD, TEV, RVN
488.	<i>Oleandra wallichii</i>	Herb	TSEV, STE, AJHU, Pine
489.	<i>Onychium japonicum</i>	Herb	TCF
490.	<i>Ophiopogon intermedius</i>	Herb	TSEV
491.	<i>Ophiorrhiza mungos</i>	Herb	TSEV
492.	<i>Oplismenus burmannii</i>	Herb	TSEV, MMD, TBL, RVN
493.	<i>Oplismenus compositus</i>	Herb	V, MMD, TEV, STE, TBL, TCF, AJHU, HLK, RVN
494.	<i>Oreocnide frutescens</i>	Tree/Shrub	TSEV
495.	<i>Oreocnide integrifolia</i>	Tree	TSEV, MMD, TEV, STE
496.	<i>Oroxylum indicum</i>	Tree	TSEV, STE
497.	<i>Osbeckia chinensis</i>	Herb	AJHU
498.	<i>Osbeckia crinita</i>	Shrub	TEV, STE, AJHU
499.	<i>Osbeckia nepalensis</i>	Shrub	STE, DEGR
500.	<i>Osbeckia stellata</i>	Shrub	TEV, TBL, AJHU
501.	<i>Osmanthus fragrans</i>	Tree/Shrub	TSEV, TBL
502.	<i>Ostodes paniculata</i>	Tree	TSEV, TEV, STE, TBL



<b>Sr. No.</b>	<b>Name of Species</b>	<b>Habit</b>	<b>Forest Type</b>
503.	<i>Oxalis corniculata</i>	Herb	TSEV, STE, TBL, TCF, AJHU, DEGR, RVN
504.	<i>Oxyspora paniculata</i>	Shrub	TSEV, TEV, STE, TBL, AJHU
505.	<i>Pachylarnax pleiocarpa</i>	Tree	TSEV
506.	<i>Paederia scandens</i>	Climber	GRA
507.	<i>Pajanelia longifolia</i>	Tree	STE
508.	<i>Panax pseudoginseng</i>	Herb	STE, TBL
509.	<i>Panicum brevifolium</i>	Herb	TSEV, STE, AJHU
510.	<i>Parameria glandulifera</i>	Shrub	TSEV
511.	<i>Parthenocissus semicordata</i>	Climber	TSEV
512.	<i>Paspalum dilatatum</i>	Herb	TSEV
513.	<i>Pavetta subcapitata</i>	Shrub	AJHU
514.	<i>Pavetta indica</i>	Shrub	TSEV
515.	<i>Peperomia pellucida</i>	Herb	STE
516.	<i>Pericampylus glaucus</i>	Climber	AJHU
517.	<i>Persea kurzii</i>	Tree	TBL
518.	<i>Persicaria chinensis</i>	Herb	TEV
519.	<i>Persicaria pubescens</i>	Herb	STE, TBL
520.	<i>Phlogacanthus thyrsoiflorus</i>	Shrub	TSEV, MMD, TEV, STE, DEGR, HLK
521.	<i>Phlogacanthus tubiflorus</i>	Shrub	TSEV
522.	<i>Phoebe attenuata</i>	Tree	TSEV
523.	<i>Phoebe cooperiana</i>	Tree	TSEV, TEV, STE, TBL, AJHU, DEGR, RDN
524.	<i>Phoebe goalparensis</i>	Tree	TSEV, MMD
525.	<i>Phoebe lanceolata</i>	Tree	STE
526.	<i>Phoebe paniculata</i>	Tree	STE
527.	<i>Phrynium capitatum</i>	Herb	TSEV, MMD, TEV, STE, TBL, AJHU, HLK
528.	<i>Phyllanthus reticulatus</i>	Shrub	TSEV, AJHU
529.	<i>Phyllanthus urinaria</i>	Herb	TSEV, STE
530.	<i>Phyllanthus maderaspatensis</i>	Herb/Shrub	HLK
531.	<i>Picrasma javanica</i>	Tree	STE, HLK
532.	<i>Pieris formosa</i>	Shrub	RDN
533.	<i>Pilea glaberrima</i>	Herb	TSEV, MMD, TEV, STE, HLK, RVN
534.	<i>Pilea scripta</i>	Herb	TSEV, STE, TBL
535.	<i>Pimpinella diversifolia</i>	Herb	Pine
536.	<i>Pinus kesiya</i>	Tree	Pine
537.	<i>Pinus roxburghii</i>	Tree	TBL, TCF, Pine
538.	<i>Pinus wallichiana</i>	Tree	TCF, Pine, Fir
539.	<i>Piper betle</i>	Climber	TSEV
540.	<i>Piper longum</i>	Trailing	TSEV, MMD, TEV, STE, TBL, AJHU, HLK, RVN
541.	<i>Piper mullesua</i>	Climber	TSEV, MMD, TEV
542.	<i>Piper nepalense</i>	Shrubby	TSEV, MMD, TEV, STE, TBL, AJHU,

Sr. No.	Name of Species	Habit	Forest Type
			HLK, RVN
543.	<i>Piper nigrum</i>	Trailing	TSEV, TEV, STE, TBL
544.	<i>Piper peepuloides</i>	Climber	TSEV, STE
545.	<i>Piper sylvaticum</i>	Creeper	TSEV, TEV, STE, AJHU
546.	<i>Piper thomsonii</i>	Climber	TSEV
547.	<i>Pithecolobium angulatum</i>	Tree	STE
548.	<i>Pithecolobium bigeminum</i>	Tree	AJHU
549.	<i>Pithecolobium montanum</i>	Tree	AJHU
550.	<i>Pityrogramma calomelonos</i>	Herb	TBL
551.	<i>Plantago erosa</i>	Herb	STE, RVN
552.	<i>Plumeria acutifolia</i>	Tree	TSEV
553.	<i>Podophyllum hexandrum</i>	Herb	RDN, Fir
554.	<i>Pogostemon benghalense</i>	Herb	TSEV
555.	<i>Pogostemon pubescens</i>	Herb	TSEV, MMD, HLK
556.	<i>Polyalthia jenkinsii</i>	Tree	TSEV, MMD, STE, TBL, TCF, AJHU
557.	<i>Polyalthia longifolia</i>	Tree	TSEV
558.	<i>Polyalthia simiarum</i>	Tree	TSEV, STE, DEGR
559.	<i>Polygala arillata</i>	Tree	TSEV, STE, DEGR
560.	<i>Polygala longifolia</i>	Herb	Pine
561.	<i>Polygonatum multiflorum</i>	Herb	STE, Pine
562.	<i>Polygonum barbatum</i>	Herb	TSEV
563.	<i>Polygonum orientale</i>	Herb	TSEV, MMD
564.	<i>Polygonum rude</i>	Herb	MMD
565.	<i>Polygonum tomentosum</i>	Herb	MMD, DEGR
566.	<i>Pongamia pinnata</i>	Tree	TEV
567.	<i>Populus ciliata</i>	Tree	MMD
568.	<i>Potentilla fruticosa</i>	Herb	TBL, Pine
569.	<i>Pothos cathcartii</i>	Climber	TSEV
570.	<i>Pothos scandens</i>	Climber	TSEV, MMD, TEV, STE, TBL, Pine, HLK
571.	<i>Pottsia cantonesis</i>	Climber	TSEV
572.	<i>Pouzolzia hirta</i>	Herb	STE
573.	<i>Premna bengalensis</i>	Tree	TSEV, TEV, STE, TBL, AJHU
574.	<i>Premna latifolia</i>	Tree	TSEV, HLK
575.	<i>Premna milleflora</i>	Tree	TSEV, STE
576.	<i>Prunus acuminata</i>	Tree	TBL
577.	<i>Prunus arborea</i>	Tree	TSEV
578.	<i>Prunus cerasoides</i>	Tree	TSEV, STE, TBL, RDN, Pine
579.	<i>Prunus napaulensis</i>	Tree	TSEV, STE, TBL
580.	<i>Prunus salicina</i>	Tree	TCF
581.	<i>Psychotria monticola</i>	Shrub	TSEV, STE, TBL, AJHU
582.	<i>Pteridium aquilinum</i>	Herb	STE, TCF, AJHU, DEGR
583.	<i>Pterospermum acerifolium</i>	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, RVN

Sr. No.	Name of Species	Habit	Forest Type
584.	<i>Pterospermum lanceaefolium</i>	Tree	TSEV, MMD, TEV, STE, DEGR, RVN
585.	<i>Pterygota alata</i>	Tree	TSEV, MMD, RVN
586.	<i>Beilschmiedia pseudomicrocarpa</i>	Tree	STE
587.	<i>Pyrola rotundifolia</i>	Herb	Pine
588.	<i>Pyrus pashia</i>	Tree	MMD
589.	<i>Quercus acutissima</i>	Tree	STE
590.	<i>Lithocarpus dealbata</i>	Tree	STE
591.	<i>Quercus glauca</i>	Tree	STE, TBL, Pine
592.	<i>Quercus griffithii</i>	Tree	STE, TBL
593.	<i>Quercus lamellosa</i>	Tree	TSEV, STE, TBL, TCF, RDN, BAMB
594.	<i>Quercus leucotrichophora</i>	Tree	TBL, TCF
595.	<i>Castanopsis lanceaefolia</i>	Tree	STE
596.	<i>Quercus semicarpifolia</i>	Tree	TBL, Pine
597.	<i>Quercus semiserrata</i>	Tree	TSEV, TEV, STE, TBL, TCF, AJHU, DEGR, RVN
598.	<i>Randia cochinchinensis</i>	Tree	TSEV
599.	<i>Randia longiflora</i>	Shrub	TSEV, MMD, STE
600.	<i>Randia wallichii</i>	Tree	TSEV, STE
601.	<i>Ranunculus cantoniensis</i>	Shrub	TSEV
602.	<i>Reissantia indica</i>	Shrub	TSEV, STE
603.	<i>Rhamnus nepalensis</i>	Tree/Shrub	TSEV, STE, AJHU
604.	<i>Rhizophora mucronata</i>	Tree/Shrub	TSEV
605.	<i>Rhododendron arboreum</i>	Tree	TBL, TCF, BAMB
606.	<i>Rhododendron campanulatum</i>	Shrub	RDN
607.	<i>Rhododendron campylocarpum</i>	Shrub	TBL, TCF, RDN
608.	<i>Rhododendron hodgsonii</i>	Shrub	TBL, TCF, RDN, Fir
609.	<i>Rhododendron setosum</i>	Shrub	TCF, Fir
610.	<i>Rhus chinensis</i>	Tree	TEV
611.	<i>Rhus griffithii</i>	Tree	TSEV, STE, DEGR
612.	<i>Rhus hookeri</i>	Tree	TSEV
613.	<i>Rhus semialata</i>	Tree	MMD, STE, TSEV, MMD, STE, TBL, DEGR, Pine
614.	<i>Rhus succedanea</i>	Tree	TSEV, MMD, STE
615.	<i>Rhynchosyris ellipticum</i>	Shrub	TSEV, TBL, STE,
616.	<i>Rorippa indica</i>	Herb	TBL
617.	<i>Rourea minor</i>	Tree	Pine
618.	<i>Rubia cordifolia</i>	Climber	TEV, TBL, AJHU, DEGR
619.	<i>Rubia sikkimensis</i>	Climber	TBL
620.	<i>Rubus alpestris</i>	Shrub	TBL
621.	<i>Rubus biflorus</i>	Shrub	TBL
622.	<i>Rubus ellipticus</i>	Shrub	TSEV, MMD, TEV, STE, TBL, TCF, AJHU, DEGR, RDN, Pine, BAMB, GRA

Sr. No.	Name of Species	Habit	Forest Type
623.	<i>Rubus niveus</i>	Shrub	STE, Pine
624.	<i>Rubus lasiocarpus</i>	Shrub	TBL, DEGR, Pine
625.	<i>Rubus paniculatus</i>	Climber	STE, AJHU
626.	<i>Rubus rosaefolius</i>	Shrub	STE, TBL
627.	<i>Rungia parviflora</i>	Herb	TCF
628.	<i>Rynchosstylis retusa</i>	Herb	TSEV
629.	<i>Sabia lanceolata</i>	Climber	STE, TBL, AJHU, DEGR, EVG Pine Forest
630.	<i>Saccharum arundinaceum</i>	Herb	DEGR, GRA
631.	<i>Saccharum spontaneum</i>	Herb	TSEV, STE, TCF, DEGR
632.	<i>Sageretia filiformis</i>	Shrub	Pine
633.	<i>Salix tetrasperma</i>	Tree	STE
634.	<i>Sanicula europea</i>	Herb	STE
635.	<i>Santalum album</i>	Tree	TSEV
636.	<i>Lepisanthes senegalensis</i>	Tree	TEV
637.	<i>Sapindus mukorossi</i>	Tree	TEV, STE, BAMB
638.	<i>Sapindus rarak</i>	Tree	TSEV
639.	<i>Sapium baccatum</i>	Tree	MMD, STE, TBL
640.	<i>Sapium eugeniaefolium</i>	Tree	TSEV, TBL, AJHU, DEGR, Pine
641.	<i>Saprosma ternatum</i>	Tree	TSEV, STE, TBL
642.	<i>Sarcandra glabra</i>	Shrub	TSEV, TEV, STE
643.	<i>Sarcospermum arboreum</i>	Tree	TSEV, STE, Pine
644.	<i>Saurauia armata</i>	Tree	TSEV, DEGR
645.	<i>Saurauia cerea</i>	Tree	TSEV, TEV
646.	<i>Saurauia nepalensis</i>	Tree	TSEV, TEV, STE, DEGR
647.	<i>Saurauia punduana</i>	Tree	TSEV
648.	<i>Saurauia roxburghii</i>	Tree	TEV, STE, TBL, TCF, AJHU, DEGR
649.	<i>Schefflera venulosa</i>	Shrub	TBL
650.	<i>Schefflera wallichiana</i>	Tree/Shrub	TBL
651.	<i>Schima wallichii</i> ssp. <i>wallichii</i> var. <i>hasiana</i>	Tree	TSEV, TEV, STE, TBL, AJHU, HLN
652.	<i>Schisandra grandiflora</i>	Climber	RDN, Pine, Fir
653.	<i>Schleichera oleosa</i>	Tree	TEV, STE
654.	<i>Scutellaria discolor</i>	Herb	TSEV
655.	<i>Scutellaria glandulosa</i>	Herb	TSEV
656.	<i>Sedum multicaule</i>	Herb	RDN
657.	<i>Selaginella wallichii</i>	Herb	TSEV, STE, AJHU
658.	<i>Selaginella willdenovii</i>	Herb	TSEV
659.	<i>Semecarpus anacardium</i>	Tree	TSEV, MMD, TEV
660.	<i>Senecio corymbosus</i>	Herb	TBL
661.	<i>Senecio scandens</i>	Climber	TSEV, TCF, AJHU, DEGR
662.	<i>Setaria palmifolia</i>	Herb	STE, AJHU
663.	<i>Shorea assamica</i>	Tree	TSEV, MMD, TEV, STE, AJHU, HLN

<b>Sr. No.</b>	<b>Name of Species</b>	<b>Habit</b>	<b>Forest Type</b>
664.	<i>Shorea robusta</i>	Tree	TSEV
665.	<i>Skimmia anquetilia</i>	Shrub	TCF
666.	<i>Skimmia arborescens</i>	Shrub	STE
667.	<i>Smilacina oleracea</i>	Herb	TBL
668.	<i>Smilax aspera</i>	Shrub	TBL, Pine
669.	<i>Smilax glaucophylla</i>	Shrub	TSEV, TBL, AJHU
670.	<i>Smilax lanceaefolia</i>	Shrub	TSEV, STE
671.	<i>Smilax ocreata</i>	Shrub	TSEV, TEV, STE, TBL, AJHU
672.	<i>Smilax ovalifolia</i>	Shrub	TSEV, STE, TBL, AJHU
673.	<i>Solanum myriacanthum</i>	Undershrub	MMD, AJHU
674.	<i>Solanum nigrum</i>	Herb	STE
675.	<i>Solanum torvum</i>	Shrub	TSEV, MMD, TEV, RVN
676.	<i>Solanum xanthocarpum</i>	Herb	AJHU
677.	<i>Sphenomeris chusana</i>	Herb	TSEV, TBL
678.	<i>Spilanthes paniculata</i>	Herb	TSEV, MMD
679.	<i>Spiradiclis bifida</i>	Herb	TBL, DEGR
680.	<i>Spondias pinnata</i>	Tree	TSEV, TBL
681.	<i>Stenochlaena palustris</i>	Climber	TSEV, MMD, STE, AJHU, Pine
682.	<i>Stephania japonica</i>	Climbing shrub	TSEV
683.	<i>Sterculia guttata</i>	Tree	TSEV, STE
684.	<i>Sterculia hamiltonii</i>	Tree/Shrub	TSEV, STE, DEGR, AJHU
685.	<i>Sterculia roxburghii</i>	Tree	TSEV, STE
686.	<i>Sterculia versicolor</i>	Tree	TBL
687.	<i>Sterculia villosa</i>	Tree	TSEV, MMD, TEV, TBL, TCF, RVN
688.	<i>Stereospermum chelonoides</i>	Tree	TSEV, MMD, TEV, STE, TBL, DEGR, RVN
689.	<i>Streblus asper</i>	Tree	TSEV, TBL
690.	<i>Strobilanthes lanceolatus</i>	Shrub	MMD
691.	<i>Strobilanthes callosus</i>	Shrub	STE, TBL
692.	<i>Strychnos laurina</i>	Climber	TSEV, MMD, STE
693.	<i>Styrax serrulatum</i>	Tree	TSEV, TEV, STE, TBL
694.	<i>Symplocos cochinchinensis</i>	Tree	TSEV, TBL
695.	<i>Symplocos oxyphylla</i>	Tree	TSEV, STE, AJHU
696.	<i>Symplocos racemosum</i>	Tree	TBL
697.	<i>Syzygium balsameum</i>	Tree	TSEV
698.	<i>Syzygium cumini</i>	Tree	TSEV, MMD, TEV, STE, TBL, BAMB
699.	<i>Syzygium formosum</i>	Tree	TSEV, MMD, STE, TBL, AJHU
700.	<i>Syzygium kurzii</i>	Tree	TSEV, TEV, TBL, TCF
701.	<i>Syzygium malaccense</i>	Tree	TSEV, TEV, STE
702.	<i>Syzygium oblatum</i>	Tree	TSEV
703.	<i>Syzygium kurzii</i>	Tree	STE, AJHU
704.	<i>Tamarix dioica</i>	Tree	TSEV, TBL
705.	<i>Taxus wallichiana</i>	Tree	TBL, TCF, Fir
706.	<i>Tectona grandis</i>	Tree	MMD, TEV, STE

Sr. No.	Name of Species	Habit	Forest Type
707.	<i>Terminalia bellirica</i>	Tree	TSEV, MMD, STE
708.	<i>Terminalia chebula</i>	Tree	TSEV, MMD, STE
709.	<i>Terminalia citrina</i>	Tree	TSEV, TEV, STE
710.	<i>Terminalia myriocarpa</i>	Tree	TSEV, MMD, TEV, STE, AJHU, HLK, BAMB, RVN
711.	<i>Tetracera sarmentosa</i>	Tree	TSEV
712.	<i>Tetrameles nudiflora</i>	Tree	TSEV, MMD, STE
713.	<i>Tetrastigma bracteolatum</i>	Climber	TSEV, TBL
714.	<i>Tetrastigma lanceolarium</i>	Climber	TSEV, STE, TBL
715.	<i>Tetrastigma leucostaphylum</i>	Climber	TSEV, MMD, STE
716.	<i>Tetrastigma serrulatum</i>	Climber	TSEV, TEV, STE, TBL, HLK, RVN
717.	<i>Tetrastigma thomsonianum</i>	Climber	TEV
718.	<i>Themeda arundinacea</i>	Herb	GRA
719.	<i>Themeda villosa</i>	Herb	GRA
720.	<i>Thlaspi arvense</i>	Herb	RDN, Fir
721.	<i>Thysanolaena maxima</i>	Herb	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, HLN
722.	<i>Tiliacora acuminata</i>	Climbing Shrub	STE
723.	<i>Toddalia asiatica</i>	Climbing Shrub	TEV, AJHU
724.	<i>Toona ciliata</i>	Tree	TSEV, MMD, TEV, STE, HLK
725.	<i>Trachelospermum lucidum</i>	Climber	TEV, STE
726.	<i>Trema cannabina</i>	Tree	STE
727.	<i>Trema orientalis</i>	Tree	TSEV
728.	<i>Trevesia palmata</i>	Tree	TSEV, TEV, STE, TBL, Pine
729.	<i>Trewia nudiflora</i>	Tree	TSEV
730.	<i>Tricalysia singularis</i>	Tree	TEV
731.	<i>Triumfetta pilosa</i>	Shrub	AJHU
732.	<i>Triumfetta rhomboidea</i>	Shrub	TSEV
733.	<i>Tropidia curculigoides</i>	Herb	TSEV, STE, TBL, DEGR, GRA
734.	<i>Tsuga brunoniana</i>	Tree	TBL
735.	<i>Turpinia nepalensis</i>	Tree/Shrub	HLK
736.	<i>Uncaria sessilifructus</i>	Climber	STE
737.	<i>Urena lobata</i> var. <i>glauca</i>	Herb	MMD, TEV, STE, TBL, AJHU, Pine
738.	<i>Valeriana jatamansii</i>	Herb	AJHU
739.	<i>Vallaris solanacea</i>	Climber	TSEV, MMD
740.	<i>Vanda cristata</i>	Herb	TEV, Pine
741.	<i>Vatica lancaefolia</i>	Tree	TSEV, TEV, STE, TBL
742.	<i>Ventilago calyculata</i>	Shrub	Pine
743.	<i>Ventilago madraspatana</i>	Shrub	TSEV
744.	<i>Verbascum thapsus</i>	Herb	TSEV
745.	<i>Viburnum colebrookianum</i>	Shrub	TEV
746.	<i>Viburnum erubescens</i>	Tree	TBL, TCF
747.	<i>Viburnum foetidum</i>	Shrub	TSEV, TBL

Sr. No.	Name of Species	Habit	Forest Type
748.	<i>Viburnum mullaha</i>	Shrub	TBL
749.	<i>Viburnum nervosum</i>	Shrub	AJHU, Fir
750.	<i>Viola biflora</i>	Herb	Fir
751.	<i>Viola patrinii</i>	Herb	STE, TBL, RVN
752.	<i>Vitex canescens</i>	Tree	TSEV, TEV
753.	<i>Vitex glabrata</i>	Tree	TSEV, TEV, STE, TBL, HLK
754.	<i>Vitex negundo</i>	Tree/Shrub	TBL
755.	<i>Vitex peduncularis</i>	Tree	TSEV, TBL, DEGR
756.	<i>Tetrastigma rumicispermum</i>	Climber	TEV, DEGR
757.	<i>Wallichia densiflora</i>	Shrub	TSEV, MMD, STE, AJHU, HLK
758.	<i>Walsura robusta</i>	Tree	TSEV, TEV, STE, AJHU
759.	<i>Wendlandia tinctoria</i>	Tree/Shrub	STE
760.	<i>Woodfordia fruticosa</i>	Shrub	Pine
761.	<i>Wrightia arborea</i>	Tree	TSEV, MMD, STE, DEGR
762.	<i>Wrightia coccinia</i>	Tree	TSEV, TEV, STE, TBL
763.	<i>Wrightia tomentosa</i>	Tree	TSEV
764.	<i>Xerospermum glabratum</i>	Tree	TSEV, MMD, RVN
765.	<i>Xylosma longifolium</i>	Tree	TSEV, TEV, TBL
766.	<i>Zanthoxylum acanthopodium</i>	Shrub	TSEV
767.	<i>Zanthoxylum nitidum</i>	Shrub	STE
768.	<i>Ziziphus mauritiana</i>	Shrub/Tree	STE

TSEV= Tropical semievergreen, MMD = Moist deciduous, TEV = Tropical evergreen, STE = Subtropical evergreen, TBL = Temperate broadleaved, TCF = Temperate coniferus, BAMB = Bamboo mixed, RVN = Riverine, GRA = Grassland, HLN = Hollong, HLK = Hollock, Pine = Pine, RDN = Rhododendron, DEGR = Degraded, AJHU = Abandoned jhum, Fir = Fir

Source:

Biodiversity Characterisation at Landscape Level in North-East India using Satellite Remote Sensing and Geographic Information System. Indian Institute of Remote Sensing, 2002.





## **Annexure – 6.5**

### **List of Selected Medicinally Important Plant Species and their indicative use in North East India**



Sr. No.	Species	Importance	Habit	Forest Type
1.	<i>Abies webbiana</i>	Dried leaves astringent, stomachic, carminative, expectorant and aphrodisiac. Useful for treatment of asthma, haemoptysis, phthisis and catarrh of bladder, hoarseness, fever of infants and chest infections.	Tree	TBL, TCF
2.	<i>Abutilon indicum</i>	Herb used as a febrifuge, anthelmintic and anti-inflammatory, in urinary troubles and lumbago. Bark is astringent and diuretic. Leaves cooked and eaten, is diuretic and demulcent.	Herb/Undershrub	STE
3.	<i>Acacia pennata</i>	Fruit pulp pesticidal. Decoction of leaves used as febrifuge	Climber	TSEV
4.	<i>Acanthopanax trifoliatum</i>	Used in paralysis.	Tree	STE
5.	<i>Achyranthes aspera</i>	Plant shows antifertility activity	Herb	TSEV, MMD, AJHU, HLK, RVN
6.	<i>Aconitum ferox</i>	Used externally in the form of a paste or liniment in cases of menorah, muscular rheumatism and inflammatory joint infections. Internally administered for nasal catarrh, tonsillitis, sore throat, gastric disorders.	Herb	TBL, RDN, Fir
7.	<i>Aconitum sp.</i>	Useful as insecticide and rodenticide	Herb	TBL, RDN
8.	<i>Acronychia laurifolia</i>	Bark and root for external applications for sores and ulcers. Bark used as a tonic, prescribed in scabies. Root extract rubbed on skin for rheumatism.	Tree	TEV, DEGR
9.	<i>Acronychia pedunculata</i>	Root and bark used in external application for sores and ulcers.	Tree	TSEV, HLK
10.	<i>Actinodaphne angustifolia</i>	Infusion of the leaves used for diabetes and urinary disorders	Tree	TSEV
11.	<i>Adiantum flabellulatum</i>	Rhizomes used for cough and as an anthelmintic; also used as gripe.	Herb	TCF
12.	<i>Adiantum pedatum</i>	Rhizome is used as a stimulant, expectorant, demulcent, tonic and	Herb	TBL

Sr. No.	Species	Importance	Habit	Forest Type
		astringent and as emmenagogue. A decoction of the herb is reported to be used against cold and hoarseness		
13.	<i>Ageratum conyzoides</i>	Crushed leaf juice is used for cuts and wounds as haemostatic.	Herb	TSEV, MMD, STE, TBL, AJHU, DEGR
14.	<i>Aglaia hiernii</i>	Medicinal.	Tree	TSEV, MMD, TEV, STE, TCF
15.	<i>Ailanthus excelsa</i>	The bark is bitter, astringent, febrifuge and anthelmintic. Has antispasmodic and expectorant properties used for asthma, bronchitis and dysentery. Also used for dyspepsia and ear-ache.	Tree	TSEV
16.	<i>Albizia lebeck</i>	Leaves and seeds used in eye troubles.	Tree	TSEV, MMD, TEV, STE, TCF, AJHU, HLK, HLK, RVN
17.	<i>Albizia procera</i>	Used for stomach and intestinal diseases and during pregnancy. All parts of the plant show anti cancer activity.	Tree	TSEV, TEV, STE, AJHU, Pine
18.	<i>Aleurites moluccana</i>	The oil used as purgative, externally employed in rheumatism and ulcers	Tree	TSEV, STE
19.	<i>Allamanda cathartica</i>	Leaves used as a cathartic. Ethanolic extract of the roots is active against p-388 leukaemia <i>in vivo</i> in mice and <i>in vitro</i> against human carcinoma of nasopharynx.	Shrub	TSEV
20.	<i>Alocasia fornicata</i>	Rhizome eaten as vegetable after cooking.	Herb	STE
21.	<i>Alpinia nigra</i>	Medicinal rhizomes, used in gout and colic.	Herb	AJHU
22.	<i>Alstonia scholaris</i>	Bark bitter tonic, febrifuge, anthelmintic and galactagogue.	Tree	TSEV, TEV, TBL
23.	<i>Altingia excelsa</i>	Resin is carminative, expectorant, stomachic, antiascorbitic, antipyretic. Used in leucoderma, vesicular calculi, scabies, lumbago, renal and pulmonary troubles.	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, HLN, RVN

Sr. No.	Species	Importance	Habit	Forest Type
24.	<i>Amomum dealbatum</i>	Used in medicine and sweetmeats.	Herb	TSEV, STE
25.	<i>Amomum subulatum</i>	Used in medicine and sweetmeats, an oil extracted from seeds is applied to inflamed eyelids.	Herb	TSEV
26.	<i>Amoora rohituka</i>	Liniment in rheumatism, dressing for sores	Tree	HLK
27.	<i>Ampelocissus latifolia</i>	The juice of the tender leaves is used in dental troubles and as a detergent for indolent ulcers	Herb	RVN
28.	<i>Ampelopteris prolifera</i>	Fronds aperient.	Herb	GRA
29.	<i>Anemone vitifolia</i>	Fresh juice inhibits growth of several pathogenic fungi.	Herb	STE, TBL, AJHU
30.	<i>Anisomeles indica</i>	Possesses aromatic, astringent, carminative and tonic properties and is employed as a treatment in gastric catarrh and intermittent fevers. A decoction of the herb is given in convulsions and applied to itches	Herb	AJHU
31.	<i>Antidesma bunius</i>	Leaves acidic, diaphoretic.	Tree	TSEV
32.	<i>Aphanamixis polystachya</i>	Bark astringent, used in spleen and liver diseases, tumors, abdominal complaints. Used in rheumatism.	Tree	TSEV, AJHU
33.	<i>Aporusa octandra</i>	Wood used for constructional purposes. Fruits edible.	Tree	TBL
34.	<i>Aquilaria malaccencis</i>	Agarwood is considered stimulant, anti-asthmatic, carminative, aphrodisiac and astringent. Used in diarrhoea, dysentery, gout, rheumatism and paralysis. Also used as liniment in various skin diseases.	Tree	TEV, STE
35.	<i>Ardisia crispa</i>	Roots used in fever, diarrhoea and rheumatism.	Shrub	TSEV, STE, BAMB
36.	<i>Ardisia solanacea</i>	Roots in diarrhoea and rheumatism.	Shrub	TSEV, TBL
37.	<i>Argemone mexicana</i>	Latex of the plant is used for the treatment of syphilis and skin diseases	Herb	TSEV, Pine

Sr. No.	Species	Importance	Habit	Forest Type
38.	<i>Aristolochia cathcartii</i>	Tumour inhibiting properties.	Climber	TSEV
39.	<i>Aristolochia platanifolia</i>	Tumour inhibiting properties.	Climber	TSEV
40.	<i>Aristolochia tagala</i>	Considered carminative tonic.	Climber	TSEV
41.	<i>Artemisia nilagirica</i>	Herb is considered to be emmenagogue, anthelmintic and stomachic. Also used as febrifuge and an inferior substitute for cinchona in fevers. A weak decoction to children is given for treatment of measles.	Herb	MMD, GRA
42.	<i>Artemisia vulgaris</i>	Emmenagogue, anthelmintic, stomachic; used as febrifuge, infusion of leaves given in asthma and nervous and spasmodic affections. Roots used as a tonic and antiseptic.	Herb	TSEV, STE, TBL, DEGR, RVN
43.	<i>Artocarpus lacucha</i>	Bark is chewed with pan (betel). Ripe fruits edible, takes good polish & season well. Seeds purgative. Bark in powder form applied to sores, pimples and cracked skin.	Tree	TSEV, STE, DEGR
44.	<i>Arundinella nepalensis</i>	A lotion prepared from the grass used as a vulnerary.	Shrub	TCF
45.	<i>Asplenium nidus</i>	Depurative and sedative.	Herb	TSEV, MMD, TEV, STE, AJHU, HLK, HLN, RVN
46.	<i>Aster trinervius</i>	Plant reported to have antiseptic properties.	Herb	GRA
47.	<i>Azadirachta indica</i>	Leaves, bark and fruits with insect repellent properties. Leaf juice anthelmintic, diuretic and emmenagogue.	Tree	TSEV, TEV
48.	<i>Azadirachta indica</i>	Decoction of leaves given for ulcers and eczema, flowers tonic and stomachic; twigs used for diarrhoea; berries purgative, emollient; seeds used for skin infections.	Tree	TEV, STE
49.	<i>Baliospermum montanum</i>	Leaves emetic, used in haemetesis and veterinary practice, given to horses as remedy for coughs and colds;	Shrub	TBL

Sr. No.	Species	Importance	Habit	Forest Type
		bamboo manna tonic, useful in fever, cough, in snake bite, etc.		
50.	<i>Bambusa arundinacea</i>	Medicinal and ethnobotanically important plant	Shrub	TSEV, STE, TBL
51.	<i>Bauhinia purpurea</i>	Bark used in diarrhoea. Laxative and anthelmintic Stem used for setting fractured bones.	Tree	TBL
52.	<i>Bauhinia variegata</i>	Roots carminative, prevents obesity. Bark tonic and antithelmintic. Used in scrofula and cutaneous troubles.  Used for ulcers and leprosy. Flowers laxative, diarrhoea, piles, dysentery. Buds in dyspepsia; roots antidote to snake poison.	Tree	TSEV, MMD
53.	<i>Begonia palmata</i>	Decoction of the root is given against fever and liver complaints. Used for venereal diseases.	Herb	TSEV, TEV, STE, AJHU
54.	<i>Begonia picta</i>	Used for colic and dysentery.	Herb	TSEV, MMD, STE
55.	<i>Begonia roxburghii</i>	Tubers along with fruits of <i>Solena heterophylla</i> are boiled and the solution taken to relieve fever.	Herb	STE
56.	<i>Berberis asiatica</i>	Stems recommended in rheumatism. Roots reported to have anti cancer activity	Shrub	Pine
57.	<i>Bidens pilosa</i>	Tonic and stimulant. Used in leprosy and other skin diseases and tumours. Decoction used for prickly heat and febrifuge. Infusion of leaves sudorific. Juice for eyes and ear troubles. Flowers used in diarrhoea.	Herb	DEGR, Pine
58.	<i>Bidens tripartita</i>	Herb reported to possess astringent, antiscorbutic, diaphoretic, emmenagogue, diuretic, antiseptic, aperient, febrifuge, sedative and mild narcotic properties. Particularly useful in dropsy, gout, haematuria, in chronic dysentery and eczema		

Sr. No.	Species	Importance	Habit	Forest Type
			Herb	DEGR
59.	<i>Blechnum orientale</i>	Used as an anthelmintic and for urinary disorders. A poultice of the rhizome is applied to boils	Herb	STE, AJHU, DEGR
60.	<i>Boehmeria macrophylla</i>	Employed to treat eczema.	Shrub	TEV, STE, TBL, TCF
61.	<i>Boehmeria nivea</i>	Roots aperient, leaves resolvent	Shrub	TSEV
62.	<i>Bombax ceiba</i>	Bark exudes an edible gum which is credited with stringent, tonic, and demulcent properties.	Tree	MMD, DEGR, RVN
63.	<i>Bombax ceiba</i>	Bark exudes gum which is used as astringent, tonic and demulcent.	Tree	TSEV
64.	<i>Breynia retusa</i>	Leaves employed as poultice to hasten suppuration.	Shrub	STE
65.	<i>Bridelia montana</i>	Bark astringent and anthelmintic. Plant anthelmintic; root and bark astringent	Tree	TSEV, STE, TBL
66.	<i>Buddleja asiatica</i>	A paste is made with roots and mixed with rice water to be drunk as a tonic.	Shrub	TSEV, STE
67.	<i>Butea monosperma</i>	Seeds anthelmintic. Gum astringent in diarrhoea and dysentery; flowers and leaves astringent, tonic. Bark and seed in snake bite.	Tree	STE
68.	<i>Butea parviflora</i>	Decoction of bark given in dropsy and bowel complaints.	Tree	TSEV
69.	<i>Byttneria grandiflora</i>	Seeds given to cows as vermifuge.	Tree	TSEV
70.	<i>Caesalpinia cucullata</i>	Seeds given to cows as vermifuge.	Woody climber	STE, TBL
71.	<i>Casearia vareca</i>	Fruits medicinal.	Tree	TSEV, STE, DEGR
72.	<i>Calanthe triplicata</i>	Herb reported to be used in diseases of the stomach and the intestine. Root is chewed along with betelnuts or other aromatic substances in	Herb	Pine



Sr. No.	Species	Importance	Habit	Forest Type
		diarrhoea. A poultice of the flowers is used to reduce pain due to ulcers.		
73.	<i>Callicarpa arborea</i>	Bark aromatic, bitter, tonic, carminative; decoction of bark applied to cutaneous diseases.	Tree	TSEV, STE, TBL, AJHU, DEGR
74.	<i>Callicarpa macrophylla</i>	Leaves warmed and are used to give relief in rheumatic pains. A paste of the seed is employed in treating oral ulcers.  Seeds are reported to be employed in leprosy and as diuretic, the seeds and roots are employed as stomachic.	Shrub	AJHU
75.	<i>Canarium bengalense</i>	Leaves and bark externally used for rheumatic swellings.	Tree	TSEV, MMD, TEV, STE
76.	<i>Canarium strictum</i>	Shining gum used as an insect repellent. Gum used in rheumatic pains, in chronic skin diseases.	Tree	TSEV, MMD, STE
77.	<i>Cardamine hirsuta</i>	Has antiscorbutic and diuretic properties.	Herb	MMD, TEV
78.	<i>Careya arborea</i>	Flower and juice of fresh bark given with honey as demulcifier in coughs and in cold. Bark used as antipyretic in fevers particularly in small pox and in snake bite.	Tree	TSEV, STE
79.	<i>Carica papaya</i>	Seeds, leaves, whole plant yield a blood anticoagulant.	Tree	STE
80.	<i>Caryota urens</i>	Nut acrid, cooling, to allay thirst and fatigue; used as an application to the head in cases of hemicrania.	Tree	TSEV, STE, TBL, AJHU, DEGR
81.	<i>Cassia occidentalis</i>	Leaves and seeds purgative. Seeds used in skin troubles.	Shrub	TSEV
82.	<i>Cassia tora</i>	Decoction of leaves laxative; leaves and seeds in skin diseases, for ringworm and itching; root in snake bite.	Shrub	STE
83.	<i>Cayratia trifolia</i>	Leaves, roots and seeds are applied as poultice to ulcers and boils and to yoke sores on the neck of bullocks. Fomentation with a hot decoction of leaves or roots is diaphoretic and recommended in high fever.	Climber	AJHU

Sr. No.	Species	Importance	Habit	Forest Type
84.	<i>Celastrus paniculata</i>	Possess emetic, diaphoretic, febrifugal properties	Shrub	AJHU
85.	<i>Celtis australis</i>	Fruits in amenorrhoea and colic.	Tree	STE, TBL, AJHU, HLK
86.	<i>Centella asiatica</i>	Plant in dysentery, leprosy, tuberculosis and skin diseases. Leaves as tonic and for improving memory, useful in syphilitic skin diseases both internally and externally	Herb	MMD, TBL, AJHU, DEGR, RVN
87.	<i>Cephalotaxus griffithii</i>	Leaves and roots contain cephalotaxine as a major alkaloid which possess antitumour activity	Tree	STE, TBL, TCF
88.	<i>Chasalia curviflora</i>	Decoction of the roots used for coughs. Roots used against malaria. Decoction of root used in rheumatism, pneumonia, head disorders, ear and eye diseases and sore throat. Roots and leaves used in external applications for wounds, ulcers and headache.	Shrub	TSEV, TEV, TBL, AJHU
89.	<i>Chionanthus intermedia</i>	Bark is bitter used for intermittent fevers.	Shrub	STE
90.	<i>Chisocheton cumingianus</i> ssp. <i>balansae</i>	Seed oil used as purgative.	Tree	STE
91.	<i>Chloranthus elatior</i>	Poultice of roots recommended in boils and carbuncles. Shrub considered as a stimulant. Decoction of the leaves and roots is used as tea and is reported to be sudorific. Boiled and powdered roots are rubbed on the body in fevers.	Herb	TSEV
92.	<i>Christella parasitica</i>	The tender shoots (fronds) are used for fomenting in gout and rheumatism	Herb	TSEV, MMD, TEV, STE, TBL, TCF, AJHU, DEGR, HLK, RVN, GRA
93.	<i>Chromolaena odorata</i>	Leaf juice considered antiseptic, applied on cuts,	Shrub	MMD

Sr. No.	Species	Importance	Habit	Forest Type
		bruises and wounds to prevent bleeding. A decoction of the leaves is used in Nigeria for curing cough, malaria, internal haemorrhage and influenza. Panama: A tea is made from leaves and taken for cold.		
94.	<i>Chukrasia tabularis</i>	Bark possesses astringent properties. Leaves stimulant, carminative used in rheumatism, colic diarrhoea and in scorpion sting.	Tree	TSEV, MMD, TEV,
95.	<i>Cinnamomum bejolghota</i>	Used in dyspepsia and liver complaints.	Tree	TSEV, TEV, TBL, AJHU
96.	<i>Cinnamomum tamala</i>	Aromatic in gonorrhoea and bark is boiled and taken as a remedy for coughs.	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, HLN
97.	<i>Cissampelos pareira</i>	The leaf is given as a tonic and in heart complaints. Plant juice with jaggery and egg is given internally for minor injuries. The poultice of leaves is applied to sores, scabies, itches, pimples, boils and burns. The decoction mixed with lemon and garlic.	Climber	MMD, TEV, STE,
98.	<i>Cissus repens</i>	Used as substitute for sorrel.	Climber	STE, DEGR
99.	<i>Citrus limetta</i>	The fruits are used like lemon, valued as a refrigerant in fever and jaundice.	Tree/Shrub	TSEV
100.	<i>Citrus medica</i>	Roots anthelmintic, in constipation, useful in vomiting, urinary calculus; flowers and buds stimulant and carminative. Juice used as astringent.	Tree/Shrub	TSEV, STE
101.	<i>Clausena excavata</i>	Infusion of roots, flowers and leaves used for colic.	Tree	MMD
102.	<i>Clerodendrum colebrookianum</i>	Tender leaves taken as vegetables. Leaves are warmed over fire, mashed into a paste, massaged in rheumatism.	Shrub	TEV, STE
103.	<i>Clerodendrum serratum</i>	Young leaves and flower clusters are used as vegetable. Roots in febrile	Shrub	TSEV, TEV, DEGR

Sr. No.	Species	Importance	Habit	Forest Type
		and catarrhal affections useful in malaria. Leaves used for fever, boiled with oil and butter made into ointment, useful in cephalagia and ophthalmia, in snake bite.		
104.	<i>Clerodendrum viscosum</i>	Leaves as bitter tonic, laxative. Fresh juice for removal of ascarides, external application to tumours.	Shrub	TSEV, TEV, STE, AJHU, DEGR, HLK
105.	<i>Cocculus hirsutus</i>	Juice of leaves used as refrigerant, also applied to eczema and impetigo. Roots laxative and demulcent for bilious dyspepsia, rheumatism and stomach-ache in children.	Herb	AJHU
106.	<i>Colocasia esculenta</i>	Juice of petioles used as an astringent and styptic.	Herb	MMD, TEV, RVN
107.	<i>Combretum acuminatum</i>	Leaves anthelmintic. Used for expelling tapeworms.	Climber	TSEV
108.	<i>Combretum pilosum</i>	Leaves anthelmintic. Used as cure for <i>Ascaris lumbricoides</i> and <i>Oxyuris vermicularis</i> .	Climber	STE
109.	<i>Combretum roxburghii</i>	Leaves used for stomach troubles.	Climber	TSEV
110.	<i>Coptis teeta</i>	Rhizome tonic and stomachic, used for debility and dyspepsia; also employed as salve for eyes.	Herb	MMD, TBL, TCF
111.	<i>Cordia dichotoma</i>	Fruits astringent anthelmintic, diuretic, expectorant, used in disease of lungs and spleen. Juice in gripes; bark used in dyspepsia and fevers; kernels in ringworm; applied to ulcers and in headaches; plant used in snake bite	Tree	AJHU
112.	<i>Crassocephalum crepidioides</i>	Leaf juice used to prevent bleeding.	Herb	TCF
113.	<i>Croton caudatus</i>	Leaves applied as poultice to sprains. Leaf and shoot extracts used for Malaria and Cholera, used by Mikirs to blacken teeth. A sort of gum exudates in early morning is	Shrub	TSEV, MMD, STE

Sr. No.	Species	Importance	Habit	Forest Type
		said to create cataract.		
114.	<i>Croton joufra</i>	Bark used as a veterinary medicine. Leaves, seeds and roots are occasionally spoken of as used medicinally. Bark used in veterinary medicine.	Tree/Shrub	TSEV, STE
115.	<i>Croton tiglium</i>	Seed oil is purgative. Wood used for cleaning the teeth and for curing and relieving tooth ache. Solution of the bark or seeds in water is used as laxative in stomach ailments.  Used as fish poison. Used in snake bite. Seeds and oil drastic purgative, fish poison	Tree	AJHU
116.	<i>Curculigo orchioides</i>	Tuberous roots used for skin troubles, considered demulcent, diuretic, and tonic. Used in piles, diarrhoea, jaundice  and asthma.	Herb	AJHU
117.	<i>Cymbidium aloifolium</i>	Emetic and purgative; source of salep used as a nutrient and demulcent.	Herb	TBL, TCF
118.	<i>Cynodon dactylon</i>	Decoction of root diuretic in dropsy, in secondary syphilis. Infusion of root for stopping bleeding from piles. Juice of plants astringent used as application to fresh cuts and wounds, diuretic, used in dropsy, insanity, diarrhoea, dysentery. Used in cataract	Herb	TSEV, STE,
119.	<i>Cynoglossum glochidiatum</i>	Used for checking vomiting in infants.	Herb	TBL
120.	<i>Cyperus rotundus</i>	Tubers diuretic, emetic, anthelmintic, diaphoretic, astringent, stimulant, useful in disorders of stomach and irritation of the bowels.	Herb	TSEV, AJHU, DEGR
121.	<i>Dalbergia lanceolaria</i>	Decoction of bark used in dyspepsia, seed oil for rheumatism.	Herb	STE
122.	<i>Dalbergia pinnata</i>	Roots anthelmintic.	Tree/Shrub	TSEV, DEGR

Sr. No.	Species	Importance	Habit	Forest Type
123.	<i>Dalbergia sissoo</i>	Leaves bitter, stimulant, decoction of leaves useful in gonorrhoea, roots astringent, wood useful in leprosy, boils, eruptions and to allay vomiting.	Tree	TSEV, RVN
124.	<i>Dalbergia stipulacea</i>	Bark and root used as fish poison.	Tree	TSEV
125.	<i>Derris indica</i>	Root and flower medicinal.	Climber	TSEV
126.	<i>Desmodium gangeticum</i>	Roots used as febrifuge expectorant, and diuretic, in snake bite and scorpion bite.	Herb	DEGR
127.	<i>Desmodium heterocarpum</i>	Decoction used for coughs. Herb also for convulsions.	Herb	TSEV
128.	<i>Desmodium pulchellum</i>	Twig keeps the bed bugs away. Used in haemorrhage, diarrhoea, poisoning and eye diseases.	Herb	TSEV
129.	<i>Dichroa febrifuga</i>	Roots and leafy tops used in malarial fevers. Therapeutic activity due to quinazoline derivatives.	Shrub	STE, TBL
130.	<i>Dicranopteris linearis</i>	Rhizome anthelmintic, fronds used for asthma.	Herb	TSEV, STE, AJHU
131.	<i>Dillenia indica</i>	Dried fruits used for dysentery. Fruits used as tonic, laxative, used in abdominal pains. Juice of the fruit mixed with sugar and water used as cooling beverage in fevers and cough mixture. Fruits tonic, laxative, used in abdominal pains.	Tree	TSEV, MMD, TEV, AJHU
132.	<i>Dimocarpus longan</i>	Fruit stomachic, anthelmintic, and refrigerant in fevers. Dried and used as tonic .	Tree	TSEV, TEV, STE, TBL
133.	<i>Dioscorea bulbifera</i>	Applied to ulcers. Used in piles and dysentery.	Herb	TEV, DEGR
134.	<i>Drymaria cordata</i>	Juice laxative and antifebrile.	Herb	TSEV, STE, DEGR
135.	<i>Dryopteris odontoloma</i>	Rhizome anthelmintic.	Herb	TBL, TCF
136.	<i>Elaeocarpus floribundus</i>	Used for inflamed gums.	Tree	TSEV
137.	<i>Elaeocarpus sphaericus</i>	Fruits used in epilepsy.	Tree	TSEV, TEV, STE

Sr. No.	Species	Importance	Habit	Forest Type
138.	<i>Eleutherococcus trifoliatus</i>	Used in paralysis.	Tree/Shrub	TSEV, TEV, STE
139.	<i>Elsholtzia blanda</i>	Tender leaves crushed and made into paste with common salt and is applied to old wounds of cattle to clear off pus and maggot.	Herb	MMD, TCF, AJHU, RDN, RVN
140.	<i>Engelhardtia spicata</i>	Bark contains a resin which is used in medicine	Tree	TSEV, MMD, STE, AJHU
141.	<i>Erioglossum rubiginosum</i>	Decoction of seeds used in curing whooping coughs.	Tree	TSEV
142.	<i>Erythrina stricta</i>	Rheumatism, itching, burning, fever, fainting, asthma, leprosy and epilepsy.	Tree	TSEV, TEV, STE, RVN
143.	<i>Euodia fraxinifolia</i>	Fruits used in dysentery.	Tree	TBL
144.	<i>Eurya japonica</i>	Leaves used for poulticing skin eruptions.	Shrub	STE, TBL, AJHU
145.	<i>Fagopyrum esculentum</i>	Source of protein and reduces increased capillary fragility.	Herb	MMD, STE, BAMB, RVN
146.	<i>Ficus semicordata</i>	Fruit given in aphthous complaints. Fruit and bark made into a bath as cure for leprosy. Juice of roots given in bladder complaints and boiled in milk, in visceral complaints.	Tree	TSEV, TEV, STE, TCF
147.	<i>Ficus fistulosa</i>	Decoction of root taken after parturition.	Tree	TSEV, MMD, TEV, RVN
148.	<i>Ficus gibbosa</i>	Root bark stomachic and aperient.	Tree	TBL
149.	<i>Ficus hispida</i>	Fruits, seeds and bark purgative and emetic.	Tree/Shrub	TSEV, MMD, TEV, STE, TBL, AJHU
150.	<i>Ficus retusa</i>	Bark used in liver diseases. Wounds and bruises.	Tree	TBL
151.	<i>Ficus rumphii</i>	Juice used to kill worms and given internally with turmeric, pepper and for relief of asthma. Bark used in snake bite.	Tree	TSEV
152.	<i>Flacourtia jangomas</i>	Fruit for biliousness, in liver complaints. Leaves in diarrhoea and in diaphoretic.	Tree	TSEV

Sr. No.	Species	Importance	Habit	Forest Type
153.	<i>Floscopa scandens</i>	The plant is used in Malaya as an application for fractured bones. Juice of the stem is reported to be used in Lakhapur (Assam) for sore eyes.	Herb	TSEV, HLK, RVN
154.	<i>Forrestia mollissima</i>	Entire plant is crushed in medicines.	Herb	TSEV
155.	<i>Fragaria vesca</i>	Fruit is said to be astringent and diuretic. The leaves are mildly astringent and diuretic and an infusion of the leaves is given in diarrhoea and affection of the urinary organs.	Herb	TBL, TCF
156.	<i>Galium aparine</i>	Employed in the form of an infusion as aperient, diuretic, refrigerant, and antiscorbutic. The plant contains a glycoside, asperuloside and citric acid. Extracts of the plant injected intravenously into dogs lowered arteria.	Herb	DEGR
157.	<i>Garcinia cowa</i>	Acidic fruits – to cure dysentery and stomach trouble.	Tree	TSEV, TEV, STE, TBL, AJHU, DEGR
158.	<i>Garcinia acuminata</i>	Stem medicinal, resin medicinal.	Tree	TSEV, STE, TBL
159.	<i>Garcinia lancifolia</i>	Fruits edible and used in medicines.	Tree	TEV, AJHU
160.	<i>Gardenia campanulata</i>	Fruits cathartic and anthelmintic. Resin exuded by the plant is given in corpulence and enlarged spleen.	Tree/Shrub	MMD
161.	<i>Garuga pinnata</i>	The drupes are strongly acidic and possesses cooling and digestive properties. The juice of the stem is given for asthma. Decoction of root is used for pulmonary infections.	Tree	TEV
162.	<i>Geranium nepalense</i>	Herb is used as an astringent and in renal infections. The roots are used for coloring medicinal oils and also reported to be used for tanning gallic acid and querectin have been isolated from the water extracts of the	Herb	Pine



Sr. No.	Species	Importance	Habit	Forest Type
		herb.		
163.	<i>Glochidion lanceolarium</i>	Bark for stomach ailments.	Tree	TSEV, TEV, STE, AJHU
164.	<i>Gloriosa superba</i>	Tubers are regarded as tonic, stomachic and anthelmintic when taken in the doses of 5-10 grains; in large doses they are intensely poisonous. The drug from tuber is sometimes used for promoting labour pains and also abortifacient. Considered useful in colic	Herb	TEV
165.	<i>Glycosmis arborea</i>	Roots pounded and mixed with sugar given in low fever. Wood used in snake bite.	Shrub	TSEV, TEV, STE, TBL, AJHU
166.	<i>Gmelina arborea</i>	Fruit, root and bark in Hindu medicine. Juice of leaves to remove discharges from ulcers. Juice of leaves demulsify, used in gonorrhoea, cough and to remove foetid discharges and worms from ulcers. Plant used in snake bite and scorpion sting.	Tree	TSEV, MMD, DEGR, HLK
167.	<i>Gnaphalium luteoalbum</i>	Leaves astringent and vulnerary.	Herb	TCF
168.	<i>Goniothalamus sesquipedalis</i>	Decoction of leaves is given in case of liver enlargement.	Shrub	TSEV, STE
169.	<i>Grewia hirsuta</i>	Drupe is given in diarrhoea and dysentery. Pack of the root in water is applied to wounds to hasten suppuration and as dressing.	Shrub	TEV
170.	<i>Grewia laevigata</i>	Drupe is given in diarrhoea and dysentery.	Tree	STE, TBL, AJHU
171.	<i>Gymnema acuminatum</i>	Leaves of the plant are used for poulticing sores	Shrub	STE
172.	<i>Gynocardia odorata</i>	Seeds possess insecticidal properties also used for skin ailments. Bark a febrifuge. Oil from seeds in leprosy and other skin diseases. Fruit in skin diseases.	Tree	TSEV
173.	<i>Haldina cordifolia</i>	Leaves of the plant are used for poulticing sores. Roots medicinal.	Tree	TSEV

Sr. No.	Species	Importance	Habit	Forest Type
174.	<i>Hedera nepalensis</i>	Leaves and berries are reported to be stimulant diaphoretic and cathartic. Decoction of the leaves is applied externally to destroy lice in the hair. An infusion of berries is given in rheumatism.	Herb	TBL, TCF
175.	<i>Hedyotis scandens</i>	Used as local medicine for gastric troubles, eye disease.	Climber	TSEV, TEV, STE, AJHU, DEGR
176.	<i>Hiptage benghalensis</i>	Leaves used in cutaneous diseases. Leaf juice insecticidal. Used for scabies. Vine used in chronic rheumatism and asthma.	Climber	TSEV, MMD, TEV, STE, TBL, DEGR, HLK
177.	<i>Holmskioldia sanguinea</i>	Juice of the roots is taken to relieve fever.	Herb	TSEV
178.	<i>Homonoia riparia</i>	Roots laxative, diuretic, used in piles, stone in bladder and vesical calculi, strangury and urinary discharges.	Tree	STE, AJHU, Pine
179.	<i>Hovenia dulcis</i>	Fruit extract contains potassium nitrate and is strongly diuretic.	Tree	RVN
180.	<i>Hydnocarpus kurzii</i>	Yields chaulmoogra oil used for cutaneous complaints. Seeds used in leprosy and skin diseases.	Tree	TEV, STE, TBL, Pine
181.	<i>Ichnocarpus frutescens</i>	Roots are reported to possess demulcent, alterative, tonic, diaphoretic and diuretic properties and are used for fevers, dyspepsia and skin troubles. The root powder is administered with milk for diabetes, stones in the bladder and used as blood purifier	Shrub	Pine
182.	<i>Illicium griffithii</i>	Fruits Carminative and stimulant	Tree	TBL
183.	<i>Impatiens balsamina</i>	The acrid juice of the plant considered emetic, cathartic and diuretic. The leaves are used in poultices. The flowers are mucilaginous and cooling.	Herb	AJHU
184.	<i>Imperata cylindrica</i>	Rhizomes are used as a restorative, tonic and	Herb	TEV

Sr. No.	Species	Importance	Habit	Forest Type
		antipyretic and as a fumigant for piles. A decoction of rootstocks is given for diarrhoea, dysentery and gonorrhoea, as vulnerary to stop bleeding		
185.	<i>Indigofera tinctoria</i>	The extract of the plant is used in epilepsy and nervous disorders. The plant is used also in bronchitis and as an ointment for sores, old ulcers and haemorrhoids. The juice of the leaves is used for hydrophobia.	Shrub	AJHU
186.	<i>Ipomoea cymosa</i>	Poultice of leaves applied to burns, scalds and sores. Seeds aperient for cutaneous diseases.	Climber	TSEV, AJHU
187.	<i>Ipomoea purpurea</i>	Used as a purgative and antisyphilitic.	Climber	TSEV, STE, TBL
188.	<i>Jasminum scandens</i>	Root of the plant is reported to be useful in the treatment of ringworm	Climber	TBL
189.	<i>Juglans regia</i>	Leaf and fruit medicinal. Medicinally as anthelmintic and detergent. Leaves are astringent and tonic.	Tree	TBL
190.	<i>Justicia vasculosa</i>	The leaves of the herb are applied to inflammations.	Herb	STE
191.	<i>Kaulfussia aesculifolia</i>	Leaves of the herb are applied to inflammations.	Herb	STE
192.	<i>Kleinhovia hospita</i>	Decoction of leaves is used for skin eruptions. Leaf juices used as eyewash.	Tree	HLK
193.	<i>Knema angustifolia</i>	Juice is applied to sores in the mouth. Gum is used as a medicine for dysentery in Garo hills.	Tree	TSEV, STE
194.	<i>Knema linifolia</i>	Sap & smoke often produce sores.	Tree	TSEV, MMD, STE, TBL
195.	<i>Kydia calycina</i>	Leaves used in rheumatism and lumbago.	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, RVN
196.	<i>Lagerstroemia reginae</i>	Decoction of leaves used in medicine for diabetes.	Tree	TSEV

Sr. No.	Species	Importance	Habit	Forest Type
197.	<i>Lannea coromandelica</i>	The bark is acrid and astringent, used as lotion for bruises, wounds, sores, ulcers and sore eyes. Gum is given in asthma and as cordial to women during lactation. The bark has stimulant properties and is used in gout	Tree	MMD, STE
198.	<i>Leea aequata</i>	Possesses anti-tubercular properties yields an essential oil which inhibits the growth of <i>Mycobacterium tuberculosis</i> . Leaves and twigs, have antiseptic properties and are used for poulticing wounds.	Shrub	TSEV
199.	<i>Leea asiatica</i>	Roots, tubers and stems are mucilaginous and astringent. Leaves and twigs, have antiseptic properties.	Shrub/Herb	TSEV, DEGR
200.	<i>Leea indica</i>	Roots are used in diarrhoea, colic dysentery and as sudorific.	Shrub	TSEV, STE, TBL
201.	<i>Lindenbergia indica</i>	Juice of the plant is given in chronic bronchitis. Also applied in skin eruptions	Herb	MMD, TEV
202.	<i>Lindera neesiana</i>	Aromatic spicy and carminative.	Tree	STE, TBL
203.	<i>Litsea cubeba</i>	Leaf, bark oil and fruit medicinal. Fruits carminative used for dizziness, hysteria, paralysis and loss of memory.	Tree	STE
204.	<i>Litsea glutinosa</i>	It is mucilaginous, feebly balsamia and mildly astringent. Used in diarrhoea and dysentery. Ground and pasted material is used as an emollient application for sprain, bruises and rheumatic and gouty joints. Also a styptic dressing for wounds.	Tree	Pine
205.	<i>Litsea lancifolia</i>	Bark used in poultice for sprains and wounds.	Tree	TSEV, DEGR
206.	<i>Litsea monopetala</i>	Bark used in diarrhoea. Bark is mildly astringent and reported to be used for diarrhoea. Powdered bark and roots are used in external applications for pains, bruises and	Tree	TSEV, TEV, STE, TBL, AJHU, DEGR

Sr. No.	Species	Importance	Habit	Forest Type
		contusions.		
207.	<i>Lonicera micrantha</i>	Antipyretic and stomachic used in dysentery. Dried flowers diuretic and rich in caretenoids. Used as antipyretic, stomachic and in dysentery. Dried flowers considered diuretic.	Climber	TSEV, TBL
208.	<i>Lygodium flexuosum</i>	Plant used as expectorant, fresh roots are used in external applications for applications for rheumatism, sprains, scabies, eczema and cut wounds. Reported to be particularly used for carbuncles.	Climber	TSEV, TEV, STE, TBL, HLN
209.	<i>Lyonia ovalifolia</i>	Fresh roots are used in external applications for applications for rheumatism, sprains, scabies, eczema and cut wounds. Reported to be particularly used for carbuncles.	Shrub	TEV, TCF, GRA
210.	<i>Maesa chisia</i>	Roots, bark and leaves are insecticidal.	Shrub	TSEV, TEV, STE, TBL, TCF, AJHU
211.	<i>Maesa indica</i>	Used as insecticide. Decoction of leaves used for bath in case of fever during convalescence.	Tree/Shrub	TSEV, STE, TBL, AJHU, DEGR, Pine
212.	<i>Maesa ramentacea</i>	Pounded leaves applied to itches and skin infections.	Tree/Shrub	AJHU
213.	<i>Mahonia napaulensis</i>	Bark and leaves used as medicine for eye diseases. Berries eaten, diuretic.	Shrub	TBL, TCF, BAMB
214.	<i>Mallotus philippensis</i>	Ripe fruit used medicinally and considered efficacious for tapeworm. Glands and hairs anthelmintic.	Tree	TSEV, MMD, STE, DEGR
215.	<i>Mangifera indica</i>	Fruit laxative, diuretic. Bark used for uterine haemorrhage.	Tree	TSEV, TEV, STE
216.	<i>Melastoma malabathricum</i>	Bark and leaves used for skin troubles.	Shrub	TSEV, AJHU, DEGR
217.	<i>Melia dubia</i>	Fruit anthelmentic.	Tree	DEGR
218.	<i>Melodinus monogynus</i>	Leaves, wood and roots contain a narcotic compound.	Climber	TSEV, STE, TBL

Sr. No.	Species	Importance	Habit	Forest Type
		Plant locally used for malaria.		
219.	<i>Mesua ferrea</i>	Flowers astringent, stomachic, used in cough attended with expectoration, made into a paste with butter and sugar used in bleeding piles and burning of feet. Flower buds used in dysentery. Bark astringent aromatic combined with ginger used as sudorific.	Tree	TSEV, TEV, STE
220.	<i>Michelia baillonii</i>	Used in medicine for chest troubles; cough.	Tree	STE, BAMB, TSEV, STE, TBL, AJHU
221.	<i>Michelia champaca</i>	Bark is considered stimulant distinct and febrifuge, dried root and root bark are purgative and emmanagogoue. Seed, bark, root, flower, fruit-medicinal.	Tree	TSEV, MMD, TEV, AJHU, RVN
222.	<i>Michelia montana</i>	Bark used as a bitter tonic in fevers.	Tree	TEV, AJHU
223.	<i>Mikania micrantha</i>	Applied to itches.	Climber	TSEV, MMD, TEV, STE, AJHU, DEGR, HLK, RVN
224.	<i>Miliusa roxurghiana</i>	Medicinal, crushed leaves are used by <i>Daflas</i> as smelling salt during headache.	Tree/Shrub	TSEV
225.	<i>Millettia auriculata</i>	Roots applied to sores on cattle to kill vermin.	Climber	TSEV
226.	<i>Mimosa pudica</i>	Decotion of root used in urinary complaints. Juice of leaves used in dressings for sinus and also for sores and piles.	Herb	TSEV, TEV
227.	<i>Mitragyna rotundifolia</i>	Bark contains alkaloids; lowers blood pressure and paralysis, sympathetic nerve endings.	Tree	TEV, STE
228.	<i>Moringa oleifera</i>	Useful in scurvy and catarrhal affections and also used as an emetic.	Tree	TSEV
229.	<i>Morus macroua</i>	Bark, root and leaf - medicinal.	Tree	TSEV, MMD, TEV, STE, TBL,

Sr. No.	Species	Importance	Habit	Forest Type
				RVN
230.	<i>Mucuna imbricata</i>	Plant-tonic, stomach; bark and root-stem, externally used to cure eruptions and bites of poisonous animals.	Climber	STE
231.	<i>Mucuna pruriens</i>	Pods are reported to be used as famine food after repeated boiling and throwing away the water. Roots are tonic stimulant, diuretic, purgative and emmanagogue. They are used for diseases of the nervous system, kidney troubles and dropsy.	Climber	STE, HLN
232.	<i>Murraya koenigii</i>	Leaves used for diarrhoea and dysentery and for checking vomiting.	Shrub	TSEV, TEV, STE
233.	<i>Murraya paniculata</i>	Leaves used in diarrhoea and dysentery. Applied to cuts, leaves and root barks used in coughs, rheumatism and hysteria. Decoction given in dropsy.	Shrub	TSEV, MMD, TEV, STE
234.	<i>Mussaenda glabra</i>	Young leaves eaten in salads and chutneys. Infusion of leaves given for coughs. Flowers diuretic used in dropsy, asthma, etc.	Shrub	TSEV, STE, TBL
235.	<i>Myristica angustifolia</i>	Astringent. In dysentery and mouth sores.	Tree	STE
236.	<i>Myxopyrum smilacifolium</i>	Asthma, rheumatism, nervous complaints. Leaves boiled in oil, used in backache.	Climber	STE, TBL
237.	<i>Naravelia zeylanica</i>	Roots when crushed emit a smell which relieves headache.	Shrub	STE, TCF
238.	<i>Nephrolepis cordifolia</i>	A decoction of the fresh fronds is given as a drink for coughs.	Herb	TSEV, MMD, TEV, STE, TBL, AJHU, Pine
239.	<i>Ochna squarrosa</i>	Roots - antacid. Used in snake bite. Bark digestive tonic.	Shrub	STE
240.	<i>Olax nana</i>	Fruits edible. Bark used anaemia.	Herb	STE
241.	<i>Olax scandens</i>	Bark used in anaemia due to fevers.	Climber	TSEV, STE, TBL

Sr. No.	Species	Importance	Habit	Forest Type
242.	<i>Oldenlandia auricularia</i>	Herb used in diarrhoea, dysentery, colitis and early stages of cholera. Paste of the leaves applied to wounds.	Herb	STE
243.	<i>Olea dioica</i>	Bark febrifuge.	Tree	TSEV, MMD, TEV, RVN
244.	<i>Oleandra wallichii</i>	Reported to possess rejuvenating properties and beneficial to the aged.	Herb	TSEV, STE, AJHU, Pine
245.	<i>Ophiopogon intermedius</i>	Tubers used in dropsy. Fruits are taken in rheumatism and the paste applied on injuries.	Herb	TSEV
246.	<i>Ophiorrhiza mungos</i>	Roots may be used as a tonic. Roots are said to be useful for the treatment of cancer. A decoction of root leaves and bark is given as stomachic. Leaves are used for dressing ulcers.	Herb	TSEV
247.	<i>Oreocnide integrifolia</i>	Roots with ginger, are taken to cure rashes and skin infection.	Tree	TSEV, MMD, TEV, STE
248.	<i>Oroxylum indicum</i>	Roots medicinal.	Tree	TSEV, STE
249.	<i>Osbeckia chinensis</i>	The roots of the plant are chewed and the saliva is swallowed for coughing.	Herb	AJHU
250.	<i>Osbeckia stellata</i>	Decoction of roots-stomachic, dried leaves-toothache.	Shrub	TEV, TBL, AJHU
251.	<i>Osmanthus fragrans</i>	Flowers are also used for protecting clothes from insects.	Shrub	TSEV, TBL
252.	<i>Oxalis corniculata</i>	The plant possesses astringent, vermifuge, emmanagogoue and antiseptic properties. Fresh juice of the plant is used in dyspepsia, piles, anaemia and tympanitis. The leaves of the plant are cooling, refrigerant, stomachic, antiscorbutic and appetizing.	Herb	TSEV, STE, TBL, TCF, AJHU, DEGR, RVN
253.	<i>Paederia foetida</i>	Leaves possess tonic and astringent properties. All parts of the plant have been employed in medicine for rheumatic affections. Leaves are used to relieve distention due to flatulence, herpes. Painless and harmless to	Climber	GRA



Sr. No.	Species	Importance	Habit	Forest Type
		eyes.		
254.	<i>Paederia scandens</i>	Leaves and roots used for skin diseases, dysentery and Indigestion	Climber	STE, TBL
255.	<i>Panax pseudoginseng</i>	Used as aphrodisiac.	Herb	STE, TBL
256.	<i>Pandanus furcatus</i>	Young leaves from the upper part of the stems are used as an antidote for poisoning.	Tree/Shrub	TSEV, TEV, STE, AJHU
257.	<i>Parameria glandulifera</i>	Decoction of bark applied to dysentery. Infusion of leaves and flowers as emmenagogue.	Shrub	TSEV
258.	<i>Pavetta indica</i>	Purgative, urinary diseases, visceral decoction of leaves used as a lotion for ulcerated nose and haemorrhoids.	Shrub	TSEV
259.	<i>Peperomia pellucida</i>	Crushed leaves are used in applications for headache and fever. Juice is given in abdominal pains.	Herb	STE
260.	<i>Persea bombycina</i>	Leaves yield a mucilage in water, which is employed for falling of hair.	Tree	TEV, TBL
261.	<i>Persicaria chinensis</i>	Herb is tonic, antiscorbutic and vulnerary.	Herb	TEV
262.	<i>Phoebe lanceolata</i>	Ash of berries cures sores.	Tree	STE
263.	<i>Phrynium capitatum</i>	The leaves are wrapped around articles of food, prior to boiling, to impart color and flavor. They are also used to serve food and for thatching.	Herb	TSEV, MMD, TEV, STE, TBL, AJHU, HLK
264.	<i>Phyllanthus reticulatus</i>	Leaves diuretic, juice used as camphor in bleeding gums, diarrhoea in infants. Bark astringent, diuretic.	Shrub	TSEV, AJHU
265.	<i>Phyllanthus urinaria</i>	Juice of the leaves given with coconut milk as an appetizer to children. Fresh roots given in jaundice. Latex applied to sores. Used as diuretic in dropsical affections, also in gonorrhoea and in other troubles.	Herb	TSEV, STE
266.	<i>Phyllanthus maderaspatensis</i>	Seeds laxative, diuretic and carminative. Infusion of leaves applied in headache.	Shrub	HLK

Sr. No.	Species	Importance	Habit	Forest Type
267.	<i>Picrasma javanica</i>	Bark as febrifuge. Leaves applied to sores.	Tree	STE, HLK
268.	<i>Pimpinella diversifolia</i>	Carminative.	Herb	Pine
269.	<i>Pinus roxburghii</i>	Wood and oleo-resin used in snake bite and scorpion sting. Expectorant, used in chronic bronchitis and recommended for gangerene of lungs. Given as a carminative in flatulent cholic and used to arrest minor haemorrhages in tooth sockets and nose. Seeds eaten	Tree	TBL, TCF, Pine
270.	<i>Piper betle</i>	Leaves are aromatic, digestive, stimulant and carminative. Medicinally it is useful in catarrhal, pulmonary affection. It is also used for poultices. Oil of betel is used in the treatment of various respiratory catarrhal. It has carminative properties.	Climber	TSEV, MMD, TEV, STE, TBL, AJHU, HLK
271.	<i>Piper longum</i>	Alternative, toxic, cough, antidote of snake bite. Used as condiment also. Dried unripe fruit-alternative tonic. Decoction of immature fruit and root-used in chronic bronchtis, cough and cold. Root and fruit -antid. To snake bite and scorpion sting.	Shrub	TSEV, MMD, TEV, STE, TBL, AJHU, HLK, RVN
272.	<i>Piper nigrum</i>	Fruits used as spices; in weakness following fevers, vertigocoma, sore-throat, piles and skin diseases. Fruit used as aromatic, stimulant in cholera, in weakness following fevers, vertigo, coma. In dyspepsia and flatulence; as antipysetic.	Shrub	TSEV, TEV, STE, TBL
273.	<i>Piper peepuloides</i>	Stem and roots - used in leprosy and in cough.	Shrub	TSEV, STE
274.	<i>Piper sylvaticum</i>	In Bengal, the fruits are used a carminative.	Climber	TSEV, TEV, STE, AJHU
275.	<i>Piper thomsonii</i>	Roots are macerated in water and used as a diuretic.	Shrub	TSEV

Sr. No.	Species	Importance	Habit	Forest Type
276.	<i>Pithecellobium angulatum</i>	Poultice in swellings, chicken pox and small pox.	Tree	STE
277.	<i>Pithecellobium montanum</i>	They are used in poultices as a remedy for sore legs, swellings, cough, chicken pox and small pox. The ashes of the leaves mixed with coconut oil are reported to be used in skin affections.	Tree	AJHU
278.	<i>Pityrogramma calomelonos</i>	The fern used in the preparation of decoction with other plants for kidney troubles	Herb	TBL
279.	<i>Plantago erosa</i>	Possesses properties similar to <i>Plantago major</i> which is hemostatic and promotes wound healing in burns and tissues. In homeopathy it is used in disorders of tissues and in disorders of the epidermis, and in headache, earache, and toothache.	Herb	STE, RVN
280.	<i>Podophyllum hexandrum</i>	The dried rhizomes and roots are the source of a medicinal resin podophyllin, commonly used as a purgative. In recent years, the resin podophyllin and its active principle podophyllotoxin have received attention for their tumour necrotizing properties.	Herb	RDN, Fir
281.	<i>Pogostemon benghalense</i>	The leaves show antifungal activity.	Herb	TSEV
282.	<i>Pogostemon pubescens</i>	Leaves are reported to be eaten in times of scarcity. They are used as stimulant and styptic. Bruised leaves are applied as a cataplasm to wounds. The juice is given in colic and fever. Roots are stimulant and antihemorrhagic.	Herb	TSEV, MMD, HLK
283.	<i>Polyalthia longifolia</i>	Bark febrifuge.	Tree	TSEV
284.	<i>Polyalthia simiarum</i>	Bark used as cure for scorpion sting.	Tree	TSEV, STE, DEGR
285.	<i>Polygala arillata</i>	Roots purgative and febrifuge.	Shrub	TSEV, STE, DEGR

Sr. No.	Species	Importance	Habit	Forest Type
286.	<i>Polygala longifolia</i>	Used as a galactagogue	Herb	Pine
287.	<i>Polygonatum multiflorum</i>	The plant is considered diuretic. The rhizome possesses astringent, demulcent and tonic properties. The powdered rhizome is used in Europe as a poultice for bruises, inflammations, tumours and discoloration of the skin combined with other remedies.	Herb	STE, Pine
288.	<i>Polygonum barbatum</i>	Seeds used to relieve griping pains of colic. Root astringent, cooling.	Herb	TSEV
289.	<i>Polygonum chinense</i>	Plant tonic, vulnerary, antiscorbutic.	Herb	STE, TBL, TCF, DEGR
290.	<i>Polygonum orientale</i>	Plant good tonic and vulnerary.	Herb	TSEV, MMD
291.	<i>Polygonum rude</i>	Herb astringent and used in diarrhoea.	Herb	MMD
292.	<i>Polygonum tomentosum</i>	Root stocks yield acrid resin which is used as cardiac depressant.	Herb	MMD, DEGR
293.	<i>Pongamia pinnata</i>	Seeds are mainly valued for medicinal uses. Powdered seed is valued as a febrifuge and tonic and used also in bronchitis and whooping cough. The seeds crushed to paste are used for leprosy sores, skin diseases and painful rheumatic joints.	Tree	TEV
294.	<i>Populus ciliata</i>	The bark is used as a tonic, stimulant and blood purifier.	Tree	MMD
295.	<i>Potentilla fruticosa</i>	The shrub is astringent and antispasmodic.	Herb	TBL, Pine
296.	<i>Pothos cathcartii</i>	Leaves fried in ghee, given in body pains.	Climber	TSEV
297.	<i>Pothos scandens</i>	The root, bruised and fired in oil, is applied to cure abscess. The powdered leaves are applied to smallpox pustules. An infusion of the leaves is used in bath for curing convulsions	Herb	TSEV, MMD, TEV, STE, TBL, Pine, HLK

Sr. No.	Species	Importance	Habit	Forest Type
		and epilepsy. The stem cut up with camphor is smoked like tobacco for asthma.		
298.	<i>Pouzolzia hirta</i>	Roots also used for the treatment of fractures and dislocation of bones.	Herb	STE
299.	<i>Premna latifolia</i>	Leaves diuretic and used in dropsy. Applied to boils. Given to cattle in colic.	Tree	TSEV, HLK
300.	<i>Prunus cerasoides</i>	Fruits astringent. Small branches contain a hydrocyanic acid yielding substance.	Tree	TSEV, STE, TBL, RDN, Pine
301.	<i>Prunus salicina</i>	The fruit is considered stomachic and good for allaying thirst; it is given in arthritis.	Tree	TCF
302.	<i>Prunus undulata</i>	Leaves as well as fruits, poisonous to cattle, contain a hydrocyanic acid yielding substance.	Tree	TSEV, TBL, DEGR
303.	<i>Psychotria monticola</i>	Roots used in poultice of ulcers. In swellings, lotion for enlarged spleen	Shrub	TSEV, STE, TBL, AJHU
304.	<i>Pteridium aquilinum</i>	The rhizomes are astringent and are useful in diarrhoea and inflammation of the gastric and intestinal mucous membranes.	Herb	STE, TCF, AJHU, DEGR
305.	<i>Pteris ensiformis</i>	The juice is stated to possess astringent properties and a decoction of the fresh fronds is given in dysentery. Juice of the rhizome is applied in glandular swellings of the neck.	Herb	TEV
306.	<i>Pterospermum acerifolium</i>	Flowers are used as general tonic and occasionally as a cure for blood troubles, inflammation, ulcers, tumours and leprosy. Also employed as insect repellent and disinfectant. Flowers and bark are charred and mixed with Kamala applied in suppurating small-pox.	Tree	TSEV, MMD, TEV, STE, TBL, AJHU, RVN
307.	<i>Pyrola rotundifolia</i>	Diuretic and antiseptic. Also considered astringent and antilithic and is used for healing wounds. A decoction	Herb	Pine

Sr. No.	Species	Importance	Habit	Forest Type
		of the plant is prescribed against profuse menses, bloody stools, haemorrhages and ulcers in the urinary passage.		
308.	<i>Quercus lamellosa</i>	Bark and acorns astringent.	Tree	TSEV, STE, TBL, TCF, RDN, BAMB
309.	<i>Randia cochinchinensis</i>	Decoction of roots used for bowel complaints.	Tree	TSEV
310.	<i>Randia longiflora</i>	Berries used medicinally. Fruits extract insecticidal and insect repellent; used as insecticidal preparation.	Shrub	TSEV, MMD, STE
311.	<i>Ranunculus cantoniensis</i>	Used as a vesicant. Shows antibacterial activity.	Shrub	TSEV
312.	<i>Reissantia indica</i>	Sap is febrifuge. Root bark used for respiratory troubles. Root effective for inflammation of respiratory tract, both  of viral and bacterial origin.	Herb	TSEV, STE
313.	<i>Rhamnus nepalensis</i>	Pounded fruits are macerated in vinegar and used in herpes.	Shrub	TSEV, STE, AJHU
314.	<i>Rhododendron arboreum</i>	Bark is used in the preparation of a kind of snuff. Tender leaves stated to be used as a vegetable are also applied to relieve headache. Also used in diarrhoea and dysentery.	Tree	TBL, TCF, BAMB
315.	<i>Rhododendron campanulatum</i>	Leaves are said to be used in chronic rheumatism, syphilis and sciatica. They are mixed with tobacco and used as snuff to cure hemicrania and colds.	Shrub	RDN
316.	<i>Rhododendron setosum</i>	Leaves aromatic, stimulant, administered to produce sneezing.	Shrub	
317.	<i>Rhus chinensis</i>	Medicinally used for colic, dysentery and diarrhoea.	Tree	TEV
318.	<i>Rhus hookeri</i>	Juice powerful vesicant; also used in colic.	Tree	TSEV
319.	<i>Rhus javanica</i>	Sour fruits used for catching fishes by local people and as a medicine for stomach	Tree	TSEV, MMD, STE,

Sr. No.	Species	Importance	Habit	Forest Type
		troubles in skin troubles, roots  used in bowel complaints. Seeds contain brucien. Fruit possess antiameobic activity. Used in treatment of papylooma. Leaves used in rheumatism		TBL, DEGR, Pine
320.	<i>Rhus semialata</i>	Remedy for colic, fruit eaten by Nepalese, Substitute for rennet in preparing curds. Fruit used in colic.	Tree	MMD, STE
321.	<i>Rhus succedanea</i>	Cures skin rash or skin diseases. Fruit used in treatment of phthisis. Galls on branch are astringent, tonic, expectorant and stimulant. Used in diarrhoea and dysentery.	Tree	TSEV, MMD, STE
322.	<i>Rhynchosyilis retusa</i>	Fresh plant is used as emollient	Epiphyte	TSEV
323.	<i>Rourea minor</i>	Roots and twigs are employed as a bitter tonic and prescribed in rheumatism, scurvy, diabetes and in pulmonary complaints. Roots are used as a mild asprient and in external application for ulcers and skin complaints	Tree	Pine
324.	<i>Rubia cordifolia</i>	Extract from crushed plants used in skin disease. Used to be collected by Tibetan doctors. Used also for extracting varnish and tanning materials. Root tonic, alternative and astringent. Stem used in cobra bite and scorpion sting.	Climber	TEV, TBL, AJHU, DEGR
325.	<i>Rubus biflorus</i>	Fruit edible.	Shrub	TBL
326.	<i>Rungia parviflora</i>	Bruised leaves applied to relieve pain and reduce swelling. Juice of leaves cooling, aperative, given to children suffering from small pox. Root febrifuge. Leaves bruised and applied to contusions to relieve pain and diminish swelling.	Herb	TCF

Sr. No.	Species	Importance	Habit	Forest Type
327.	<i>Sabia lanceolata</i>	Leaves used for fomenting in cases of swellings and pain on the ankle or wrist.	Shrub	STE, TBL, AJHU, DEGR
328.	<i>Saccharum spontaneum</i>	Plant laxative, aphrodisiac, useful in burning sensations, strangury, vesical calculi, diseases of blood, biliousness, haemorrhagic diathesis.	Herb	TSEV, STE, TCF, DEGR
329.	<i>Salix tetrasperma</i>	The dried and powdered leaves are mixed with sugar and given for treatment of several diseases such as rheumatism, epilepsy, swellings, piles, venereal diseases and stones in bladder. Bark used as febrifuge.	Tree	STE
330.	<i>Sambucus javanica</i>	Used as depurative, diuretic and purgative. Leaves are laxative and infusion of flowers and leaves is sudorific and diuretic.	Shrub	STE
331.	<i>Sanicula europea</i>	Plant useful in diseases of the lungs and in leucorrhoea, dysentery, diarrhoea, menorrhagia and bleeding piles.	Herb	STE
332.	<i>Santalum album</i>	Wood when applied as paste relieves headache, fevers and local inflammation and to skin diseases to allay heat and pruritis, diaphoretic.	Tree	TSEV
333.	<i>Sapindus mukorossi</i>	Fruits expectorant and emetic and are used in the treatment of excessive salivation, epilepsy and chlorosis. Employed in treatment of dental caries.	Tree	TEV, STE, BAMB
334.	<i>Sapindus rarak</i>	Fruits used in medicine to remove pimples.	Tree	TSEV
335.	<i>Saprosma ternatum</i>	Leaves eaten to relieve flatulence and stomach ache.	Tree	TSEV, STE, TBL
336.	<i>Schefflera venulosa</i>	Roots mixed with rice are eaten to cure dropsy	Shrub	TBL
337.	<i>Schima wallichii</i> ssp. <i>Wallichii</i> var. <i>khasiana</i>	Bark irritates skin, anthelmintic, rubefacient.	Tree	TSEV, TEV, STE, TBL, AJHU, HLN
338.	<i>Schleichera oleosa</i>	Skin troubles.	Tree	TEV, STE



Sr. No.	Species	Importance	Habit	Forest Type
339.	<i>Scutellaria discolor</i>	Used in rheumatism.	Herb	TSEV
340.	<i>Scutellaria glandulosa</i>	Paste of the leaves is used for cuts.	Herb	TSEV
341.	<i>Sedum multicaule.</i>	Employed as emollient and vulnerary	Herb	RDN
342.	<i>Selaginella involvens</i>	Is said to have the property of prolonging life.	Herb	TSEV, STE, TBL, TCF
343.	<i>Selaginella wallichii</i>	A decoction of the plant is prescribed as a protective medicine after child birth.	Herb	TSEV, STE, AJHU
344.	<i>Selaginella willdenovi</i>	Young shoot are eaten with food partly as medicine.	Herb	TSEV
345.	<i>Semecarpus anacardium</i>	The pericarp of fruit contains an acid juice which is used in medicine. Nut used to procure abortion; given as vermifuge. Oil from the nuts-vesicular used externally in rheumatism and leprous nodules. Ashes of plant used in snake bite and scorpion sting.	Tree	TSEV, MMD, TEV
346.	<i>Senecio quinquelobus</i>	Seeds are given for the treatment of colic.	Herb	HLK
347.	<i>Senecio scandens</i>	Emetic, employed in jaundice. Leaves used for eye troubles.	Climber	TSEV, TCF, AJHU, DEGR
348.	<i>Shorea robusta</i>	Resin astringent, detergent, used in dysentery, and for fumigations and plasters given for weak digestion, gonorrhoea and as aphrodisiac.	Tree	TSEV
349.	<i>Sida rhombifolia</i>	Used in rheumatism and tuberculosis. Leaves pounded and applied on swellings. Stem mucilaginous, used as demulcent and emollient. Both internally and externally.	Herb	AJHU, RVN
350.	<i>Skimmia anquetilia</i>	Leaves used in small pox.	Herb	TCF
351.	<i>Smilax glaucophylla</i>	Shoots of this plant are eaten in times of scarcity. Extracts of almost all the parts have shown a positive antispasmodic action in	Shrub	TSEV, TBL, AJHU

Sr. No.	Species	Importance	Habit	Forest Type
		isolated guinea pig testing.		
352.	<i>Smilax lanceaefolia</i>	Juice extracted from the roots is taken in rheumatic pains and refuse after extraction of juice is used as a poultice  over the affected part.	Shrub	TSEV, STE
353.	<i>Smilax ocreata</i>	Roots used in dysentery	Shrub	TSEV, TEV, STE,  TBL, AJHU
354.	<i>Smilax ovalifolia</i>	Roots used as a substitute for Indian Sarsaparilla in the treatment of venereal diseases; applied for rheumatism and pains in the lower extremities; used in bloodless dysentery.	Shrub	TSEV, STE, TBL,  AJHU
355.	<i>Solanum nigrum</i>	Antiseptic and antidysentric. The herb also used as a diuretic and laxative. Seeds contain a fatty oil. Berries used in fevers, diarrhoea, eye diseases, hydrophobia. Juice of plant hydragogue, diuretic, alternative, given in chronic enlargement of the liver.	Herb	STE
356.	<i>Solanum torvum</i>	Used in the treatment of coughs; it is a sedative diuretic and digestive. Root is useful in poulticing cracks in the feet.	Shrub	TSEV, MMD, TEV,  RVN
357.	<i>Solanum xanthocarpum</i>	Plant is medicinal and is an expectorant and diuretic in bronchial disease. Root is used in catarrhal and febrile affection. Juice of berries useful in throat. Stem, flowers and fruits bitter, carminative, prescribed in burning of the feet.	Herb	AJHU
358.	<i>Sphenomeris chusana</i>	Used internally for chronic enteritis.	Herb	TSEV, TBL
359.	<i>Spilanthes paniculata</i>	The boiled plant with the water is given in dysentery. Decoction is given as diuretic and lithotropic employed as a bath for rheumatism and as lotion in scabies and	Herb	TSEV, MMD

Sr. No.	Species	Importance	Habit	Forest Type
		psoriasis. Juice is a vulnerary.		
360.	<i>Spondias pinnata</i>	Bark refrigent, useful in dysentery, ground and mixed with water rubbed on both articular and muscular rheumatism. Fruit antiascorbic and the pulp astringent used in bilious dyspepsia.	Tree	TSEV, TBL
361.	<i>Stephania japonica</i>	The roots are bitter and astringent. Reported to be useful in the treatment of fever, diarrhoea, dyspepsia and urinary diseases. Petroleum-ether extract of the rhizome is reported to exhibit fertility-promoting activity. Roots are used for fevers.	Climber	TSEV
362.	<i>Sterculia villosa</i>	Bark yields a gum used in veterinary medicine.	Tree	TSEV, MMD, TEV, TBL, TCF, RVN
363.	<i>Stereospermum chelonoides</i>	Roots, leaves and flowers used in decoction as a febrifuge. Juice of leaves used in maniacal cases. Flowers and fruit in scorpion sting.	Tree	TSEV, MMD, TEV, STE, TBL, DEGR, RVN
364.	<i>Streblus asper</i>	Decoction of bark given in fever, dysentery, and diarrhoea. Roots used as application to unhealthy ulcers and sinuses; antidysentery and in cases of snake bite. Milky juice antiseptic, astringent, applied to chapped hands and sore heels. Berries eaten, leaves lopped.	Tree	TSEV, TBL
365.	<i>Strobilanthes callosus</i>	Bark emollient. Used for fomentation in tenesmus and as external application in parotitis. Flowers vulnerary.	Shrub	STE, TBL
366.	<i>Styrax serrulatum</i>	Bark medicinal. Antiseptic, stimulating expectorant.	Tree	TSEV, TEV, STE, TBL
367.	<i>Symplocos racemosa</i>	Bark cooling, astringent, bowel complaints, eye diseases, ulcers, decoction used as a gargle for giving	Tree	TBL

Sr. No.	Species	Importance	Habit	Forest Type
		firmness to spongy and bleeding gums.		
368.	<i>Syzygium cumini</i>	Bark astringent used in the preparation of astringent, decoction used for gargles and washes; fresh juice given in diarrhoea. Juice of leaves used in dysentery. Juice of ripe fruit used as a stomachic, carminative, and as diuretic.  Fruit useful as astringent.	Tree	TSEV, MMD, TEV, STE, TBL, BAMB
369.	<i>Syzygium malaccense</i>	Roots diuretic. Bark astringent. Dried and pulverized leaves are applied to cracked tongue.	Tree	TSEV, TEV, STE
370.	<i>Tamarix dioica</i>	Galls and twigs used as an astringent.	Tree	TSEV, TBL
371.	<i>Taxus wallichiana</i>	Anticancerous. Epilepsy (Leaves, bark). Wood used for cabinet work. All parts of the tree except the fleshy aril is poisonous. Used as fish poison. Leaves and fruits emetic, sedative and antiseptic. Leaves used in asthma, bronchitis.	Tree	TBL, TCF, Fir
372.	<i>Tectona grandis</i>	Flowers medicinal. Wood powdered and made into plaster used for hot headache and for swellings; internally taken in dyspepsia, with burning of stomach, vermifuge. Ashes of wood applied to swollen eyelids. Bark astringent. Oil from nuts promotes growth.	Tree	MMD, TEV, STE
373.	<i>Terminalia bellirica</i>	Used in indigenous medicinal practice, kernel is edible but has narcotic properties. Fruit bitter, astringent, tonic, laxative, antipyretic, used in piles, dropsy, diarrhoea, leprosy, biliousness, dyspepsia and headache.	Tree	TSEV, MMD, STE
374.	<i>Terminalia chebula</i>	Reputed for its medicinal properties and tannin. Fruit astringent, laxative, alternative, used externally as a local application to chronic ulcers and wounds	Tree	TSEV, MMD, STE

Sr. No.	Species	Importance	Habit	Forest Type
		and as a gargle in stomatitis; finely powdered used as a dentifria.		
375.	<i>Terminalia citrina</i>	Fruits used medicinally. Fruit astringent, laxative, alternative, used externally as a local application to chronic ulcers and wounds and as a gargle in stomatitis; finely powdered used as a dentrifice and considered useful in carious teeth, bleeding of gums, etc.	Tree	TSEV, TEV, STE
376.	<i>Terminalia myriocarpa</i>	Bark fairly potent cardiac stimulant.	Tree	TSEV, MMD, TEV, STE, AJHU, HLK, BAMB, RVN
377.	<i>Tetracera sarmentosa</i>	Roots astringent used in external applications for burns leaves used for the treatment of boils; cut stems yield water.	Tree	TSEV
378.	<i>Tetrastigma serrulatum</i>	Alcoholic extract of aerial parts, when injected intramuscularly in rats, showed anticancer activity against walker carcinosarcoma 256 in rats.	Climber	TSEV, TEV, STE, TBL, HLK, RVN
379.	<i>Themeda arundinacea</i>	Medicinally, as febrifuge.	Herb	GRA
380.	<i>Thlaspi arvense</i>	Herb diuretic and blood purifier	Herb	RDN, Fir
381.	<i>Thysanolaena maxima</i>	A decoction of the roots is used as mouthwash during fever.	Herb	TSEV, MMD, TEV, STE, TBL, AJHU, DEGR, HLN
382.	<i>Tiliacora acuminata</i>	Used as a cure for snake bite. Root bark contains alkaloid.	Herb	STE
383.	<i>Toddalia asiatica</i>	The root bark is credited with diaphoretic, stomachic and antipyretic properties. Considered to be a potent anti malarial drug.	Shrub	TEV, AJHU
384.	<i>Toona ciliata</i>	Bark used for chronic dysentery of infants.	Tree	TSEV, MMD, TEV, STE, HLK
385.	<i>Trachelospermum lucidum</i>	Medicinal properties.	Climber	TEV, STE
386.	<i>Trema cannabina</i>	Decoction of roots used for the treatment of sore tongue.	Herb	STE

Sr. No.	Species	Importance	Habit	Forest Type
387.	<i>Trema orientalis</i>	Plant used in epilepsy.	Tree	TSEV
388.	<i>Trewia nudiflora</i>	Plant used for the removal of swelling, bile and phlegm. Decoction of root given to relieve flatulence and applied locally in gouty and rheumatic affections.	Tree	TSEV
389.	<i>Triumfetta rhomboidea</i>	Leaves and flowers used in leprosy. Seeds yield a fatty oil. Leaves, flowers and fruits - mucilaginous, demulcify, astringent, given in gonorrhoea. Root bitter, diuretic, facilitates childbirth.	Shrub	TSEV
390.	<i>Tropidia curculigoides</i>	A decoction of the roots is said to be given in diarrhoea and that of the herb in combination with other drugs is used in the treatment of malarial fevers.	Herb	TSEV, STE, TBL, DEGR, GRA
391.	<i>Uncaria sessilifructus</i>	Decoction of bark used as a mordant.	Climber	STE
392.	<i>Urena lobata</i>	Decoction of stem and roots used for flatulent colic. Flowers expectorant. Roots diuretic used as an external remedy for rheumatism.	Herb	MMD, TEV, STE, TBL, AJHU, Pine
393.	<i>Valeriana wallichii</i>	Rhizomes and roots of this species are known as Indian valerian. They are used as incense and in perfumes also used medicinally for hysteria.	Herb	AJHU
394.	<i>Vallis solanacea</i>	Latex of the plant is applied to wounds and old sores; it is said to hasten healing. The bark is bitter and astringent and is chewed by Kols for fixing loose teeth. Twigs are used for making baskets. Flowers and fruits are reported to be edible.	Climber	TSEV, MMD
395.	<i>Ventilago madraspatana</i>	Powdered root bark carminative, stomachic, stimulant, useful in atonic dyspepsia, debility and in mild fever. Powdered bark mixed with gingelly oil used as an application for skin diseases and itch.	Shrub	TSEV
396.	<i>Verbascum thapsus</i>	The roots are employed as febrifuge. They have long	Herb	TSEV

Sr. No.	Species	Importance	Habit	Forest Type
		been used for the treatment of diarrhoea and pulmonary diseases of cattle. The leaves were once valued as a demulcent and extensively used in various pectoral complaints and as local applications in piles.		
397.	<i>Viburnum colebrookianum</i>	The powdered leaves are applied to old sores.	Shrub	TEV
398.	<i>Viburnum foetidum</i>	Plant astringent and emmenetic; juice of leaves used internally in menor, and in post-partum haemorrhage.	Shrub	TSEV, TBL
399.	<i>Viola biflora</i>	The flowers possess pectoral, diaphoretic and antiseptic properties. The herb is used as a substitute for the drug <i>Banafshah</i> .	Herb	Fir
400.	<i>Viola patrinii</i>	Prescribed for the treatment of syphilis, scrofula and biliousness.	Herb	STE, TBL, RVN
401.	<i>Vitex glabrata</i>	Barks and roots astringent.	Tree	TSEV, TEV, STE, TBL, HLK
402.	<i>Vitex negundo</i>	Flowers astringent. Entire plant medicinal. Leaves tonic, vermifuge, highly medicinal.	Shrub	TBL
403.	<i>Wendlandia tinctoria</i>	An application prepared from the bark is used to relieve cramps in patients suffering from cholera.	Tree	STE
404.	<i>Woodfordia fruticosa</i>	Dried flowers are credited with stimulant and astringent properties. Used in bowel complaints and haemorrhages and also administered in menorrhagia and seminal weakness.	Shrub	Pine
405.	<i>Wrightia tomentosa</i>	Seeds yield medicinal oil.	Tree	TSEV
406.	<i>Zanthoxylum acanthopodium</i>	Fruits have long been known as a spice and have also been used as a medicine..	Shrub	TSEV
407.	<i>Zanthoxylum nitidum</i>	The roots are used in toothache, stomach ache and boils. Also used as an insecticide and fish poison. Freshly prepared decoction of the	Shrub	STE

Sr. No.	Species	Importance	Habit	Forest Type
		roots had a marked larvicidal action against both anophiline and culicine mosquitoes,  but no action on pupae.		
408.	<i>Zanthoxylum rhetsa</i>	Fruit aromatic, astringent, stimulant, stomachic, prescribed in dyspepsia, arising from atrabilis and in some forms of diarrhoea, given in hiney rheumatism. Root bark considered a purgative of the kidneys.	Tree	TSEV, MMD
409.	<i>Zingiber officinale</i>	Medicinal properties of ginger.	Herb	TSEV
410.	<i>Ziziphus mauritiana</i>	Fruit mucilaginous, pectoral, styptic, considered to purify blood and aid digestion.. Root used in decoction of fever and as a powder applied to old wounds and ulcers. Bark considered to be remedy in diarrhoea.	Shrub/Tree	STE

TSEV= Tropical semievergreen, MMD = Moist deciduous, TEV = Tropical evergreen, STE = Subtropical evergreen, TBL = Temperate broadleaved, TCF = Temperate coniferus, BAMB = Bamboo mixed, RVN = Riverine, GRA = Grassland, HLN = Hollong, HLK = Hollock, Pine = Pine, RDN = Rhododendron, DEGR = Degraded, AJHU = Abandoned jhum, Fir = Fir

Source:

Biodiversity Characterisation at Landscape Level in North-East India using Satellite Remote Sensing and Geographic Information System. Indian Institute of Remote Sensing, 2002.



## **Annexure – 6.6**

**Flowering plants reported to occur in Subansiri Basin,  
Arunachal Pradesh**



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
	<b>RANUNCULACEAE</b>			
1	<i>Aconitum assamicum</i>	Arunachal Pradesh, 3900-4300 m		Endemic
2	<i>Aconitum fletcherianum</i>	Arunachal Pradesh, 3000-4500 m		
3	<i>Aconitum hookeri</i>	Arunachal Pradesh		
4	<i>Actaea acuminata</i>	Arunachal Pradesh		
5	<i>Anemone geum</i>	Arunachal Pradesh		
6	<i>Anemone howellii</i>	Subansiri, 1500-2500 m		Endemic
7	<i>Anemone vitifolia</i>	Subansiri, 1400-1600 m		
8	<i>Caltha palustris</i>	Subansiri, 1800-3000 m		
9	<i>Caltha palustris var. palustris</i>	Arunachal Pradesh		Endemic
10	<i>Clematis acuminata</i>	Subansiri, 800-2500 m		
11	<i>Clematis acuminata subsp. sikkimensis</i>	Subansiri		
12	<i>Clematis buchananiana</i>	Arunachal Pradesh, 100-1000 m	Mei-bytengdoh (kh.), Danying khongru (Monpa)	
13	<i>Clematis cadmia</i>	Arunachal Pradesh, 500-1500 m	Bon-jaluki, Ban-marich (Asm.)	
14	<i>Clematis gouriana</i>	Subansiri, 500-1000 m		
15	<i>Clematis grewiiflora</i>	Arunachal Pradesh, 900-1500 m		
16	<i>Coptis teeta</i>	Arunachal Pradesh, Upper reaches of Upper Subansiri District 2500-3000 metres		Vulnerable
17	<i>Delphinium altissimum</i>	Arunachal Pradesh		
18	<i>Isopyrum adiantifolium</i>	Subansiri, 1500-2700 m		
19	<i>Naravelia zeylanica</i>	Subansiri, 500-1200 m		The stems are used as tooth sticks to cure toothaches.
20	<i>Ranunculus cantoniensis</i>	Subansiri, 1400-3500 m		
21	<i>Ranunculus chinensis</i>	Subansiri, 1600-2000 m		
22	<i>Ranunculus diffusus</i>	Subansiri, 1500-1600 m		
23	<i>Ranunculus pennsylvanicus</i>	Subansiri, 1200-1600 m		
24	<i>Thalictrum foliolosum</i>	Subansiri, 600-1200 m		The decoction of

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				roots is used in fever and eye diseases.
25	<i>Trollius farreri</i>	Arunachal Pradesh		Endemic
	<b>CIRCAEASTERACEAE</b>			
26	<i>Circaeaster agrestis to be deleted</i>	Arunachal Pradesh		
	<b>DILLENACEAE</b>			
27	<i>Dillenia indica</i>	Subansiri, 100-600 m	On-tenga, Panchkol (Asm.), chumpa (Adi), Pumplang (Mik.), Changne (Nishi).	Timber is good for making poles. Fruits are eaten either raw or cooked or used in making jam.
28	<i>Tetracera sarmentosa</i>	Subansiri, 500-1500 m		
	<b>MAGNOLIACEAE</b>			
29	<i>Magnolia campbelli</i>	Subansiri, 1600-2000 m	Lal-champ (Asm.)	
30	<i>Magnolia caveana</i>	Subansiri, 400-800 m	Pan-sopa; Phul-sopa (Asm.)	Endemic
31	<i>Magnolia globosa</i>	Arunachal Pradesh		
32	<i>Magnolia gustavii</i>	Subansiri, 300-1000 m	Khorokia-sopa (Asm.)	Endemic
33	<i>Magnolia hodgsonii</i>	Subansiri, 200-600 m	Burbang-asing (Adi); Boromthuri, Dat-bhola (Asm.); Boronthari-arong (Mik.); Teterasing (Miri)	
34	<i>Magnolia hookeri</i>	Subansiri, 300-1000 m	Pan-sopa, Phul-sopa (Asm.)	
35	<i>Magnolia pealiana</i>	Subansiri, 100-1000 m	Gahori-sopa (Asm.)	
36	<i>Magnolia pterocarpa</i>	Subansiri, 1500-2500 m	Baramphuri-sopa, Thouthua (Asm.)	Wood is white and soft, use in making tea-chests; tender sitpules are chewed for blackening the gum and teeth
37	<i>Magnolia rabaniana</i>	Subansiri, 200-1000 m	Sopa (Asm.)	
38	<i>Manglietia insignis</i>	Subansiri, 500-1500 m	Pan-Sopa, Phul-sopa	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			(Asm.)	
39	<i>Michelia doltsopa</i>	Subansiri, 1300-1700 m		Endemic
40	<i>Michelia glabra</i>	Subansiri, 300-1000 m	Pan-sopa (Asm)	
41	<i>Michelia kisopa</i>	Arunachal Pradesh		
42	<i>Michelia mannii</i>	Subansiri, 100-1000 m	Kothalua-sopa (Asm.)	
43	<i>Michelia punduana</i>	Subansiri, 1000-1500 m		
44	<i>Michelia wardii</i>	Arunachal Pradesh		Endemic
	<b>ILLICACEAE</b>			
45	<i>Illicium cambodianum</i>	Subansiri, 1600-1800 m		Endemic
46	<i>Illicium griffithii</i>	Arunachal Pradesh, 1200-1800 m		
47	<i>Illicium manipurense</i>	Subansiri, 1800-2500 m		
48	<i>Illicium simonsii</i>	Subansiri, 1800-2500 m		
	<b>SCHISANDRACEAE</b>			
49	<i>Kadsura heteroclita</i>	Subansiri, 1600-1800 m		
50	<i>Schisandra plena</i>	Arunachal Pradesh, 600-1500 m		
51	<i>Schisandra propinqua</i>	Arunachal Pradesh		Endemic
52	<i>Schisandra rubriflora</i>	Arunachal Pradesh, 1800-2600 m		
	<b>ANNONACEAE</b>			
53	<i>Alphonsea ventricosa</i>	Subansiri, 100-1000 m		
54	<i>Artabotrys caudatus</i>	Subansiri, 100-1000 m	Dhupa-lota (Asm)	
55	<i>Desmos praecox</i>	Subansiri		
56	<i>Fissistigma bicolor</i>	Subansiri, 300-800 m	Hed-bheduli (Asm); Moja-kotta (Daff.)	
57	<i>Fissistigma rubiginosum</i>	Subansiri, 500-1200 m		
58	<i>Friesodielsia fornicata</i>	Subansiri, 1000-1560 m	Mota-bokol-bill (Asm)	
59	<i>Goniothalamus simonsii</i>	Subansiri, 500-1200 m		
60	<i>Milusa globosa</i>	Subansiri, 500-800 m	Bon-ponial, Chang-ladoi, Jora-bhanora (Asm.); Tasemayang-changne (Daff.)	
61	<i>Mitrephora tomentosa</i>	Subansiri, 100-1200 m	Kolty, Kolori (Asm.); gothi-arang (Mik.)	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
	<b>MENISPERMACEAE</b>			
62	<i>Cyclea bicristata</i>	Subansiri, 300-400 m		
63	<i>Limacia oblonga</i>	Subansiri, 1000-1300 m		
64	<i>Pericampylus glaucus</i>	Subansiri, 400-1600 m	Goria-loti (Asm.)	
65	<i>Stephania japonica</i>	Subansiri 100-1000 m	Tubuki lot, Galdua (Asm.)	
66	<i>Tinospora crispa</i>	Subansiri, 100-1000 m	Hoguni-lot (Asm.)	
	<b>BERBERIDACEAE</b>			
67	<i>Berberis wallichiana</i> var. <i>wallichiana</i>	Subansiri, 1400-2000 m		Bunch of spines is used for tattooing on chin and forehead by the local people.
68	<i>Berberis wallichiana</i> var. <i>latifolia</i>	Subansiri, 1600-2500 m		
69	<i>Mahonia acanthifolia</i>	Subansiri, 2000-3500 m		
	<b>LARDIZABALACEAE</b>			
70	<i>Holboellia latifolia</i>	Subansiri, 1000-1600 m		Fruits are edible
	<b>FUMARIACEAE</b>			
71	<i>Corydalis cashmeriana</i>	Subansiri, 2500-3500 m		
72	<i>Corydalis ophiocarpa</i>	Subansiri, 600-1200 m		
73	<i>Dicentra roylei</i>	Subansiri, 1400-1600 m		Endemic
74	<i>Dicentra scandens</i>	Subansiri, 1500-2500 m		Paste of the fresh tubers is applied in snake bite; the powder made from dried tubers is taken in case of gastric troubles
75	<i>Brassica nigra</i>	Arunachal Pradesh, 1500 m		
76	<i>Cardamine circaeoides</i>	Subansiri, 1500-2000 m		
77	<i>Cardamine hirsuta</i>	Subansiri, 500-100 m		Leaves are used as vegetable, eaten raw or cooked
78	<i>Cardamine macrophylla</i>	Subansiri, 1500-2500 m		
79	<i>Cardamine scutata</i>	Subansiri, 1200-2000 m		
80	<i>Rorippa indica</i>	Subansiri, 1600-3000		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
		m		
81	<i>Capparis acutifolia</i>	Subansiri, 500-1300 m	Keta-har (Asm); Dieng-sning-sning (Kh)	Endemic
82	<i>Capparis multiflora</i>	Subansiri, 500-1400 m	Thanim-nium-kre (Aka); Thanim-nium (Mishmi)	
83	<i>Capparis roxburghii</i>	Subansiri, 500-1000 m		
84	<i>Cleome gynandra</i>	Subansiri		
85	<i>Stixis suaveolens</i>	Subansiri, 300-800 m	Madhabi malati, Madhu malati (Asm)	Fruits are sweet, edible
86	<i>Viola betonicifolia</i>	Subansiri, 700-1500 m		
87	<i>Viola canescens</i>	Subansiri, 1500-2500 m		
88	<i>Viola diffusa</i>	Subansiri, 1600-3000 m		
89	<i>Viola inconspicua</i>	Subansiri, 1500-2200 m		
90	<i>Viola sikkimensis</i>	Subansiri, 1200-1600 m		
91	<i>Casearia vareca</i>	Subansiri, 500-800 m	Abbuk-asing (adi); Bhagini, Chagladoi, Sikraguti (Asm); Jowmakron, Akron-arong (Mik); SAbenbukben asing (Miri); Nelo change (Nishi)	
92	<i>Casearia zeylanica</i>	Arunachal Pradesh, up to 1800 m	Kron-suri-arong (Mik)	
93	<i>Gynocardia odorata</i>	Subansiri, 100-800 m	Subetulpi (Adi); Umphu (Adi, Miri); Bonsha, Lemtem, Chalmugra (Asm); Takuk-changne (Nishi)	
94	<i>Xylosma longifolium</i>	Subansiri, 300-600 m	Mota-koli, rotahar	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			(Asm); Tang-enising, Ulitang-asing (Miri)	
95	<i>Polygala arillata</i> Buch.	Subansiri, 400-2500 m		
96	<i>Polygala arillata</i> var.	Subansiri, 400-600 m, in forests		
97	<i>Polygala arillata</i> var. <i>purpurescens</i>	Subansiri, 1500-1800 m in moist humid forests		
98	<i>Polygala furcata</i>	Subansiri, 1500-1800 m		
99	<i>Polygala karenium</i>	Arunachal Pradesh		
100	<i>Polygala sibirica</i>	Subansiri, 1400-1600 m		
101	<i>Polygala tatarinowii</i>	Subansiri, 1800-3650 m		
102	<i>Salomonina cantoniensis</i>	Subansiri, 1400-2500 m		
103	<i>Securidaca inappendiculata</i>	Arunachal Pradesh		
104	<i>Xanthophyllum griffithii</i>	Subansiri, 1500-1800 m		
105	<i>Drymaria diandra</i>	Subansiri, 600-1300 m		The leaf juice is applied in skin diseases. Leaves are edible as green vegetable.
106	<i>Gypsophila cerastioides</i>	Arunachal Pradesh		
107	<i>Sagina saginoides</i>	Subansiri, 600-2700 m		
108	<i>Silene indica</i>	Arunachal Pradesh		
109	<i>Stellaria media</i>	Subansiri, 1000-2000 m		
110	<i>Stellaria uliginosa</i>	Subansiri, 1500-2500 m		
111	<i>Stellaria wallichiana</i>	Arunachal Pradesh		
112	<i>Hypericum assamicum</i>	Arunachal Pradesh		
113	<i>Hypericum elodeoides</i>	Subansiri, 1100-3500 m		
114	<i>Hypericum hookerianum</i>	Subansiri, 1200-2000 m		
115	<i>Hypericum japonicum</i>	Subansiri, 1700-1800 m		
116	<i>Hypericum monanthemum</i>	Subansiri, 500-1200 m		
117	<i>Garcinia acuminata</i>	Subansiri, 500-1200 m	Kuji thikera (Asm)	Endemic
118	<i>Garcinia atroviridis</i>	Arunachal Pradesh		
119	<i>Garcinia cowa</i>	Subansiri, 50-200 m		
120	<i>Garcinia stipulata</i>	Subansiri, 800-1300 m		
121	<i>Mesua assamica</i>	Subansiri, 100-1000 m	Sia-nahar (Asm)	Timber is used in building



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				construction. Fruits are used as fish poison.
122	<i>Mesua ferrea</i>	Subansiri, 100-800 m	Ingi-asing (Adi); Nahar (Asm., Miri); Micharne or Phikcharne-arang (Mik); Puotrom (Nokte)	Ornamental. Timber is of high quality and valuable.
123	<i>Camellia lutescens</i>	Subansiri, 1200-1600 m		
124	<i>Eurya arunachalensis</i>	Subansiri, 1500-3100 m		Endemic
125	<i>Eurya cavinervis</i>	Subansiri, 600-1400 m	Murmura (Asm); yabichangnae (Nishi)	
126	<i>Eurya japonica</i>	Subansiri, 1500-1800 m		
127	<i>Eurya nitida</i>	Arunachal Pardesh, 1000-2000 m		
128	<i>Eurya trichocarpa</i>	Arunachal Pardesh, 1000-2000 m		
129	<i>Pyrenaria barringtonifolia</i>	Subansiri, 100-500 m	Gunbang (Abor); Bon madhuri (Asm)	Endemic
130	<i>Schima wallichii</i>	Subansiri, 500-2000 m	Makrisal, Noga-bhe (Asm); Cheknan-arong, Chingan-arong (Mik)	
131	<i>Schima wallichii</i>	Subansiri, 1400-1800 m		
	<b>ACTINIDIACEAE</b>			
132	<i>Actinidia callosa</i>	Subansiri, 1000-2500 m		Fruits are edible
133	<i>Saurauia armata</i>	Subansiri, 400-1050 m	Porbotia-hengania (Asm); Hero-changne (Daff., Nishi)	
134	<i>Saurauia griffithii</i>	Subansiri, 1200-1500 m		
135	<i>Saurauia macrotricha</i>	Subansiri, 300-1500 m		
136	<i>Saurauia napaulensis</i>	Subansiri, 1500-2000 m	Argongma shing (Monpa)	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
137	<i>Saurauia punduana</i>	Subansiri, 800-2400 m		Ripe fruits are sweet, edible
138	<i>Saurauia roxburghii</i>	Subansiri, 200-1500 m	Bonposola, Paniposola, Hengunia (Asm); Nonthler-arong (Mik); chepu change, chipung-changne (Nishi)	Leaves are used in preparation of country liquor. Ripe fruits are eaten.
139	<i>Stachyurus himalaicus</i>	Subansiri, 200-1000 m		
140	<i>Dipterocarpus mannii</i>	Subansiri, 100-500 m	Hollong or Holong (Asm)	
141	<i>Abelmoschus manihot</i>	Subansiri, 1500-1800 m		
142	<i>Abelmoschus manihot</i>	Subansiri, 500-1300 m		
143	<i>Abelmoschus moschatus</i>	Subansiri, 600-1500 m		
144	<i>Abutilon indicum</i>	Subansiri, 300-800 m	Kankatika, Jhapa (Asm)	
145	<i>Hibiscus surattensis</i>	Subansiri, 200-1000 m		
146	<i>Kydia calycina</i>	Subansiri, 600-1400 m	Pichhola, Kukuha (Asm); Tabri-changne (Daff)	
147	<i>Sida acuta</i>	Subansiri, 700-1600 m		
148	<i>Sida rhombifolia</i>	Subansiri, 800-2000 m	Boriala (Asm)	
149	<i>Urena lobata</i>	Subansiri, 100-1500 m	Hon-borolua, Sokomara (Asm)	Roots are made into paste and applied in the form of plaster in snake bite.
	<b>BOMBACACEAE</b>			
150	<i>Bombax ceiba</i>	Subansiri, 100-650 m	Himolu, Himila (Asm)	Wood is widely used in match industry, making tea chests and plywood. Silk cotton obtained from seeds is used for stuffing cushions, pillows, mattresses, etc.
	<b>STERCULIACEAE</b>			
151	<i>Abroma augusta</i>	Subansiri, 200-800 m	Gorukhia-korai, Bonkopalis (Asm)	
152	<i>Byttneria grandifolia</i>	Subansiri, 300-1000 m	Tikoni-borua	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			(Asm)	
153	<i>Pterigota alata</i>	Arunachal Pradesh	Pahari (Asm)	
154	<i>Pterospermum acerifolium</i>	Subansiri, 300-1000 m	Sipop-asing (Abor); Moragos (Asm)	
155	<i>Pterospermum javanicum</i>	Arunachal Pradesh		
156	<i>Sterculia hamiltonii</i>	Subansiri, 500-1300 m	Nak-chepta (Asm)	
157	<i>Sterculia roxburghii</i>	Subansiri, 500-1200 m	Nag-phona (Asm)	
158	<i>Corchorus olitorius</i>	Arunachal Pradesh	Mura-pat (Asm)	
159	<i>Grewia serrulata</i>	Subansiri, 200-1000 m		
160	<i>Triumfetta rhomboidea</i>	Subansiri 300-1000 m	Agra (Asm)	
	<b>ELAEOCARPACEAE</b>			
161	<i>Elaeocarpus acuminatus</i>	Subansiri, 500-700 m		
162	<i>Elaeocarpus aristatus</i>	Subansiri, 300-800 m	Gerela-sopa, Bagini (Asm)	
163	<i>Elaeocarpus baracteatus</i>	Arunachal Pradesh, 1000-1500 m		
164	<i>Elaeocarpus floribundus</i>	Subansiri, 300-600 m		
165	<i>Elaeocarpus ianceifolius</i>	Subansiri, 1600-2000 m		
166	<i>Elaeocarpus prunifolius</i>	Subansiri, 1400-1800 m		
167	<i>Elaeocarpus rugosus</i>	Subansiri, 400-800 m	Bor-chopa, Gatronga (Asm); tarukpai-asing (Abor)	
168	<i>Elaeocarpus sphaericus</i>	Subansiri, 200-500 m	Ludurai-asing (Abor); Rudraksha, Rudrai (Asm)	The stones are used as beads for rosaries, bracelets and necklaces
169	<i>Elaeocarpus stapfianus</i>	Arunachal Pradesh, 800-1000 m		
170	<i>Elaeocarpus tectorius</i>	Subansiri, 100-500 m	Poring, Seleng (Asm)	
171	<i>Elaeocarpus varunus</i>	Subansiri, 1400-1600 m	Bhadraksha, Niganibual (Asm)	
172	<i>Sloanea sterculiacea</i>	Subansiri, 400-600 m		
	<b>LINACEAE</b>			
173	<i>Anisadenia pubescens</i>	Arunachal Pradesh		
174	<i>Anisadenia saxatilis</i>	Subansiri, 1600-2000 m		
	<b>MALPIGHIACEAE</b>			
175	<i>Aspidopterys indica</i>	Subansiri, 300-500 m		
176	<i>Aspidopterys nutans</i>	Subansiri, 400-800 m		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
177	<i>Hiptage benghalensis</i>	Subansiri, 200-1500 m	Kerek-lata (Asm)	
	<b>GERANIACEAE</b>			
178	<i>Geranium nepalense</i>	Subansiri, 1200-1800 m		
	<b>BALSAMINACEAE</b>			
179	<i>Impatiens arguta</i>	Subansiri, 2500-3500 m		
180	<i>Impatiens barachycentra</i>	Subansiri, 900-1100 m	Namchi (Nishi)	
181	<i>Impatiens cathcartii</i>	Subansiri, 400-1000 m		
182	<i>Impatiens gammiei</i>	Subansiri, 1300-1500 m		
183	<i>Impatiens jurpia</i>	Subansiri, 600-1500 m		
184	<i>Impatiens khasiana</i>	Subansiri, 1000-1200 m		
185	<i>Impatiens laevigata</i>	Subansiri, 200-1000 m		Endemic
186	<i>Impatiens latiflora</i>	Subansiri, 300-1200 m		Endemic
187	<i>Impatiens paludosa</i>	Subansiri, 1600-1800 m		
188	<i>Impatiens porrecta</i>	Subansiri, 300-1500 m		Endemic
189	<i>Impatiens pulchra</i>	Subansiri, 300-1500 m		
190	<i>Impatiens racemosa</i>	Subansiri, 1500-2000 m		
191	<i>Impatiens radiata</i>	Subansiri, 600-800 m		
192	<i>Impatiens scabrida</i>	Subansiri, 1500-2000 m	Namcho (Hill Miri)	
193	<i>Impatiens stenantha</i>	Subansiri, 1000-2000 m		
194	<i>Impatiens tripetala</i>	Subansiri, 450-1500 m		
	<b>OXALIDACEAE</b>			
195	<i>Oxalis acetosella</i>	Subansiri, 2000-2600 m		
196	<i>Oxalis corniculata</i>	Subansiri, 500-2800 m		
	<b>RUTACEAE</b>			
197	<i>Citrus medica</i>	Subansiri, 500-1200 m	Bakol-khowa-tenga (Asm); Naya-changney (Nishi)	
198	<i>Clausena excavate</i>	Subansiri, 100-1000 m	Nara singha, Bengjuri (Asm); Theng-sah-soh-arong (Mik)	
199	<i>Clausena heptaphylla</i>	Subansiri, 200-500 m	Kebu-taye (Abor, Adi)	
200	<i>Euodia rutaeearpa</i>	Subansiri, 100-1000 m	Muka-asing (Adi); Bora-asing (Miri)	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
201	<i>Micromelum integerrimum</i>	Subansiri, 200-1000 m	Gobor-hurra (Asm)	
202	<i>Micromelum minutum</i>	Subansiri, 400-1200 m	Galling-asing (Abor, Adi); Hilaguti-gach (Asm); Theng hanse (Mik)	
203	<i>Murraya koenigii</i>	Arunachal Pradesh	Narasingha, Bisha hari (Asm); Theng sakoo (Mik); kairseng (Monpa)	
204	<i>Murraya paniculata</i>	Subansiri, 400-1000 m	Nyibumtarum (Adi); kalong-asing (Adi, Miri); kamini (Asm)	
205	<i>Paramignya griffithii</i>	Subansiri, 100-1000 m	Bonjora (Asm)	
206	<i>Skimmia anquetilia</i>	Subansiri, 1600-2500 m		Leaves are used in small pox
207	<i>Toddalia asiatica</i>	Subansiri, 1600 m	Mulkiberdukl a, Warplap-rikang (Mik)	
208	<i>Zanthoxylum acanthopodium</i>	Subansiri, 1000-2500 m	Yokhung (Apat)	
209	<i>Zanthoxylum oxyphyllum</i>	Subansiri, 1500-2000 m		
<b>SIMAROUBACEAE</b>				
210	<i>Brucea mollis</i>	Subansiri, 100-1000 m		
211	<i>Picrasma javanica</i>	Subansiri, 300-1000 m	Nim-tita, Putichhal (Asm); Putichal-asing (Miri); Singka-asing (Miri, Adi)	
212	<i>Picrasma quassioides</i>	Subansiri, 1500-2000 m		
<b>BURSERACEAE</b>				
213	<i>Canarium bengalense</i>	Subansiri, 500-1000 m	Dhuna (Asm); Kanker-asing (Miri & Adi)	Wood is used for making Tea chensts. Resin is burnt as incense
214	<i>Garuga gamblei</i>	Subansiri, 100-1000 m	Sibon-asing (Adi); Pani-amora (Asm); Teji-arong (Mik) Bankung-	Bark is used for tanning and leaves are good for cattle

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			asing (Miri)	
	<b>MELIACEAE</b>			
215	<i>Aphanamixis chittagonga</i>	Subansiri, 600-1300 m	Gan-changne (Asm); Gangru-changne (Daff., Nishi)	
216	<i>Aphanamixis polystachya</i>	Subansiri, 900-1200 m	Galling (Abor); Amari, Boga-amari, Hakhori-bakhori (Asm)	
217	<i>Azadirachta indica</i>	Subansiri, 300-700 m	Nim or Neem (Asm)	Almost every part of the plant is used. The fresh and tender twigs are used to clean teeth, particularly in pyorrhea. The bark is considered useful in skin diseases. The leaves in the form of poultice and decoction is recommended in ulcers and eczema. The dried leaves are generally kept inside clothes, books, etc., to protect them from moth and other insects. Dry flowers are considered tonic and stomachic. The berries are regarded as purgative and anthelminthic. The oil obtained from seeds is used in various skin diseases, eg. Scrofula, indolent ulcers,

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				sores, etc. the timber is long lasting and is used for different furniture.
218	<i>Chukrasia tabularis</i>	Subansiri, 500-1600 m	Boga-poma (Asm); Silling, Silleng-asing (Miri)	
219	<i>Dysoxylum alliarium</i>	Subansiri, 200-600 m	Situk-payu (Abor, Adi); Gandheli-poma, Keotia (Asm); Siti-asing (Asm)	
220	<i>Dysoxylum gobara</i>	Subansiri, 200-1100 m	Lali, Amari (Asm); Katum-asing (Abor, Adi); Galing-libor (Miri & Adi)	Timber is much used for doors and windows
221	<i>Dysoxylum grande</i>	Subansiri, 500-1200 m	Boga-Banderdima (Asm)	The timber is used for making boats and houses
222	<i>Melia azedarach</i>	Arunachal Pradesh 700-1200 m		
223	<i>Toona microcarpa</i>	Subansiri, 100-1200 m	Jatipoma (Asm)	Wood is used for making furniture, doors & windows
224	<i>Toona sureni</i>	Subansiri, 100-500 m	Poma, Jia-poma, Jati-oima (Asm); Poma-arong (Mik); Poma-asing (Miri)	Timber is used for furniture, doors and windows, etc
225	<i>Walsura robusta</i>	Subansiri, 100-1000 m	Lali (Asm)	Timber is used for making agricultural appliances
<b>OLACACEAE</b>				
226	<i>Erythralium scandens</i>	Subansiri, 1200-1600 m		
227	<i>Erythralium vagum</i>	Subansiri, 1000-1400 m		
228	<i>Schoepfia jasminodora</i>	Subansiri, 100-1000 m		
<b>ICACINACEAE</b>				
229	<i>Natsiatum herpeticum</i>	Subansiri, 250-800 m	Target riube (Miri)	
<b>OPILIACEAE</b>				

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
230	<i>Lepionurus sylvestris</i>	Subansiri, 500-1000 m		
	<b>CARDIOPTERIDACEAE</b>			
231	<i>Cardiopteris quinqueloba</i>	Subansiri, 500-700 m		
	<b>AQUIFOLIACEAE</b>			
232	<i>Ilex excels forma hypotricha</i>	Arunachal Pradesh, 1000-15000 m		
233	<i>Ilex insignis</i>	Subansiri, 600-1500 m		
234	<i>Ilex odorata</i>	Subansiri, 800-1200 m		
235	<i>Ilex sikkimensis</i>	Arunachal Pradesh, 1500-2000 m		
236	<i>Ilex triflora</i>	Subansiri, 800-1200 m		
	<b>CELASTRACEAE</b>			
237	<i>Bhesa robusta</i>	Subansiri, 1000-1500 m	Hinguri (Asm); Tamser (Mik)	
238	<i>Celastrus championii</i>	Subansiri, 1000-1800 m		
239	<i>Celastrus hindsii</i>	Subansiri, 100-1000 m	Bhoomlati (Asm)	
240	<i>Euonymus attenuates</i>	Subansiri, 200-600 m		
241	<i>Euonymus frigidus</i>	Subansiri, 500-2500 m		
242	<i>Euonymus theifolius</i>	Subansiri, 1500-2500 m		
243	<i>Euonymus viburnoides</i>	Subansiri, 1600-2500 m		
244	<i>Maytenus hookeri</i>	Subansiri, 300-800 m		
245	<i>Microtropis densiflora</i>	Subansiri, 100-300 m		
246	<i>Salacia khasiana</i>	Arunachal Pradesh		
	<b>RHAMNACEAE</b>			
247	<i>Berchemia floribunda</i>	Subansiri, 600-1600 m		
248	<i>Gouania tiliaefolia</i>	Subansiri, 500-1000 m	Jwarpat (Asm)	
249	<i>Rhamnus napalensis</i>	Subansiri, 1600-1800 m	Biringa, Biring-guli (Asm); nakaling-aron (Mik); Biring-karinn-astug (Miri)	
250	<i>Sageretia giligormis</i>	Subansiri, 600-1800 m		
251	<i>Ziziphus mauritiana</i>	Subansiri, 100-600 m	Boguri (Asm., Miri); Gangeasing (Abor, Adi); Thakrin-aron (Mik)	Fruits are edible and the bark is said to be useful in diarrhea.
	<b>VITACEAE</b>			
252	<i>Cayratia japonica</i>	Subansiri, 1500-2000 m		
253	<i>Cayratia mollissima</i>	Subansiri, 100-500 m		
254	<i>Cayratia pedata</i>	Subansiri, 500-1000 m		
255	<i>Cayratia trifolia</i>	Subansiri, 1200-1500	Chepta-lot	



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
		m	(Asm); Taki go kang (Miri)	
256	<i>Cissus adnata</i>	Subansiri, 1400-1700 m		
257	<i>Cissus assamica</i>	Subansiri, 600-1500 m		Endemic
258	<i>Cissus repanda</i>	Subansiri, 100-1100 m	Medmedia-lot (Asm)	
259	<i>Cissus repens</i>	Subansiri, 500-1000 m	Taru-beku (Apat); Medmedia-lot (Asm)	Ripe fruits are edible
260	<i>Tertrastigma bracteolatum</i>	Subansiri, 700-1800 m		
261	<i>Tetrastigma dubium</i>	Subansiri, 300-800 m		
262	<i>Tetrastigma planicaule</i>	Subansiri, 200-600 m		
263	<i>Tetrastigma rumicispermum</i>	Subansiri, 500-1200 m		
264	<i>Tetrastigma serrulatum</i>	Subansiri, 1500-2000 m		
	<b>LEEACEAE</b>			
265	<i>Leea aequata</i>	Subansiri, 400-1000 m		
266	<i>Leea alata</i>	Subansiri, 500-1000 m	Bon-ou (Asm)	
267	<i>Leea asiatica</i>	Subansiri, 400-1200 m		
268	<i>Leea indica</i>	Subansiri, 500-1000 m	Rakki baing assing (Adi, Miri); kukura Thengia, Ahina, Gach-gangma (Asm); dibadian-asing (Miri); Demborang land-changne (Nishi)	
269	<i>Leea macrophylla</i>	Subansiri, 400-800 m		
	<b>HIPPOCASTANACEAE</b>			
270	<i>Aesculus assamica</i>	Subansiri, 400-800 m	Raman-bih (Asm); Sarlok-asing (Abor, Adi); Ramon-asing (Miri); Phaklang-jan-arong (Mik)	
	<b>SAPINDACEAE</b>			
271	<i>Allophylus zeylanicus</i>	Subansiri, 500-1200 m		
272	<i>Allophylus zeylanicus</i> var. <i>grandiflora</i>	Subansiri, 200-1000 m		
273	<i>Lepisanthes senegalensis</i>	Subansiri, 300-1000 m	Tang-ting, Bonderdima (Asm);	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			Bongadhia (Mik)	
274	<i>Sapindus rarak</i>	Subansiri, 100-1000 m	Am-seleng (Asm)	
275	<i>Xerespermum glabratum</i>	Arunachal Pradesh, 500-1000 m	Bhela-ansling (Hill Miri)	
	<b>ACERACEAE</b>			
276	<i>Acer hookeri</i>	Subansiri, 1800-2100 m	Karsing (Monpa)	
277	<i>Acer laevigatum</i>	Subansiri, 1500-2500 m	Dieng-than, dieng-soh-tyrkhum	
278	<i>Acer pectinatum</i>	Subansiri, 3000-3700 m		
279	<i>Acer thomsonii</i>	Subansiri, 1500-1800 m		
	<b>SABIACEAE</b>			
280	<i>Meliosma pinnata</i>	Subansiri, 100-600 m	Banpasola, Mamoi (Asm); Dermi-asing (Miri) Nammu-changne (Nishi)	
281	<i>Meliosma simplicifolia</i>	Subansiri, 300-1000 m	Pichola, larubandha, Sankonaro (Asm), Gurban-asing (Abor, Adi, Miri); Nitak-asing (Miri)	
282	<i>Sabia campanulata</i>	Subansiri, 800-1200 m		
283	<i>Sabia lanceolata</i>	Subansiri, 500-900 m		
284	<i>Sabia purpurea</i>	Subansiri, 200-2500 m	Jermineirang-chhai (Asm)	
	<b>ANACARDIACEAE</b>			
285	<i>Mangifera indica</i>	Subansiri	Am (Asm); Kei-asing (Miri); Tagung-changne (Nishi)	
286	<i>Mangifera sylvatica</i>	Subansiri, 1200-1400 m	Bon-am (Asm)	
287	<i>Pegia nitida</i>	Subansiri, 200-1000 m	Dhindau-baguri (lata (Asm); Midi-takhir (Abor, Adi, Miri)	
288	<i>Pistacia chinensis</i>	Arunachal Pradesh, up		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
		to 1200 m		
289	<i>Rhus hookeri</i>	Subansiri, 1400-1600 m		
290	<i>Rhus javanica</i>	Subansiri, 100-600 m	Naga-tenga (Asm)	
	<b>CONNARACEAE</b>			
291	<i>Rourea minor</i>	Subansiri, 1500-1600 m		
	<b>FABACEAE</b>			
292	<i>Butea buteiformis</i>	Arunachal Pradesh, 1000-2000 m		
293	<i>Butea monosperma</i>	Arunachal Pradesh, up to 1000 m	Polah, polak (Asm)	
294	<i>Clitoria mariana</i>	Subansiri		
295	<i>Codariocalyx motorius</i>	Subansiri, 1100-1800 m		
296	<i>Crotalaria alata</i>	Subansiri, 300-1200 m		
297	<i>Crotalaria juncea</i>	Subansiri	Ausa (Asm)	
298	<i>Crotalaria laburnifolia</i>	Subansiri		
299	<i>Crotalaria pallid</i>	Arunachal Pradesh	Ghantakaran (Asm)	Decoction of roots mixed with Poper nigram, Allium stivum and salt is given to mother after child birth to relieve pain and stop bleeding.
300	<i>Crotalaria sessiliflora</i>	Subansiri, 200-2400 m		
301	<i>Crotalaria tetragona</i>	Subansiri, 200-1200 m		
302	<i>Dalbergia lanceolaria</i>	Subansiri, up to 1000 m	Meda-luwa, Mouhit (Asm)	
303	<i>Calbergia pinnata</i>	Subansiri, 600-800 m	Laleng-chhali, Dat-bijli (Asm)	
304	<i>Dalbergia rimosa</i>	Subansiri, 100-1000 m	Gajai-latau, Mermerilata (Asm)	
305	<i>Dalhousiea bracteata</i>	Subansiri, 300-400 m	Nirang-riubi (Abor); Pahari-lata, Tekala-lata, Telilat (Asm)	
306	<i>Derris cuneifolia</i>	Subansiri, up to 2000 m		
307	<i>Derris polystachya</i>	Arunachal Pradesh, 500-1500 m		
308	<i>Derris scandens</i>	Arunachal Pradesh		
309	<i>Derris secunda</i>	Subansiri, 2500 m		
310	<i>Desmodium caudatum</i>	Subansiri, 500-1200 m		
311	<i>Desmodium concinnum</i>	Subansiri, 1000-1200 m		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
312	<i>Desmodium gangeticum</i>	Subansiri, up to 2000 m		
313	<i>Desmodium gyroides</i>	Subansiri, up to 1200 m		
314	<i>Desmodium heterocarpon</i>	Subansiri, 200-1500 m		
315	<i>Desmodium microphyllum</i>	Subansiri, up to 1600 m		
316	<i>Desmodium multiflorum</i>	Subansiri, 600-2000 m		
317	<i>Desmodium podocarpum</i>	Subansiri, up to 1500 m		
318	<i>Desmodium tiliaefolium</i>	Subansiri, up to 1500 m		
319	<i>Desmodium triflorum</i>	Subansiri, up to 1200 m		
320	<i>Desmodium velutinum</i>	Subansiri, 300-1500 m		
321	<i>Dysolobium grande</i>	Arunachal Pradesh	Bahdar-kakua (Asm)	
322	<i>Dysolobium leucens</i>	Arunachal Pradesh		
323	<i>Flemingia macrophylla</i>	Subansiri, 200-1200 m		
324	<i>Indigofera dosua</i>	Subansiri, 200-1200 m	Zia-shing (Monpa)	
325	<i>Indigofera stachyodes</i>	Subansiri, up to 800 m		
326	<i>Indigofera tinctoria</i>	Arunachal Pradesh		
327	<i>Lens culinaris</i>	Subansiri		
328	<i>Lespedeza juncea</i>	Subansiri		Used for pasturing and soil improvement
329	<i>Lespedeza striata</i>	Subansiri, 350-1000 m		Useful as pasture, hay in erosion control and green manure
330	<i>Mastersia assamica</i>	Subansiri, up to 300 m		
331	<i>Millettia cinerea</i>	Subansiri, up to 1500 m		
332	<i>Millettia pachycarpa</i>	Subansiri	Book-bih, Bokol-bih, Holosi (Asm); Hapuling (Nishi)	Roots and pods are used as fish poison
333	<i>Mucuna macrocarpa</i>	Arunachal Pradesh		
334	<i>Mucuna pruriens</i>	Subansiri, 450-900 m		
335	<i>Ormosia robusta</i>	Subansiri, up to 150 m	Porghum (Miri)	
336	<i>Phaseolus torosus</i>	Subansiri		
337	<i>Pongamia pinnata</i>	Arunachal Pradesh		
338	<i>Pueraria peduncularis</i>	Subansiri, up to 1100m		
339	<i>Pueraria phaseoloides</i>	Subansiri, 700-1200 m		
340	<i>Pueraria thunbergiana</i>	Subansiri, 500-1200 m		
341	<i>Sesbania bispinosa</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
342	<i>Shuteria involucrata</i>	Subansiri		
343	<i>Smithia grandis</i>	Arunachal Pradesh		
344	<i>Sophora acuminata</i>	Subansiri		
345	<i>Tephrosia candida</i>	Subansiri, 300-1100 m	Bilakhani, Bilokhoni (Asm)	
346	<i>Uraria crinite</i>	Subansiri		
347	<i>Vigna umbellata</i>	Subansiri, 500-1200 m		
	<b>CAESALPINIACEAE</b>			
348	<i>Bauhinia acuminata</i>	Arunachal Pradesh	Mati-katota (Asm)	
349	<i>Bauhinia malabarica</i>	Arunachal Pradesh		Leaves are used for flavoring food stuff; bark is useful for tanning; young buds and seeds are edible; flowers are medicinal
350	<i>Bauhinia purpurea</i>	Subansiri, 400-1500 m	Og-yok (Abor); Kurial, Boga-kanchan (Asm)	Leaves are used as fodder; bark used for dyeing and tanning. Flowers are used as pot-herb in curries & pickles. Wood is utilized for making agricultural implements and in interior construction work
351	<i>Bauhinia scandens</i>	Arunachal Pradesh	Deo-jokhola (Asm)	The bark is used in making ropes
352	<i>Bauhinia vahlii</i>	Arunachal Pradesh	Nak-kali-lewa (Asm)	Fibre yield from bark is used for cordage; leaves are used as plates; roasted seeds are edible
353	<i>Bauhinia variegata</i>	Subansiri, up to 17500 m	Boga-katra, Katora, Kuron (Asm); Gal-pacham (Hill-Miri)	Tender leaves and flowers are used as vegetables
354	<i>Bauhinia wallichii</i>	Arunachal Pradesh	Ram-jakhola, Makhori-ghila (Asm)	
355	<i>Caesalpinia bonduc</i>	Arunachal Pradesh	Lataguti	Leaves and

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			(Asm)	seeds are medicinal
356	<i>Caesalpinia cucullata</i>	Subansiri, 200-1000 m	Baghasora, Bagh-anchora (Asm); kempu-riubi (Abor); Paniphigag-taraw (Daff)	
357	<i>Caesalpinia enneaphylla</i>	Arunachal Pradesh	Erachora, Kochra, kaint (Asm); Dadu-asing (Abor)	
358	<i>Caesalpinia tortuosa</i>	Subansiri		
359	<i>Cassia alata</i>	Subansiri		Leaves in the form of paste is applied in ringworm infections
360	<i>Cassia fistula</i>	Subansiri	Sonaru, sonari, Honalu, Honaru (Asm)	Heartwood is hard and durable. The pulp of fruit is a powerful purgative. The bark is used as a tanning material
361	<i>Cassia mimosoides</i>	Subansiri		
362	<i>Cassia nodosa</i>	Arunachal Pradesh		
363	<i>Cassia occidentalis</i>	Subansiri, 200-1000 m	Hant-thenga (Asm)	
364	<i>Cassia tora</i>	Subansiri, 100-500 m	Dari-diga, bon-medelua (Asm)	Infusion of leaves and seeds are given to women in case of low blood pressure particularly during pregnancy
365	<i>Gymnocladus assamicus</i>	Arunachal Pradesh, 1500-1800 m		
366	<i>Maniltoa polyandra</i>	Arunachal Pradesh		
367	<i>Saraca asoca</i>	Arunachal Pradesh	Khok, Asok (Asm)	
368	<i>Tamarindus indica</i>	Arunachal Pradesh	Tetuli (Asm)	
	<b>MIMOSACEAE</b>			
369	<i>Acacia caesia</i>	Subansiri, up to 250 m		
370	<i>Acacia caesia</i>	Subansiri, 450-600 m	Kecheri-kant, Pochui-kant	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			(Asm)	
371	<i>Acacia farnesiana</i>	Arunachal Pradesh	Tarua-kadam (Asm)	Flowers are used in preparation of cassie perfume
372	<i>Acacia rugata</i>	Subansiri	Pasoi-tenga, Kusia-kaint, Amsikira (Asm)	The paste prepared from powdered stems is used to stupefy fish
373	<i>Albizia chinensis</i>	Subansiri, 200-1800 m	Sau, Saw-koroi (Asm); tat-kung-asing (Abor, Adi); Gurgong-asing (Miri)	
374	<i>Albizia lebbeck</i>	Arunachal Pradesh	Kothia-oroi (Asm)	Useful in veneering and also for turnery; exported largely for decorative furniture work
375	<i>Albizia lucidior</i>	Subansiri, 100-1200 m	Dumkol-asing (Abor); Moj, Michha-gach (Asm); Langgit-asing, Tage, Dumbre (Miri)	
376	<i>Entada phaseoloides</i>	Subansiri, 500-800 m	Gila-lewa, Bor-ghills, Ghila (Asm)	Roasted seeds are eaten and also used as substitute for shampoo
377	<i>Mimosa pudica</i>	Subansiri, up to 450 m		
378	<i>Mimosa rubicaulis</i>	Arunachal Pradesh		
379	<i>Parkia roxburghii</i>	Arunachal Pradesh		Young fruits are consumed as vegetables
380	<i>Pithecellobium heterophyllum</i>	Subansiri, up to 500 m		Fruits are used for dyeing clothes
381	<i>Pithecellobium montanum</i>	Arunachal Pradesh		
	<b>ROSACEAE</b>			
382	<i>Agrimonia pilosa</i>	Subansiri, 1500-2500 m	Taniom (Nishi)	
383	<i>Agrimonia pilosa</i>	Subansiri, 1500-2800 m		
384	<i>Cotoneaster bacillaris</i>	Subansiri, 1600-2000 m		
385	<i>Docynia indica</i>	Subansiri, 1500-1800 m	Losu (Monpa)	

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
386	<i>Duchesnea indica</i>	Subansiri, 1500-1800 m		
387	<i>Neillia thyrsoiflora</i>	Subansiri, 1500-2500 m		
388	<i>Neillia thyrsoiflora</i>	Subansiri, 1000-1500 m		
389	<i>Photinia cuspidate</i>	Subansiri, 1500-2200 m		
390	<i>Photinia hookeri</i>	Subansiri, 800-1200 m		
391	<i>Photinia integrifolia</i>	Subansiri, 1500-2500 m		
392	<i>Photinia integrifolia</i>	Subansiri, 1600-2000 m		
393	<i>Photinia wardii</i>	Arunachal Pradesh, 1350-1650 m		
394	<i>Potentilla griffithii</i>	Arunachal Pradesh, 2000-3000 m		
395	<i>Potentilla nepalensis</i>	Subansiri, 1500-2500 m		Roots impart a red colour to wool and wood are used as a part of dyestuff. Its ash mixed with oil is applied on burn injuries
396	<i>Potentilla saundersiana</i>	Subansiri, 180-3000 m		
397	<i>Potentilla sundaica</i>	Subansiri, 600-1600 m		The plant is considered as astringent. Fresh leaves are pounded and applied to abscesses. Roots and stems are pounded and applied as an antidote in snake and centipede bites
398	<i>Prunus cerasoides</i>	Subansiri, 1200-3100 m		
399	<i>Prunus cornuta</i>	Subansiri, 1500-2500 m		
400	<i>Prunus mapaulensis</i>	Subansiri, 1500-1800 m		
401	<i>Prunus phaeosticta</i>	Subansiri, 1500-2500 m		
402	<i>Prunus rufa</i>	Subansiri, 1500-2000 m	Gonde (Apat)	Fruits are edible
403	<i>Prunus undulata</i>	Subansiri, 1500-2500 m		



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
404	<i>Pyrus expansa</i>	Arunachal Pradesh, 1800-2500 m		
405	<i>Pyrus griffithii</i>	Subansiri, 1600-1800 m		
406	<i>Pyrus pashia</i>	Subansiri, 1600-1800 m	Semo (Apat)	Fruits are edible
407	<i>Pyrus polycarpa</i>	Subansiri, 1500-1800 m		
408	<i>Pyrus wenzigiana</i>	Arunachal Pradesh, 3000-4000 m		
409	<i>Rosa brunonii</i>	Subansiri, 1600-2500 m		
410	<i>Rosa leschenaultiana</i>	Subansiri, 1500-2000 m		
411	<i>Rubus assamensis</i>	Subansiri, 1200-2000 m	Fideging (Nishi)	
412	<i>Rubus birmanicus</i>	Subansiri, 1000-1500 m		
413	<i>Rubus calycinus</i>	Subansiri, 1500-2000 m		
414	<i>Rubus duthieanus</i>	Subansiri,		
415	<i>Rubus ellipticus</i>	Subansiri, 600-1500 m	Jilying (Apat)	
416	<i>Rubus fairholmianus</i>	Subansiri, 1500-1800 m		
417	<i>Rubus gigantiflorus</i>	Subansiri, 2000-3000 m		
418	<i>Rubus hamiltonii</i>	Subansiri, 1500-1800 m		
419	<i>Rubus hexagynus</i>	Subansiri, 1600-2000 m		
420	<i>Rubus indotibetanus</i>	Arunachal Pradesh, 1400-3000 m		
421	<i>Rubus insignis</i>	Subansiri, 300-800 m	Tape-tare (Adi); bor-sereli-kaint (Asm); Cheche-nimri (Nishi)	Leaves are eaten with bark of <i>Callicarpa arborea</i> var. <i>ovalifolia</i> as a substitute of peper betel. Ripe fruits are eaten, sweet
422	<i>Rubus lucens</i>	Subansiri, 500-1000 m		
423	<i>Rubus niveus</i>	Subansiri, 300-1100 m	Nikhee (Apat); kiblupum (Miri)	
424	<i>Rubus paniculatus</i>	Subansiri, 200-600 m	Cheche-nimri (Nishi); Taptara (Adi)	Leaves are used by Adi people as a substitute of peper betel, Fruits are eaten, sweet

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
425	<i>Rubus pentagona</i>	Subansiri, 2000-3000 m		
426	<i>Rubus rosifolius</i>	Subansiri, 600-1100 m	Hitimbum (Apat); kebolepum (Adi); Ta-shin-ta (Abor)	Fruits are edible, sour in taste
427	<i>Sorbus wallichii</i>	Subansiri, 2000-2500 m		
<b>SAXIFRAGACEAE</b>				
428	<i>Astilbe rivularis</i>	Subansiri, 2000-3600 m		
429	<i>Chrysosplenium ianuginosum</i>	Subansiri, 2500-3500 m		
430	<i>Chrysosplenium nepalense</i>	Subansiri, 2000-4000 m		
431	<i>Dichroa febrifuga</i>	Subansiri, up to 2500 m		
432	<i>Tiarella polyphylla</i>	Subansiri, 2000-4000 m		
<b>GROSSULARIACEAE</b>				
433	<i>Itea chinensis</i>	Subansiri		
<b>HYDRANGEACEAE</b>				
434	<i>Hydrangea anomala</i>	Subansiri, 1800-2700 m		
435	<i>Hydrangea heteromalla</i>	Subansiri, 2400-3300 m		
436	<i>Hydrangea robusta</i>	Subansiri, up to 2500 m		
437	<i>Philadelphus tomentosus</i>	Subansiri, up to 1800 m		
438	<i>Pileostegia subansiriana</i>	Subansiri, ca. 1800 m		Endemic
<b>HAMAMELIDACEAE</b>				
439	<i>Altingia excelsa</i>	Subansiri, 300-1250 m	Siri-asing, Shi-rih (Abor); Duang, Jutuli (Asm); Hare (Hill Miri); yogir-asing (Miri); Junkli (Nishi); Raysong (Nokte)	The wood is useful for indoor work
440	<i>Corylopsis himalayana</i>	Subansiri, up to 3150 m		
441	<i>Loropetalum chinense</i>	Subansiri, up to 1000 m	Marri (Apat)	Plants are used in religious ceremony
<b>HALORAGIDACEAE</b>				
442	<i>Haloragis micrantha</i>	Subansiri, 1500-3000 m		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
	<b>COMBRETACEAE</b>			
443	<i>Combretum acuminatum</i>	Subansiri, up to 300 m	Nahar-lata (Asm)	
444	<i>Combretum alatum</i>	Subansiri, up to 450 m	Teriseok (Adi); More-ai (Apat); Lotachali, Jonari-lowaw; Bain=lowaw (Asm)	The bark is chewed as substitute of betel nut
445	<i>Combretum pilosum</i>	Subansiri		
446	<i>Terminalia arjuna</i>	Subansiri		The bark is said to be diuretic and cardiogenic
447	<i>Terminalia chebula</i>	Subansiri	Hilika (Asm); Likkha (Nokte)	A good timber yielding plant. Fruits are used in tanning; decoction of fruits is given in asthmatic trouble and in malaria
448	<i>Terminalia myriocarpa</i>	Subansiri, 750-1150 m	Solok, gilak (Adi); Shuilek (Abor); Holok (Asm), Silok (Miri & Adi), Lakbang (Nokte)	Timbers durable and are used in various household constructions
	<b>MYRTACEAE</b>			
449	<i>Callistemon citrinus</i>	Subansiri, 400-600 m		
450	<i>Eucalyptus tereticornis</i>	Subansiri		
451	<i>Syzygium aborense</i>	Subansiri, 640-762 m	Pon-kar (Abor); pankala-sing (Adi)	Endemic
452	<i>Syzygium anisopetalum</i>	Subansiri		
453	<i>Syzygium fruticosum</i>	Subansiri	Kathiya-jamuk (Asm)	
454	<i>Syzygium megacarpum</i>	Arunachal Pradesh	Prandab (Mik)	
455	<i>Syzygium tetragonum</i>	Subansiri, up to 200 m		
	<b>MELASTOMATACEAE</b>			
456	<i>Melastoma normale</i>	Subansiri, 350-2000 m	Pudiraju (Adi); Akysanyi (Apat); Die-sengne (Nishi)	Leaves are said to be applied to wounds to stop bleeding; fruits are edible
457	<i>Osbeckia nepalensis</i>	Subansiri, 200-1500 m	Pudirasa	Ripe fruits are

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
			(Adi); Kakuchi (Asm)	edible
458	<i>Osbeckia nutans</i>	Subansiri, 300-2000 m		
459	<i>Osbeckia stellata</i>	Subansiri, 300-2000 m	Didasa (Nishi)	
460	<i>Oxyspora cernua</i>	Subansiri		
461	<i>Pseudodissochaeta assamica</i>	Subansiri, 300-1500 m	Lota-phukola (Asm)	Stems are often chewed for juice by the Aborees
462	<i>Sonerila maculata</i>	Subansiri, 100-1100 m	Jakmalo (Nishi)	Leaves are cooked and eaten as vegetable
	<b>LYTHRACEAE</b>			
463	<i>Cuphea carthagensis</i>	Subansiri, 300-800 m		
464	<i>Lagerstroemia reginae</i>	Subansiri, 600-1000 m	Ajar, Ajhar (Asm)	
465	<i>Rotala indica</i>	Subansiri, 200-1400 m		
466	<i>Rotala rotundifolia</i>	Subansiri		
467	<i>Duabanga grandiflora</i>	Subansiri, 300-400 m	Khukan, Hokul (Asm)	
	<b>ONAGRACEAE</b>			
468	<i>Circaea alpine</i>	Subansiri, 1600-3300 m		
469	<i>Circaea repens</i>	Subansiri, 1600-3000 m		
470	<i>Epilobium brevifolium</i>	Subansiri, 1800-2000 m		
471	<i>Epilobium brevifolium</i>	Subansiri, 1300-1600 m		
472	<i>Ludwigia hyssopifolia</i>	Subansiri, 200-500 m		
473	<i>Ludwigia octovalvis</i>	Subansiri, 200-900 m		
	<b>PASSIFLORACEAE</b>			
474	<i>Adenia trilobata</i>	Subansiri, 700-2000 m		Leaves are made into paste and applied in snake bite
475	<i>Modecca cordifolia</i>	Subansiri, 700-2000 m		
476	<i>Passiflora leschenaultia</i>	Subansiri, 700-2000 m		
	<b>CARICACEAE</b>			
477	<i>Carica papaya</i>	Subansiri, up to 700 m		Fruits are edible and also medicinal. The latex contains papain has got various medicinal properties
	<b>CUCURBITACEAE</b>			
478	<i>Benincasa hispida</i>	Subansiri, 500-1400 m	Chalkumra (Asm)	Young and ripe fruits are used

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				as vegetable. The fruits are considered as tonic, nutritive and diuretic
479	<i>Cucurbita maxima</i>	Subansiri		All parts of the plants are edible. The seeds are anthelmintic, diuretic and tonic
480	<i>Cucurbita moschata</i>	Subansiri, 400-700 m	Lal-kumra (Abor)	The yellow pulp of the fruits is cooked and eaten
481	<i>Cucurbita pepo</i>	Subansiri, 400-700 m	Lal-kumra (Abor)	Fruits are edible. The fresh seeds are anthelmintic
482	<i>Gomphogyne cissiformis</i>	Arunachal Pradesh, 1500-2400 m		
483	<i>Gymnostemma pedata</i>	Subansiri, 700-2600 m		
484	<i>Hemsleya graciliflora</i>	Arunachal Pradesh		
485	<i>Lagenaria siceraria</i>	Subansiri, up to 200 m		Fruits are used as vegetable; hard fruit shells are used as bottles, bowels, pipes, etc., shells are also used in musical instruments; fruit pulp is used as emetic and purgative; fruit juice is also used in curing pimples
486	<i>Luffa acutangula</i>	Subansiri	Jhinga (Asm)	Young fruits are used as vegetable
487	<i>Luffa cylindrical</i>	Subansiri	Ghiyatori, Bhol (Asm)	Fruits are used as vegetable, dried fibrous fruits are used as brush and as pumice stone
488	<i>Momordica charantia</i>	Subansiri, 200-1200 m	Tita-karela (Asm)	
489	<i>Momordica cochinchinensis</i>	Subansiri	Bhat-karela (Asm)	Young fruits are used as vegetable

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
490	<i>Mimordica dioica</i>	Subansiri		Young green fruits are edible; mucilaginous tuber is used as medicine to stop bleeding in piles and also as an expectorant
491	<i>Neoalsomitra clavigera</i>	Subnasiri, 1200-1800 m		
492	<i>Thladiantha hokkeri</i>	Subansiri, 1200-1800 m		
493	<i>Trichosanthes bracteata</i>	Subansiri, 800-1800 m		
494	<i>Trichosanthes cordata</i>	Subansiri, 100-500 m		
495	<i>Trichosanthes dioica</i>	Subansiri, 200-100 m		
496	<i>Trichosanthes tricuspudata</i>	Subansiri, 300-1500 m		
497	<i>Trichosanthes truncate</i>	Subansiri, 300-1200 m		
498	<i>Zehneria indica</i>	Subansiri, up to 2100 m		
	<b>BEGONIACEAE</b>			
499	<i>Begonia aborensis</i>	Subansiri, 400-1200 m		Rare and Endemic
500	<i>Begonia annulata</i>	Subansiri, 300-2100 m		
501	<i>Begonia hatacoa</i>	Subansiri, 1200-2500 m		
502	<i>Begonia josephi</i>	Subansiri		Bulbs are used in stomachache
	<b>MOLLUGINACEAE</b>			
503	<i>Mollugo nudicaulis</i>	Subansiri, up to 500 m		
504	<i>Centella asiatica</i>	Subansiri, 300-1700	Bor-mani-muni (Asm)	
505	<i>Hydrocotyle himalaica</i>	Subansiri, 300-1600 m		Used as medicine in snake bite
506	<i>Oenanthe javanica</i>	Subansiri, 1000-2000 m	Aguhama (Apat)	The whole plant is used as vegetable
507	<i>Sanicula elata</i>	Subansiri, 200-1600 m		
508	<i>Trachyspermum ammi</i>	Arunachal Pradesh	Joan (Asm)	
509	<i>Aralia foliosa</i>	Subansiri, 300-1000 m		
510	<i>Brassaiopsis glomerulata</i>	Subansiri, 200-1600 m	Kurila (Asm)	
511	<i>Brassaiopsis griffithii</i>	Subansiri		
512	<i>Gamblea ciliate</i>	Subansiri		
513	<i>Hedera nepalensis</i>	Subansiri, 1500-3000 m		
514	<i>Helwingia himalaica</i>	Subansiri		
515	<i>Panax pseudo-ginseng</i>	Subansiri, 1500-2000 m		The Ginseng popularly known as the elixir of life and is an extremely

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				popular rejuvenating and revitalizing tonic and considered to be a panacea. The Korean Ginseng ( <i>P.ginseng</i> ) is widely used world wide and more familiar, while the Indian Ginseng is perhaps least understood (Mehta & Haridarsan 1992)
516	<i>Pentapanax leschenaultii</i>	Subansiri, 500-1500 m		
517	<i>Trevesia palmate</i>	Subansiri, 500-1000 m	Tago (Adi); Bhotola (Asm)	Fruits are used to stupefy fish for easy catch
	<b>CAPRIFOLIACEAE</b>			
518	<i>Carlemannia griffithii</i>	Subansiri		
519	<i>Sambucus hookeri</i>	Subansiri, 300-1100 m	Hoklaati (Asm)	
520	<i>Silvianthus baracteatus</i>	Subansiri		
521	<i>Viburnum colebrookianum</i>	Subansiri, 300-1000 m		Pounded leaves are used to cure the old sores
522	<i>Viburnum cylindricum</i>	Subansiri, 1000-2000 m		
523	<i>Viburnum foetidum</i>	Subansiri		
524	<i>Viburnum mullah</i>	Subansiri, 2800-3000 m		
525	<i>Viburnum semprvirens</i>	Subansiri, 1600-2000 m		
	<b>RUBIACEAE</b>			
526	<i>Chassalia curviflora</i>	Subansiri, 500-1500 m		
527	<i>Chassalia curviflora</i>	Subansiri, 600-1200 m		
528	<i>Coffea benghalensis</i>	Subansiri, 200-2000 m	Akhaji, Kothnaphul (Asm)	Seeds are used as substitute for coffee
529	<i>Galium asperifolium</i>	Subansiri		
530	<i>Galium asperuloides</i>	Subansiri, 2200-3200 m		
531	<i>Galium elegans</i>	Subansiri, 1200-2000 m		
532	<i>Hedyotis corymbosa</i>	Subansiri, 1000-2000 m		
533	<i>Hedyotis costata</i>	Subansiri, 400-1200 m		
534	<i>Hedyotis diffusa</i>	Subansiri,		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
535	<i>Hedyotis glabra</i>	Subansiri, 400-600 m		
536	<i>Hedyotis herbacea</i>	Subansiri		
537	<i>Hedyotis scandens</i>	Subansiri, 500-2400 m	Bhedeli (Asm)	Used as medicine for gastric trouble, eye disease
538	<i>Hyptianthera stricta</i>	Subansiri, 300-1000 m		
539	<i>Ixora subsessilis</i>	Subansiri, 400-1400 m		
540	<i>Knoxia sumatrensis</i>	Subansiri,		
541	<i>Lasianthus biermannii</i>	Subansiri, 700-2300 m		
542	<i>Lasianthus hookeri</i>	Subansiri		
543	<i>Lasianthus longicauda</i>	Subansiri	Santupaya (Apat)	
544	<i>Lasianthus lucidus</i>	Subansiri, 300-1000 m		
545	<i>Lasianthus wallichii</i>	Subansiri, 1500-1600 m		
546	<i>Luculia gratissima</i>	Subansiri, 1500-2000 m		
547	<i>Mitracarpus verticillatus</i>	Subansiri, 200-1000 m	Talu (Hill-Miri)	
548	<i>Mussaenda glabra</i>	Subansiri, 600-1500 m	Charai-atha, Sonarupa (Asm); Charbu-taru (Daff)	
549	<i>Mussaenda incana</i>	Subansiri, 6-1200 m		
550	<i>Mussaenda macrophylla</i>	Subansiri, 600-1200 m		
551	<i>Mussaenda roxburghii</i>	Subansiri, 450-1500 m	Akshap (Abor); Tangmeng (Adi)	Leaves are used as vegetable
552	<i>Mycetia listeri</i>	Subnasiri, 250-1200 m		Endemic
553	<i>Mycetia longifolia</i>	Subansiri, 700-1800 m	Tangmge (Adi)	Leaves are cooked and eaten as vegetables
554	<i>Mycetia mukherjiana</i>	Subansiri		
555	<i>Myrioneuron nutans</i>	Subansiri, 1000-1500 m		
556	<i>Neanotis ingrate</i>	Subansiri, 800-1500 m		
557	<i>Neanotis wightiana</i>	Subansiri		
558	<i>Nertera sinensis</i>	Subansiri, 1200-1500 m		
559	<i>Nostolachma jenkinsii</i>	Subansiri, 1000-1500 m		
560	<i>Ophiorrhiza harrisiana</i>	Subansiri, 2000-2200 m		
561	<i>Ophiorrhiza mungos</i>	Subansiri, 1000-2500 m	Igar (Abor)	
562	<i>Ophiorrhiza rugosa</i>	Subansiri		
563	<i>Ophiorrhiza subcapitata</i>	Subansiri, 500-800 m		



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
564	<i>Ophiorrhiza succirubra</i>	Subansiri, 1400-2000 m		
565	<i>Ophiorrhiza talevalliensis</i>	Subansiri, 2500-3000 m		Endemic
566	<i>Ophiorrhiza thomsonii</i>	Subansiri, 500-1000 m		
567	<i>Ophiorrhiza treutleri</i>	Subansiri,		
568	<i>Ophiorrhiza trichocarpa</i>	Subansiri, 1500-2500 m		
569	<i>Paederia foetida</i>	Subansiri, 300-1300 m	Padurilata (Asm)	
570	<i>Pavetta crassicaulis</i>	Subnasiri	Sam-suku (Asm)	
571	<i>Polyura geminata</i>	Subansiri, 1000-1500 m		Endemic
572	<i>Psychotria adenophylla</i>	Subansiri, 1400-1600 m		
573	<i>Psychotria burkillii</i>	Subansiri, 300-1000 m		Endemic
574	<i>Psychotria calocarpa</i>	Subansiri, 500-1500 m		
575	<i>Psychotria denticulata</i>	Subansiri, 600-1200 m		
576	<i>Psychotria erratica</i>	Subansiri, 200-2500 m		
577	<i>Psychotria silhetensis</i>	Subansiri, 500-100 m		
578	<i>Randia cochinchinensis</i>	Subansiri, 1000-1200 m		
579	<i>Randia griffithii</i>	Subansiri, 200-500 m		
580	<i>Rubia cordifolia</i>	Subnasiri, 2000-4000 m		Extract from crushed plant is used in skin disease. Extract from stems and leaves is also used to colour canes and clothes
581	<i>Rubia cordifolia</i>	Subansiri		
582	<i>Saprosma ternatum</i>	Subansiri, 1200-1500 m	Bhedeli (Asm)	
583	<i>Spermacoce decandollei</i>	Subansiri		
584	<i>Spermacoce latifolia</i>	Subansiri, 100-1500 m		
585	<i>Spermacoce ocymoides</i>	Subansiri,		
586	<i>Spiradiclis bifida</i>	Subansiri, 300-1000 m	Sokho (Adi); byani-kat (Abor)	Leaves are used as vegetable
587	<i>Spiradiclis cylindrica</i>	Subansiri, 500-1000 m		
588	<i>Tarenna saiatica</i>	Arunachal Pradesh, 1000-1500 m		Decoction of leaves mixed with rice beer is given as stimulant in injuries. Leaves in the form of paste is applied for healing

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				wounds
589	<i>Tarenna odorata</i>	Subansiri, 500-1200 m		
590	<i>Uncaria homomalla</i>	Subansiri, 200-500 m		
591	<i>Uncaria scandens</i>	Subansiri		
592	<i>Uncaria sessilifructus</i>	Subansiri, 200-1100 m	Borakhilata (Asm)	
593	<i>Wendlandia puberula</i>	Subansiri, 800-1200 m	Papka-changne (Asm)	
594	<i>Wendlandia tinctoria</i>	Subansiri, 1000-1500 m	Gauni-kewta, Rangapatiogach (Asm)	
	<b>VALERIANACEAE</b>			
595	<i>Valeriana hardwickii</i>	Subansiri, 2000-3000 m		
	<b>ASTERACEAE</b>			
596	<i>Adenostemma lavenia</i>	Subansiri		
597	<i>Ageratum conyzoides</i>	Subansiri		
598	<i>Ageratum houstonianum</i>	Subansiri		In open forest, along roadsides
599	<i>Ainsliaea latifolia</i>	Subansiri		Along moist slopes
600	<i>Ambrosia artemisiifolia</i>	Subansiri		The wind borne pollens of this species are said to cause serious allergic diseases
601	<i>Anaphalis adnata</i>	Subansiri		
602	<i>Anaphalis contorta</i>	Subansiri		
603	<i>Anaphalis griffithii</i>	Subansiri		Undergrowth in secondary forests
604	<i>Anaphalis triplinervis</i>	Subansiri		
605	<i>Artemisia indica</i>	Subansiri		Along roadsides, waste places
606	<i>Artemisia nilagirica</i>	Subansiri		In open or shaded places amidst grasses or along forest edges
607	<i>Aster ageratoides</i>	Subansiri		On moist soil in open places
608	<i>Bidens bipinnata</i>	Subansiri		Common weed in waste places, roadsides
609	<i>Bidens tripartita</i>	Subansiri		Leaves are eaten as vegetable either raw or after boiling/cooking
610	<i>Blumea balsanifera</i>	Subansiri		
611	<i>Blumea fistulosa</i>	Subansiri		In open

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
				grassland, roadsides
612	<i>Blumea procera</i>	Subansiri		In moist shaded places
613	<i>Blumea riparia</i>	Subansiri		
614	<i>Cacalia mortonii</i>	Subansiri		
615	<i>Cirsium interpositum</i>	Subansiri		
616	<i>Cirsium verutum</i>	Subansiri		
617	<i>Cissampelopsis volubilis</i>	Subansiri		
618	<i>Cissampelopsis walkeri</i>	Subansiri		
619	<i>Conyza bonariensis</i>	Subansiri		In open grassland
620	<i>Conyza japonica</i>	Subansiri		
621	<i>Conyza sumatrensis</i>	Subansiri		
622	<i>Crassocephalum crepidioides</i>	Subansiri		Leaf juice is applied in cuts to prevent bleeding and relief pain
623	<i>Dichrocephala integrifolia</i>	Subansiri		
624	<i>Eupatorium cannabinum</i>	Subansiri		
625	<i>Galinsoga parviflora</i>	Subansiri		
626	<i>Galinsoga quadriradiata</i>	Subansiri		
627	<i>Gnaphalium hypoleucum</i>	Subansiri		
628	<i>Gnaphalium purpureum</i>	Subansiri		
629	<i>Gynura bicolor</i>	Subansiri		
630	<i>Ixeris gracilis</i>	Subansiri		
631	<i>Lactuca indica</i>	Subansiri		
632	<i>Piloselloides hirsuta</i>	Subansiri		
633	<i>Prenanthes hookeri</i>	Subansiri		
634	<i>Rhynchospermum verticillatum</i>	Subansiri		
635	<i>Saussurea deltoidea</i>	Subansiri		
636	<i>Senecio graciliflorus</i>	Subansiri		
637	<i>Senecio linifolius</i>	Subansiri		
638	<i>Senecio wightianus</i>	Subansiri		
639	<i>Senecio wightii</i>	Subansiri		
640	<i>Siegesbeckia orientalis</i>	Subansiri		
641	<i>Spaeranthus indicus</i>	Subansiri		
642	<i>Tithonia rotundifolia</i>	Subansiri		
643	<i>Vernonia cinerea</i>	Subansiri		
644	<i>Vernonia saligna</i>	Subansiri		
645	<i>Vernonia vagans</i>	Subansiri		
646	<i>Vernonia volkammeriaefolia</i>	Subansiri		
647	<i>Wedelia montana</i>	Subansiri		
648	<i>Youngia japonica</i>	Subansiri		
649	<i>Youngia silhetensis</i>	Subansiri		
	<b>CAMPANULACEAE</b>			
650	<i>Campanula pallida</i>	Subansiri		
651	<i>Campanumaea parviflora</i>	Subansiri		
652	<i>Leptocodon gracilllis</i>	Subansiri		
653	<i>Pratia nummularia</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
654	<i>Agapetes anonyma</i>	Subansiri		The species is known from the fruiting material only. flowering material is not yet collected
655	<i>Agapetes astrosanguenea</i>	Subansiri		
656	<i>Agapetes hyalocheilos</i>	Subansiri		
657	<i>Agapetes incurvata</i>	Subansiri		
658	<i>Agapetes interdicta</i>	Subansiri		
659	<i>Agapetes muscorum</i>	Subansiri		
660	<i>Agapetes refracta</i>	Subansiri		Endemic
661	<i>Agapetes salicifolia</i>	Subansiri		
662	<i>Agapetes variegata</i>	Subansiri		
663	<i>Enkianthus deflexus</i>	Subansiri		
664	<i>Gaultheria hypochlora</i>	Subansiri		
665	<i>Gaultheria sinensis</i>	Subansiri		
666	<i>Rhododendron arboreum</i>	Subansiri		
667	<i>Rhododendron arizelum</i>	Subansiri		
668	<i>Rhododendron exasperatum</i>	Subansiri		
669	<i>Rhododendron falconeri</i> <i>subsp. eximium</i>	Subansiri		Endemic
670	<i>Rhododendron grande</i>	Subansiri		
671	<i>Rhododendron kendrickii</i>	Subansiri		
672	<i>Rhododendron maddenii</i>	Subansiri		
673	<i>Rhododendron micromeres</i>	Subansiri		
674	<i>Rhododendron nayarii</i>	Subansiri		
675	<i>Rhododendron neriifolium</i>	Subansiri		
676	<i>Rhododendron nuttallii</i>	Subansiri		Endemic
677	<i>Rhododendron obtusum</i>	Subansiri		
678	<i>Rhododendron parryae</i>	Subansiri		
679	<i>Rhododendron peramoinum</i>	Subansiri		
680	<i>Rhododendron stenaulum</i>	Subansiri		
681	<i>Rhododendron subansiriense</i>	Subansiri		Endemic, known only from type collection
682	<i>Rhododendron vaccinooides</i>	Subansiri		
	<b>PRIMULACEAE</b>			
683	<i>Lysimachia congestiflora</i>	Subansiri		
684	<i>Lysimachia ferruginea</i>	Subansiri		
685	<i>Primula denticulata</i>	Subansiri		
686	<i>Primula listeri</i>	Subansiri		
687	<i>Primula subansirica</i>	Subansiri		
	<b>MYRSINACEAE</b>			
688	<i>Amblyanthopsis membranacea</i>	Subansiri		
689	<i>Amblyanthus obovatus</i>	Subansiri		
690	<i>Ardisha colorata</i>	Subansiri		
691	<i>Ardisia crispa</i>	Subansiri		
692	<i>Ardisia paniculata</i>	Subansiri		
693	<i>Ardisia rhynchophylla</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
694	<i>Ardisia solanacea</i>	Subansiri		
695	<i>Embeli parviflora</i>	Subansiri		
696	<i>Embelia ribes</i>	Subansiri		
697	<i>Maesa castaneifolia</i>	Subansiri		
698	<i>Maesa chisia</i>	Subansiri		
699	<i>Maesa indica</i>	Subansiri		
700	<i>Maesa maxima</i>	Subansiri		
701	<i>Maesa ramentacea</i>	Subansiri		
702	<i>Maesa truncata</i>	Subansiri		Endemic
703	<i>Maesa Ziroensis</i>	Subansiri		
704	<i>Myrsine semiserrata</i>	Subansiri		
705	<i>Rapanea capitellata</i>	Subansiri		
706	<i>Sadiria erecta</i>	Subansiri		
	<b>EBENACEAE</b>			
707	<i>Diospyros toposia</i>	Subansiri		
	<b>STYRACACEAE</b>			
708	<i>Alniphyllum fortunei</i>	Subansiri		Rare
709	<i>Bruinsmia polysperma</i>	Subansiri		
710	<i>Huodendron biaristatum</i>	Subansiri		Rare
711	<i>Styrax serrulatum</i>	Subansiri		
	<b>SYMLOCACEAE</b>			
712	<i>Symplocos cochinchinensis</i>	Subansiri		
713	<i>Symplocos glomerata</i>	Subansiri		
714	<i>Symplocos lucida</i>	Subansiri		
715	<i>Symplocos phyllocalyx</i>	Subansiri		
716	<i>Symplocos sumuntia</i>	Subansiri		
	<b>OLEACEAE</b>			
717	<i>Jasminum adenophyllum</i>	Subansiri		
718	<i>Jasminum azoricum</i>	Subansiri		
719	<i>Jasminum caudatum</i>	Subansiri		
720	<i>Jasminum laurifolium</i>	Subansiri		
721	<i>Jasminum listeri</i>	Subansiri		
722	<i>Jasminum nervosum</i>	Subansiri		
723	<i>Jasminum subglandulosum</i>	Subansiri		
724	<i>Osmanthus suavis</i>	Subansiri		
	<b>APOCYNACEAE</b>			
725	<i>Chonemorpha griffithii</i>	Subansiri		
726	<i>Trachelospermum axillare</i>	Subansiri		
	<b>ASCLEPIADACEAE</b>			
727	<i>Asclepias curassavica</i>	Subansiri		
728	<i>Dischidia benghalensis</i>	Subansiri		
729	<i>Tylophora longifolia</i>	Subansiri		
	<b>BUDDLEJACEAE</b>			
730	<i>Buddleja asiatica</i>	Subansiri		
	<b>EXACUM TETRAGONUM</b>			
731	<i>Exacum tetragonum</i>	Subansiri		
732	<i>Tripterospermum fasciculatum</i>	Subansiri		
	<b>BORAGINACEAE</b>			
733	<i>Cynoglossum glochidiatum</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
734	<i>Cynoglossum lanceolatum</i>	Subansiri		
735	<i>Cynoglossum zeylanicum</i>	Subansiri		
736	<i>Tournefortia montana</i>	Subansiri		
	<b>CONVOLVULACEAE</b>			
737	<i>Argyreia capitata</i>	Subansiri		
738	<i>Argyreia nervosa</i>	Subansiri		
739	<i>Argyreia sikkimensis</i>	Subansiri		
740	<i>Erycibe paniculata</i>	Subansiri		
741	<i>Cuscuta reflexa</i>	Subansiri		
742	<i>Capsicum annuum</i>	Subansiri		
743	<i>Capsicum frutescens</i>	Subansiri		
744	<i>Lycianthes laevis</i>	Subansiri		
745	<i>Lycopersicon esculentum</i>	Subansiri		
746	<i>Solanum anguivi</i>	Subansiri		
747	<i>Solanum erianthum</i>	Subansiri		
748	<i>Solanum myriacanthum</i>	Subansiri		
749	<i>Solanum nigrum</i>	Subansiri		
750	<i>Solanum viarum</i>	Subansiri		
751	<i>Centranthera indica</i>	Subansiri		
752	<i>Dopatrium junceum</i>	Subansiri		
753	<i>Ellisiophyllum pinnatum</i>	Subansiri		
754	<i>Limnophila chinensis</i>	Subansiri		
755	<i>Limnophila connata</i>	Subansiri		
756	<i>Lindenbergia hookeri</i>	Subansiri		
757	<i>Lindernia anagallis</i>	Subansiri		
758	<i>Lindernia antipoda</i>	Subansiri		
759	<i>Lindernia ciliata</i>	Subansiri		
760	<i>Lindernia sessiflora</i>	Subansiri		
761	<i>Mazus dentatus</i>	Subansiri		
762	<i>Mazus surculosus</i>	Subansiri		
763	<i>Melasma avense</i>	Subansiri		
764	<i>Scoparia dulcis</i>	Subansiri		
765	<i>Torenia asiatica</i>	Subansiri		
766	<i>Torenia diffusa</i>	Subansiri		
	<b>GESNERIACEAE</b>			
767	<i>Aeschynanthus parasiticus</i>	Subansiri		Endemic
768	<i>Beccarinda cordifolia</i>	Subansiri		
769	<i>Boeica fulva</i>	Subansiri		
770	<i>Chitra oblongifolia</i>	Subansiri		
771	<i>Loxostigma griffithii</i>	Subansiri		Endemic
772	<i>Lysionotus palinensis</i>	Subansiri		
773	<i>Lysionotus serratus</i>	Subansiri		
774	* <i>Rhynchoglossum lazulinum</i>	Subansiri		Endemic
775	<i>Loxostigma griffithii</i>	Subansiri		
776	<i>Lysionotus palinensis</i>	Subansiri		
777	<i>Lysionotus serratus</i>	Subansiri		
778	<i>Rhynchoglossum lazulinum</i>	Subansiri		
779	<i>Rhynchoglossum calycinum</i>	Subansiri		
780	<i>Rhynchoglossum ellipticum</i>	Subansiri		
	<b>BIGNONIACEAE</b>			
781	<i>Fernandoa adenophylla</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
	<b>PEDALIACEAE</b>			
782	<i>Sesamum orientale</i>	Subansiri		
783	<i>Aeanthus leucostachyus</i>	Subansiri		
784	<i>Andrographis laxiiflora</i>	Subansiri		
785	<i>Asystasia neesiana</i>	Subansiri		
786	<i>Barleria cristata</i>	Subansiri		
787	<i>Difflugossa colorata</i>	Subansiri		
788	<i>Justicia adhatoda</i>	Subansiri		
789	<i>Justicia khasiana</i>	Subansiri		
790	<i>Justicia vasculosa</i>	Subansiri		
791	<i>Peristrophe roxburghiana</i>	Subansiri		
792	<i>Phlogacanthus curviflorus</i>	Subansiri		
793	<i>Phlogacanthus tubiflorus</i>	Subansiri		Endemic
794	<i>Pseuderanthemum palatiferum</i>	Subansiri		
795	<i>Strobilanthes pectinatus</i>	Subansiri		
796	<i>Strobilanthes pentitemonoides</i>	Subansiri		
797	<i>Strobilanthes rhombifolius</i>	Subansiri		
798	<i>Thunbergia coccinea</i>	Subansiri		
799	<i>Thunbergia grandiflora</i>	Subansiri		
	<b>VERBENACEAE</b>			
800	<i>Callicarpa arborea</i>	Subansiri		
801	<i>Callicarpa rubella</i>	Subansiri		
802	<i>Callicarpa vestita</i>	Subansiri		
803	<i>Clerodendrum bracteatum</i>	Subansiri		
804	<i>Clerodendrum colebrookianum</i>	Subansiri		
805	<i>Clerodendrum lasiocephalum</i>	Subansiri		Endemic
806	<i>Clerodendrum serratum</i>	Subansiri		
807	<i>Clerodendrum squamatum</i>	Subansiri		
808	<i>Clerodendrum venosum</i>	Subansiri		
809	<i>Clerodendrum villosum</i>	Subansiri		
810	<i>Gmelina arborea</i>	Subansiri		
811	<i>Premna barbata</i>	Subansiri		
812	<i>Premna coriacea</i>	Subansiri		
813	<i>Verbena officinalis</i>	Subansiri		
	<b>LAMIACEAE</b>			
814	<i>Achyrospermum densiflorum</i>	Subansiri		
815	<i>Ajuga lobata</i>	Subansiri		
816	<i>Ajuga macrosperma</i>	Subansiri		
817	<i>Clinopodium umbrosum</i>	Subansiri		
818	<i>Elsholtzia blanda</i>	Subansiri		
819	<i>Elsholtzia stachyodes</i>	Subansiri		
820	<i>Eusteralis lineraris</i>	Subansiri		
821	<i>Leucas ciliata</i>	Subansiri		
822	<i>Leucas mollissima</i>	Subansiri		
823	<i>Melissa axillaris</i>	Subansiri		
824	<i>Orthosiphon incurvus</i>	Subansiri		
825	<i>Perilla frutescens</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
826	<i>Plectranthus griffithii</i>	Subansiri		
827	<i>Pogostemon amarantoides</i>	Subansiri		
828	<i>Pogostemon auricularius</i>	Subansiri		
829	<i>Rabdosia coetsa</i>	Subansiri		
830	<i>Rabdosia lophanthoides</i>	Subansiri		
831	<i>Rabdosia ternifolia</i>	Subansiri		
832	<i>Salvia mecongensis</i>	Subansiri		
833	<i>Teucrium viscidum</i>	Subansiri		
	<b>PLANTAGINACEAE</b>			
834	<i>Plantago erosa</i>	Subansiri		
	<b>NYCTAGINACEAE</b>			
835	<i>Boerhavia diffusa</i>	Subansiri		
	<b>AMARANTHACEAE</b>			
836	<i>Achyranthes aspera</i>	Subansiri		
837	<i>Achyranthes bidentata</i>	Subansiri		
838	<i>Aerva sanguinolenta</i>	Subansiri		
839	<i>Alternanthera sessilis</i>	Subansiri		
840	<i>Amaranthus blitum</i>	Subansiri		
841	<i>Amarnathus tricolor</i>	Subansiri		
842	<i>Amarnathus viridus</i>	Subansiri		
843	<i>Colosia argentea</i>	Subansiri		
844	<i>Colosia argentea forma cristata</i>	Subansiri		
845	<i>Cyathula prostrata</i>	Subansiri		
846	<i>Cyathula amaranthoides</i>	Subansiri		
	<b>CHENOPODIACEAE</b>			
847	<i>Chenopodium album</i>	Subansiri		
848	<i>Chenopodium ambrosioides</i>	Subansiri		
	<b>POLYGONACEAE</b>			
849	<i>Aconogonum molle</i>	Subansiri		
850	<i>Aconogonum molle var. rude</i>	Subansiri		
851	<i>Aconogonum molle pangianum</i>	Subansiri		
852	<i>Fagopyrum dibotrys</i>	Subansiri		
853	<i>Fagopyrum esculantum</i>	Subansiri		
854	<i>Persicaria barbata</i>	Subansiri		
855	<i>Persicaria capitata</i>	Subansiri		
856	<i>Persicaria chinensis</i>	Subansiri		
857	<i>Persicaria chinensis var. ovalifolia</i>	Subansiri		
858	<i>Persicaria muricata</i>	Subansiri		
859	<i>Persicaria nepalensis</i>	Subansiri		
860	<i>Persicaria perfoliata</i>	Subansiri		
861	<i>Persicaria posumbu</i>	Subansiri		
862	<i>Persicaria pubescens</i>	Subansiri		
863	<i>Persicaria pubescens var. acuminata</i>	Subansiri		
864	<i>Persicaria runcinata</i>	Subansiri		
865	<i>Persicaria salicifolia</i>	Subansiri		
866	<i>Persicaria strigosa</i>	Subansiri		
867	<i>Persicaria tenella var.</i>	Subansiri		



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
	<i>kawagoeana</i>			
868	<i>Polygonum palmatum</i>	Subansiri		
869	<i>Tovora virginiana</i>	Subansiri		
	<b>PODOSTEMACEAE</b>			
870	<i>Zeylanidium olivaceum</i>	Subansiri		
	<b>PIPERACEAE</b>			
871	<i>Peperomia heyneana</i>	Subansiri		
872	<i>Peperomia pellucida</i>	Subansiri		
873	<i>Peperomia tetraphylla</i>	Subansiri		
874	<i>Piper betleoides</i>	Subansiri		
875	<i>Piper clarkei</i>	Subansiri		
876	<i>Piper gamblei</i>	Subansiri		
877	<i>Piper nepalense</i>	Subansiri		
878	<i>Piper sylvaticum</i>	Subansiri		
879	<i>Piper thomsonii</i>	Subansiri		
880	<i>Piper trioicum</i>	Subansiri		
	<b>SAURURACEAE</b>			
881	<i>Houttuynia cordata</i>	Subansiri		
	<b>CHLORANTHACEAE</b>			
882	<i>Chloranthus elatior</i>	Subansiri		
883	<i>Sarcandra glabra</i>	Subansiri		
	<b>LAURACEAE</b>			
884	<i>Aetnodaphne obovata</i>	Subansiri		
885	<i>Alseodaphne anadersonii</i>	Subansiri		
886	<i>Beilschmiedia pseudomicropora</i>	Subansiri		
887	<i>Cinnamomum bejolghota</i>	Subansiri		
888	<i>Cinnamomum camphora</i>	Subansiri		
889	<i>Cinnamomum tamala</i>	Subansiri		
890	<i>Cryptocarya amygdalina</i>	Subansiri		
891	<i>Lindera caudata</i>	Subansiri		
892	<i>Lindera neesiana</i>	Subansiri, 1500-2500 m		
893	<i>Litsea salicifolia</i>	Subansiri		
894	<i>Neocinnamomum caudatum</i>	Subansiri		
895	<i>Neolitsea cassia</i>	Subansiri		
896	<i>Phoebe attenuata</i>	Subansiri		
897	<i>Phoebe goalparensis</i>	Subansiri		
898	<i>Phoebe lanceolata</i>	Subansiri		
	<b>THYMELAEACEAE</b>			
899	<i>Daphne bholua</i>	Subansiri		
900	<i>Daphne papyracea</i>	Subansiri		
	<b>ELAEAGNACEAE</b>			
901	<i>Elaeagnus caudata</i>	Subansiri		
902	<i>Elaeagnus infundibularis</i>	Subansiri		
903	<i>Helixanthera ligustrina</i>	Subansiri		
904	<i>Helixanthera parasitica</i>	Subansiri		
905	<i>Macrosolen psilanthus</i>	Subansiri		
906	<i>Seurrula parasitica</i>	Subansiri		
	<b>SANTALACEAE</b>			
907	<i>Phacellaria compressa</i>	Subansiri		
	<b>BALANOPHORACEAE</b>			

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
908	<i>Daphniphyllum himalayense</i>	Subansiri		
	<b>EUPHORBIACEAE</b>			
909	<i>Antidesma acuminatum</i>	Subansiri		
910	<i>Antidesma khasiana</i>	Subansiri		
911	<i>Antidesma nigricans</i>	Subansiri		
912	<i>Baliospermum corymbiferum</i>	Subansiri		
913	<i>Baliospermum micranthum</i>	Subansiri		Endemic
914	<i>Bridelia scandens</i>	Subansiri		
915	<i>Euphorbia hirta</i>	Subansiri		
916	<i>Glochidion assamicum</i>	Subansiri		
917	<i>Glochidion khasianum</i>	Subansiri		
918	<i>Hemicicca glauca</i>	Subansiri		
919	<i>Kirganelia reticulata</i>	Subansiri		
920	<i>Macaranga denticulata</i>	Subansiri		
921	<i>Mallotus ferrugineous</i>	Subansiri		
922	<i>Ostodes paniculata</i>	Subansiri		
923	<i>Phyllanthus emblica</i>	Subansiri		
924	<i>Phyllanthus urinaria</i>	Subansiri		
925	<i>Ricinus communis</i>	Subansiri		
926	<i>Sapium baccatum</i>	Subansiri		
927	<i>Sauropus macranthus</i>	Subansiri		
	<b>ULMACEAE</b>			
928	<i>Trema orientalis</i>	Subansiri		
929	<i>Trema tomentosa</i>	Subansiri		
	<b>CANNABACEAE</b>			
930	<i>Cannabis sativa</i>	Subansiri		
931	<i>Broussonetia kampfieri</i>	Subansiri		
932	<i>Ficus auriculata</i>	Subansiri		
933	<i>Ficus bhotanica</i>	Subansiri		
934	<i>Ficus elastica</i>	Subansiri		
935	<i>Ficus fistulosa</i>	Subansiri		
936	<i>Ficus gasparriniana</i>	Subansiri		
937	<i>Ficus religiosa</i>	Subansiri		
938	<i>Ficus rigida</i>	Subansiri		
939	<i>Morus australis</i>	Subansiri		
	<b>URTICACEAE</b>			
940	<i>Boehmeria penduliflora</i>	Subansiri		
941	<i>Chamabainia cuspidata</i>	Subansiri		
942	<i>Dendrocnide sinuata</i>	Subansiri		
943	<i>Elatostema cuneatum</i>	Subansiri		
944	<i>Elatostema lineolatum</i>	Subansiri		
945	<i>Elatostema logicaudatum</i>	Subansiri		
946	<i>Elatostema monandrum</i>	Subansiri		
947	<i>Elatostema obtusum</i>	Subansiri		
948	<i>Elatostema sessile</i>	Subansiri		
949	<i>Oreocnide frutescens</i>	Subansiri		
950	<i>Oreocnide integrifolia</i>	Subansiri		
951	<i>Pilea anisophylla</i>	Subansiri		
952	<i>Pilea glaberrima</i>	Subansiri		
953	* <i>Pilea insolens</i>	Subansiri		Endemic
954	<i>Poikilospermum</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
	<i>naucleiflorum</i>			
955	<i>Pouzolzia bennettiana</i>	Subansiri		
956	<i>Pouzolzia frondosa</i>	Subansiri		
957	<i>Pouzolzia sanguinea</i> var. <i>fulgens</i>	Subansiri		
958	<i>Procris crenata</i>	Subansiri		
959	<i>Sarcochlamys pulcherrima</i>	Subansiri		
	<b>JUGLANDACEAE</b>			
960	<i>Engelhardia roxburghiana</i>	Subansiri		Bark is used as fish poison
961	<i>Engelhardia spicata</i>	Subansiri		The paste of powdered roots is used as fish poison. Bark is used for tanning. wood is used for building purpose, tea boxes and for carving
	<b>BETULACEAE</b>			
962	<i>Alnus nepalensis</i>	Subansiri		
	<b>FAGACEAE</b>			
963	<i>Quercus lamellosa</i>	Subansiri		
	<b>SALICACEAE</b>			
964	<i>Populus gamblei</i>	Subansiri		
	<b>ORCHIDACEAE</b>			
965	<i>Acampe praemorsa</i>	Subansiri		
966	<i>Acampe rigida</i>	Subansiri		
967	<i>Acanthephippium striatum</i>	Subansiri		
968	<i>Acrochaene punctata</i>	Subansiri		
969	<i>Aerides falcata</i>	Subansiri		
970	<i>Aerides multiflora</i>	Subansiri		
971	<i>Aerides odorata</i>	Subansiri		
972	<i>Agrostophyllum brevipes</i>	Subansiri		
973	<i>Agrostophyllum callosum</i>	Subansiri		
974	<i>Agrostophyllum myrianthum</i>	Subansiri		
975	<i>Agrostophyllum planicaule</i>	Subansiri		
976	<i>Anoectochilus brevilabris</i>	Subansiri		
977	<i>Anthogonium gracile</i>	Subansiri		
978	<i>Aphyllorchis montana</i>	Subansiri		
979	<i>Arundina graminifolia</i>	Subansiri		
980	<i>Ascocentrum curvifolium</i>	Subansiri		
981	<i>Brachycorythis obcordata</i>	Subansiri		
982	<i>Bulbophyllum affine</i>	Subansiri		
983	<i>Bulbophyllum andersonii</i>	Subansiri		
984	<i>Bulbophyllum careyanum</i>	Subansiri		
985	<i>Bulbophyllum cariniflorum</i>	Subansiri		
986	<i>Bulbophyllum cauliflorum</i>	Subansiri		
987	<i>Bulbophyllum cylindraceum</i>	Subansiri		
988	<i>Bulbophyllum delitescens</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
989	<i>Bulbophyllum griffithii</i>	Subansiri		
990	<i>Bulbophyllum gymnopus</i>	Subansiri		
991	<i>Bulbophyllum hirtum</i>	Subansiri		
992	<i>Bulbophyllym hymenanthum</i>	Subansiri		
993	<i>Bulbophyllym khasianum</i>	Subansiri		
994	<i>Bulbophyllym leopardinum</i>	Subansiri		
995	<i>Bulbophyllym odoratissimum</i>	Subansiri		
996	<i>Bulbophyllym ornatissimum</i>	Subansiri		
997	<i>Bulbophyllum protractum</i>	Subansiri		
998	<i>Bulbophyllum reptans</i>	Subansiri		
999	<i>Bulbophyllum rolfei</i>	Subansiri		
1000	<i>Bulbophyllum secundum</i>	Subansiri		
1001	<i>Bulbophyllum thomsoni</i>	Subansiri		
1002	<i>Bulbophyllum tortuosum</i>	Subansiri		
1003	<i>Bulbophyllum triste</i>	Subansiri		
1004	<i>Bulleyia yunnanensis</i>	Subansiri		Rare
1005	<i>Calanthe alismifolia</i>	Subansiri		
1006	<i>Calanthe biloba</i>	Subansiri		
1007	<i>Calanthe brevicornu</i>	Subansiri		
1008	<i>Calanthe chloroleuca</i>	Subansiri		
1009	<i>Calanthe griffithii</i>	Subansiri		
1010	<i>Calanthe plantaginea</i>	Subansiri		
1011	<i>Calanthe puberula</i>	Subansiri		
1012	<i>Calanthe pachystalix</i>	Subansiri		
1013	<i>Calanthe sylvatica</i>	Subansiri		
1014	<i>Calanthe tricarinata</i>	Subansiri		
1015	<i>Cephalanthera longifolia</i>	Subansiri		
1016	<i>Ceratostylis himalaica</i>	Subansiri		
1017	<i>Cleisostoma filiforme</i>	Subansiri		
1018	<i>Cleisostoma simondii</i>	Subansiri		
1019	<i>Coelogyne arunachalensis</i>	Lower Subansiri		Endemic
1020	<i>Coelogyne barbata</i>	Subansiri		
1021	<i>Coelogyne corymbosa</i>	Subansiri		
1022	<i>Coelogyne cristata</i>	Subansiri		
1023	<i>Coelogyne fimbriata</i>	Subansiri		
1024	<i>Coelogyne flaccida</i>	Subansiri		
1025	<i>Coelogyne fluliginosa</i>	Subansiri		
1026	<i>Coelogyne fuscescens</i>	Subansiri		
1027	<i>Coelogyne griffithii</i>	Subansiri		
1028	<i>Coelogyne micrantha</i>	Subansiri		
1029	<i>Coelogyne nitida</i>	Subansiri		
1030	<i>Coelogyne occultata</i>	Subansiri		
1031	<i>Coelogyne ovalis</i>	Subansiri		
1032	<i>Coelogyne prolifera</i>	Subansiri		
1033	<i>Coelogyne punctulata</i>	Subansiri		
1034	<i>Coelogyne suaveolens</i>	Subansiri		
1035	<i>Coelogyne veratrifolia</i>	Subansiri		
1036	<i>Cryptochilus lutea</i>	Subansiri		
1037	<i>Cryptochilus sanguinea</i>	Subansiri		
1038	<i>Cymbidium aloifolium</i>	Subansiri		
1039	<i>Cymbidium bicolor</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1040	<i>Cymbidium cochleare</i>	Subansiri		
1041	<i>Cymbidium cyperifolium</i>	Subansiri		
1042	<i>Cymbidium dayanum</i>	Subansiri		
1043	<i>Cymbidium devonianum</i>	Subansiri		
1044	<i>Cymbidium iridioides</i>	Subansiri		
1045	<i>Cymbidium lancifolium</i>	Subansiri		
1046	<i>Cymbidium lowianum</i>	Subansiri		
1047	<i>Cymbidium mastersii</i>	Subansiri		
1048	<i>Cymbidium sinense</i>	Subansiri		
1049	<i>Dactylorhiza hataqirea</i>	Subansiri		
1050	<i>Dendrobium acinaciforme</i>	Subansiri		
1051	<i>Dendrobium amoenum</i>	Subansiri		
1052	<i>Dendrobium anceps</i>	Subansiri		
1053	<i>Dendrobium aphyllum</i>	Subansiri		
1054	<i>Dendrobium candidum</i>	Subansiri		
1055	<i>Dendrobium cathcartii</i>	Subansiri		Endemic
1056	<i>Dendrobium chrysanthum</i>	Subansiri		
1057	<i>Dendrobium chryssotoxum</i>	Subansiri		
1058	<i>Dendrobium crepidatum</i>	Subansiri		
1059	<i>Dendrobium cretaceum</i>	Subansiri		
1060	<i>Dendrobium denudans</i>	Subansiri		
1061	<i>Dendrobium devonianum</i>	Subansiri		
1062	<i>Dendrobium eriiflorum</i>	Subansiri		
1063	<i>Dendrobium falconeri</i>	Subansiri		
1064	<i>Dendrobium farmeri</i>	Subansiri		
1065	<i>Dendrobium fambriatum</i>	Subansiri		
1066	<i>Dendrobium gibsonii</i>	Subansiri		
1067	<i>Dendrobium hookerianum</i>	Subansiri		Endemic
1068	<i>Dendrobium lindleyi</i>	Subansiri		
1069	<i>Dendrobium lituiflorum</i>	Subansiri		
1070	<i>Dendrobium longicornu</i>	Subansiri		
1071	<i>Dendrobium moschatum</i>	Subansiri		
1072	<i>Dendrobium nobile</i>	Subansiri		
1073	<i>Dendrobium palpebrae</i>	Subansiri		
1074	<i>Dendrobium parciflorum</i>	Subansiri		
1075	<i>Dendrobium parishii</i>	Subansiri		
1076	<i>Dendrobium sulcatum</i>	Subansiri		Endemic
1077	<i>Epipogium indicum</i>	Subansiri		Endemic
1078	<i>Epipogium roseum</i>	Subansiri		
1079	<i>Eria acervata</i>	Subansiri		
1080	<i>Eria bambusifolia</i>	Subansiri		
1081	<i>Eria biflora</i>	Subansiri		
1082	<i>Eria bipunctata</i>	Subansiri		
1083	<i>Eria bractescens</i>	Subansiri		
1084	<i>Eria clausa</i>	Subansiri		Endemic
1085	<i>Eria clavicaulis</i>	Subansiri		
1086	<i>Eria coronaria</i>	Subansiri		
1087	<i>Eria cristata</i>	Subansiri		
1088	<i>Eria discolor</i>	Subansiri		
1089	<i>Eria excavata</i>	Subansiri		
1090	<i>Eria ferruginea</i>	Subansiri		Endemic

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1091	<i>Eria graminifolia</i>	Subansiri		
1092	<i>Eria jengingensis</i>	Subansiri		Endemic
1093	<i>Eria lasiopetala</i>	Subansiri		
1094	<i>Eria muscicola</i>	Subansiri		
1095	<i>Eria paniculata</i>	Subansiri		
1096	<i>Eria pannea</i>	Subansiri		
1097	<i>Eria pudica</i>	Subansiri		
1098	<i>Eria pumila</i>	Subansiri		
1099	<i>Eria pusilla</i>	Subansiri		
1100	<i>Eria sharmae</i>	Subansiri		Endemic
1101	<i>Eria spicata</i>	Subansiri		
1102	<i>Eria stricta</i>	Subansiri		
1103	<i>Erythrodes hirsuta</i>	Subansiri		
1104	<i>Esmeralda cathcartii</i>	Subansiri		
1105	<i>Eulophia bicallosa</i>	Subansiri		
1106	<i>Galeola lindleyana</i>	Subansiri		
1107	<i>Galeola nudifolia</i>	Subansiri		
1108	<i>Gastrochilus dasypogon</i>	Subansiri		
1109	<i>Gastrochilus distichus</i>	Subansiri		
1110	<i>Gastrochilus intermedius</i>	Subansiri		
1111	<i>Geodorum densiflorum</i>	Subansiri		
1112	<i>Goodyera foliosa</i>	Subansiri		
1113	<i>Goodyera hemsleyana</i>	Subansiri		
1114	<i>Goodyera procera</i>	Subansiri		
1115	<i>Goodyera schlechtendaliana</i>	Subansiri		
1116	<i>Goodyera viridiflora</i>	Subansiri		
1117	<i>Goodyera vittata</i>	Subansiri		
1118	<i>Habenaria arietina</i>	Subansiri		
1119	<i>Habenaria dentata</i>	Subansiri		
1120	<i>Habenaria pantlingiana</i>	Subansiri		
1121	<i>Habenaria pectinata</i>	Subansiri		
1122	<i>Habenaria stenopetala</i>	Subansiri		
1123	<i>Hermidium jaffreyanum</i>	Subansiri		
1124	<i>Herpysma longicaulis</i>	Subansiri		
1125	<i>Hetaeria affinis</i>	Subansiri		
1126	<i>Ione arunachalensis</i>	Subansiri		
1127	<i>Liparis assamica</i>	Subansiri		Endemic
1128	<i>Liparis bistrata</i>	Subansiri		
1129	<i>Liparis cathcartii</i>	Subansiri		
1130	<i>Liparis cordifolia</i>	Subansiri		
1131	<i>Liparis distans</i>	Subansiri		Endemic
1132	<i>Liparis elliptica</i>	Subansiri		
1133	<i>Liparis luteola</i>	Subansiri		
1134	<i>Liparis nervosa</i>	Subansiri		
1135	<i>Liparis odorata</i>	Subansiri		
1136	<i>Liparis plantaginea</i>	Subansiri		Endemic
1137	<i>Liparis resupinata</i>	Subansiri		
1138	<i>Liparis stricklandiana</i>	Subansiri		
1139	<i>Liparis viridiflora</i>	Subansiri		
1140	<i>Liparis wrayii</i>	Subansiri		
1141	<i>Luisiopsis inconspicua</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1142	<i>Malaxis acuminata</i>	Subansiri		
1143	<i>Myrmechis pumila</i>	Subansiri		
1144	<i>Neogyna gardneriana</i>	Subansiri		
1145	<i>Oberonia denticulata</i>	Subansiri		
1146	<i>Oberonia emarginata</i>	Subansiri		
1147	<i>Oberonia ensiformis</i>	Subansiri		
1148	<i>Oberonia falcata</i>	Subansiri		
1149	<i>Oberonia jenkinsiana</i>	Subansiri		
1150	<i>Oberonia panchyrachis</i>	Subansiri		
1151	<i>Oberonia pyrulifera</i>	Subansiri		
1152	<i>Odontochilus lanceolatus</i>	Subansiri		
1153	<i>Odontochilus albus</i>	Subansiri		
1154	<i>Otochilus fuscus</i>	Subansiri		
1155	<i>Otochilus porrectus</i>	Subansiri		
1156	<i>Papilionanthe teres</i>	Subansiri		
1157	<i>Papilionanthe uniflora</i>	Subansiri		
1158	<i>Peristylus fallax</i>	Subansiri		
1159	<i>Peristylus goodyeroides</i>	Subansiri		
1160	<i>Phaius tankervilleae</i>	Subansiri		
1161	<i>Phalaenopsis mannii</i>	Subansiri		
1162	<i>Phalaenopsis taenialis</i>	Subansiri		
1163	<i>Pholidota articulata</i>	Subansiri		
1164	<i>Pholidota imbricata</i>	Subansiri		
1165	<i>Pholidota pallida</i>	Subansiri		
1166	<i>Pholidota protracta</i>	Subansiri		
1167	<i>Pholidota pygmaea</i>	Subansiri		Endemic
1168	<i>Pholidota wattii</i>	Subansiri		Rare and Endemic
1169	<i>Phreatia elegans</i>	Subansiri		
1170	<i>Platanthera arcuata</i>	Subansiri		
1171	<i>Platanthera dyeriana</i>	Subansiri		
1172	<i>Pomatocalpa armigerum</i>	Subansiri		
1173	<i>Rhynchostylis retusa</i>	Subansiri		
1174	<i>Smitinandia micrantha</i>	Subansiri		
1175	<i>Dpiranthes sinensis</i>	Subansiri		
1176	<i>Stereochilus hirtus</i>	Subansiri		
1177	<i>Taeniophyllum arunachalense</i>	Subansiri		
1178	<i>Tainia latifolia</i>	Subansiri		
1179	<i>Thrixspermum muscaeflorum</i>	Subansiri		
1180	<i>Thrixspermum pygmaeum</i>	Subansiri		
1181	<i>Thunia alba</i>	Subansiri		
1182	<i>Trias nasuta</i>	Subansiri		
1183	<i>Trichotosia pulvinata</i>	Subansiri		
1184	<i>Uncifera acuminata</i>	Subansiri		
1185	<i>Vanda cristata</i>	Subansiri		
1186	<i>Vanda testacea</i>	Subansiri		
1187	<i>Zeuxine goodeyoides</i>	Subansiri		
1188	<i>Zeuxine lindleyana</i>	Subansiri		
1189	<i>Alpinia malaccensis</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1190	<i>Globba clarkei</i>	Subansiri		
1191	<i>Globba hookeri</i>	Subansiri		
1192	<i>Globba multiflora</i>	Subansiri		
1193	<i>Globba rubromaculata</i>	Subansiri		
1194	<i>Hedychium gracillimum</i>	Subansiri		
1195	<i>Hedychium longipedunculatum</i>	Subansiri		
1196	<i>Hedychium thyriforme</i>	Subansiri		
	<b>MUSACEAE</b>			
1197	<i>Musa balbisiana</i>	Subansiri		
1198	<i>Musa rosacea</i>	Subansiri		
	<b>TACCACEAE</b>			
1199	<i>Tacca integrifolia</i>	Subansiri		
1200	<i>Dioscorea bulbifera</i>	Subansiri		
1201	<i>Dioscorea hamiltonii</i>	Subansiri		
1202	<i>Dioscorea listeri</i>	Subansiri		
1203	<i>Dioscorea orbiculata</i>	Subansiri		
1204	<i>Dioscorea pentaphylla</i>	Subansiri		
	<b>AGAVACEAE</b>			
1205	<i>Dracaena angustifolia</i>	Subansiri		
1206	<i>Chlorophytum arundinaceum</i>	Subansiri		
1207	<i>Curculigo capitulata</i>	Subansiri		
1208	<i>Curculigo prainiana</i>	Subansiri		
1209	<i>Dianella ensifolia</i>	Subansiri		
1210	<i>Paris polyphylla</i>	Subansiri		
1211	<i>Peliosanthes teta ssp humilis</i>	Subansiri		Endemic
1212	<i>Peliosanthes violacea</i>	Subansiri		
1213	<i>Peliosanthes punctatum</i>	Subansiri		
	<b>SMILACACEAE</b>			
1214	<i>Smilax ovalifolia</i>	Subansiri		
1215	<i>Smilax perfoliata</i>	Subansiri		
	<b>PONTERIACEAE</b>			
1216	<i>Monochoria vaginalis</i>	Subansiri		
	<b>COMMELINACEAE</b>			
1217	<i>Aclisia subumbellata</i>	Subansiri		
1218	<i>Amischotholype hookeri</i>	Subansiri		
1219	<i>Amischotholype mollissima</i>	Subansiri		
1220	<i>Commelina diffusa</i>	Subansiri		
1221	<i>Commelina maculata</i>	Subansiri		
1222	<i>Commelina sikkimensis</i>	Subansiri		
1223	<i>Cyanotis papilionaca</i>	Subansiri		
1224	<i>Cyanotis vaga</i>	Subansiri		
1225	<i>Floscopa scandens</i>	Subansiri		
1226	<i>Murdannia divergens</i>	Subansiri		
1227	<i>Murdannia loriformis</i>	Subansiri		
1228	<i>Murdannia nudiflora</i>	Subansiri		
1229	<i>Murdannia spirata</i>	Subansiri		
1230	<i>Murdannia triquetra</i>	Subansiri		
1231	<i>Pollia hasskarlii</i>	Subansiri		
1232	<i>Pollia secundiflora</i>	Subansiri		



Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1233	<i>Rhopalephora scaberrima</i>	Subansiri		
1234	<i>Streptolirion volubile</i>	Subansiri		
1235	<i>Streptolirion volubile</i> ssp. <i>hasianum</i>	Subansiri		
	<b>JUNCACEAE</b>			
1236	<i>Juncus prismatocarpus</i> var. <i>sinensis</i>	Subansiri		
1237	<i>Phoenix sylvestris</i>	Subansiri		
	<b>ARACEAE</b>			
1238	<i>Alocasia fornicata</i>	Subansiri		
1239	<i>Amorphophallus paeoniifolius</i>	Subansiri		
1240	<i>Arisaema concinnum</i>	Subansiri		
1241	<i>Arisaema consanguineum</i>	Subansiri		
1242	<i>Arisaema nepenthoides</i>	Subansiri		
1243	<i>Arisaema petiolulatum</i>	Subansiri		
1244	<i>Arisaema speciosum</i>	Subansiri		
1245	<i>Arisaema wattii</i>	Subansiri		
1246	<i>Colocasia affinis</i>	Subansiri		
1247	<i>Colocasia esculenta</i>	Subansiri		
1248	<i>Gonatanthus ornatus</i>	Subansiri		
1249	<i>Gonatanthus pumilus</i>	Subansiri		
1250	<i>Lagenandra undulata</i>	Subansiri		Endemic
1251	<i>Pothos cathcartii</i>	Subansiri		
1252	<i>Rhaphidophora calophyllum</i>	Subansiri		
1253	<i>Rhaphidophora decursiva</i>	Subansiri		
1254	<i>Rhaphidophora glauca</i>	Subansiri		
1255	<i>Steudnera assamica</i>	Subansiri		
	<b>LEMNACEAE</b>			
1256	<i>Alisma plantago-aquatica</i>	Subansiri		
1257	<i>Sagittaria trifolia</i>	Subansiri		
	<b>POTAMOGETONACEAE</b>			
1258	<i>Potamogeton nodosus</i>	Subansiri		
1259	<i>Potamogeton octandrus</i>	Subansiri		
	<b>ERIOCAULACEAE</b>			
1260	<i>Eriocaulon brownianum</i>	Subansiri		
1261	<i>Eriocaulon luzulifolium</i>	Subansiri		
1262	<i>Eriocaulon nepalense</i>	Subansiri		
	<b>CYPERACEAE</b>			
1263	<i>Cyperus compressus</i>	Subansiri		
1264	<i>Cyperus cyperoides</i>	Subansiri		
1265	<i>Cyperus pilosus</i>	Subansiri		
1266	<i>Cyperus sanguinolentus</i>	Subansiri		
1267	<i>Cyperus tenuispica</i>	Subansiri		
1268	<i>Eleocharis tetraquetra</i>	Subansiri		
1269	<i>Fimbristylis aestivalis</i>	Subansiri		
1270	<i>Fimbristylis dichotoma</i>	Subansiri		
1271	<i>Fimbristylis tenera</i>	Subansiri		
1272	<i>Mapania palustris</i>	Subansiri		
1273	<i>Mapania arunachalensis</i>	Subansiri		Endemic
1274	<i>Schoenoplectus mucronatus</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1275	<i>Scirpus wichurai</i>	Subansiri		
	<b>POACEAE</b>			
1276	<i>Arthraxon lancifolius</i>	Subansiri		
1277	<i>Arthraxon microphyllus</i>	Subansiri		
1278	<i>Arundinella bengalensis</i>	Subansiri		
1279	<i>Bambusa tulda</i>	Subansiri		
1280	<i>Bambusa vulgaris</i>	Subansiri		
1281	<i>Coix lacryma-jobi var mayuen</i>	Subansiri		
1282	<i>Cyrtococcum accerescens</i>	Subansiri		
1283	<i>Cyrtococcum oxyphyllum</i>	Subansiri		
1284	<i>Cyrtococcum patens</i>	Subansiri		
1285	<i>Dendrocalamus hamiltonii</i>	Subansiri		
1286	<i>Dendrocalamus sahnii</i>	Subansiri		
1287	<i>Dendrocalamus sikkimensis</i>	Subansiri		
1288	<i>Digitaria violascens</i>	Subansiri		
1289	<i>Echinochloa colona</i>	Subansiri		
1290	<i>Eleusine coracena</i>	Subansiri		
1291	<i>Eleusine indica</i>	Subansiri		
1292	<i>Eragrostis pilosa</i>	Subansiri		
1293	<i>Eragrostis tenella</i>	Subansiri		
1294	<i>Eragrostis unioides</i>	Subansiri		
1295	<i>Garnotia tenella</i>	Subansiri		
1296	<i>Isachne albens</i>	Subansiri		
1297	<i>Mnesithea granularis</i>	Subansiri		
1298	<i>Oplismenus compositus</i>	Subansiri		
1299	<i>Oryza sativa</i>	Subansiri		
1300	<i>Panicum astrosanguineum</i>	Subansiri		
1301	<i>Panicum brevifolium</i>	Subansiri		
1302	<i>Panicum khasianum</i>	Subansiri		
1303	<i>Panicum miliaceum</i>	Subansiri		
1304	<i>Paspalum conjugatum</i>	Subansiri		
1305	<i>Paspalum conjugatum var. pubescens</i>	Subansiri		
1306	<i>Phragmites karka</i>	Subansiri		
1307	<i>Phyllostachys assamica</i>	Subansiri		
1308	<i>Phyllostachys mannii</i>	Subansiri		
1309	<i>Pleioblastus simonii</i>	Subansiri		
1310	<i>Pogonatherum crinitum</i>	Subansiri		
1311	<i>Pogonatherum paniceum</i>	Subansiri		
1312	<i>Saccharum arundinaceum</i>	Subansiri		
1313	<i>Saccharum spontaneum</i>	Subansiri		
1314	<i>Sacciolepis interrupta</i>	Subansiri		
1315	<i>Schizostachyum arunachalensis</i>	Subansiri		
1316	<i>Schizostachyum funchsianum</i>	Subansiri		
1317	<i>Schizostachyum pallidum</i>	Subansiri		
1318	<i>Schizostachyum polymorphum</i>	Subansiri		
1319	<i>Setaria italica</i>	Subansiri		

Sr. No.	Botanical Name	Location	Local Name	Status & Remarks
1320	<i>Setaria palmifolia</i>	Subansiri		
1321	<i>Themeda caudata</i>	Subansiri		
1322	<i>Thysanolaena maxima</i>	Subansiri		
1323	<i>Zea mays</i>	Subansiri		

Source:

Materials for the Flora of Arunachal Pradesh, Volume I, 1996, Volume II, 2008 and volume III, 2009, Botanical Survey of India and primary surveys



## **Annexure – 6.7**

**List of Plant Species with their Family and Local Names Found at the Affected Area of Lower Subansiri Project at Dumporijo, Siberite – Gengi, Gerukamukh – I, Gerukamukh – II**



**Site 1: Dumporijo**

Sr. No.	Botanical Name	Family	Local Name
<b>Trees</b>			
1.	<i>Ailanthus grandis</i>	Simarubaceae	Borpat
2.	<i>Altingia excelsa</i>	Hamamelidaceae	Jutuli
3.	<i>Amoora wallichii</i>	Meliaceae	Amari
4.	<i>Anthecephalus chinensis</i>	Rubiaceae	
5.	<i>Callicarpa</i> sp.	Verbenaceae	
6.	<i>Canarium strictum</i>	Burseraceae	Dhuna
7.	<i>Duabanga grandiflora</i>	Sonneratiaceae	Khokan
8.	<i>Erythrina stricta</i>	Fabaceae	Madar
9.	<i>Ficus roxburghii</i>	Moraceae	
10.	<i>Lindera</i> sp.	Lauraceae	
11.	<i>Meliosma pinnata</i>	Sabiaceae	
12.	<i>Mellotus tetraococcus</i>	Euphorbiaceae	
13.	<i>Mengleitia insignis</i>	Magnoliaceae	Phulsopa
14.	<i>Morus laevigata</i>	Moraceae	Bola
15.	<i>Musa glauca</i>	Musaceae	Wild Banana
16.	<i>Oreocnide integrifolia</i>	Urticaceae	
17.	<i>Pterospermum acerifolium</i>	Sterculiaceae	Hathi paila
18.	<i>Sapium baccatum</i>	Euphorbiaceae	Seleng
19.	<i>Stereospermum chelonoides</i>	Bignoniaceae	Paroli
20.	<i>Syzygium</i> sp.	Myrtaceae	Jamun
21.	<i>Terminalia myriocarpa</i>	Combretaceae	Hollock
22.	<i>Toona febrifuga</i>	Meliaceae	Poma
23.	<i>Vitex peduncularis</i>	Verbenaceae	Pareng
<b>Shurbs</b>			
24.	<i>Capparis multiflora</i>	Capparaceae	
25.	<i>Homonoia riparia</i>	Euphorbiaceae	
26.	<i>Ixora acuminata</i>	Rubiaceae	
27.	<i>Laportea crenulata</i>	Urticaceae	
28.	<i>Maesa chisia</i>	Myrsinaceae	
29.	<i>Mellastoma malabathricum</i>	Melastomataceae	
30.	<i>Morinda angustifolia</i>	Rubiaceae	
<b>Herb</b>			
31.	<i>Ageratum conyzoides</i>	Asteraceae	
32.	<i>Bidens biternata</i>	Asteraceae	
33.	<i>Carassocephalum crepidioides</i>	Asteraceae	
34.	<i>Eupatorium odoratum</i>	Asteraceae	
35.	<i>Impatiens</i> sp.	Balsaminaceae	
36.	<i>Phrynium pubinerve</i>	Marantaceae	
37.	<i>Polygonum barbatum</i>	Polygonaceae	
38.	<i>Sida acutifolia</i>	Malvaceae	
39.	<i>Solanum torvum</i>	Solanaceae	
40.	<i>Spilanthes paniculatus</i>	Asteraceae	
41.	<i>Urena lobata</i>	Malvaceae	
<b>Cane / Palm</b>			
42.	<i>Calamus acanthospathus</i>	Arecaceae	
43.	<i>Calamus flagellum</i>	Arecaceae	Raidang
44.	<i>Calamus floribundus</i>	Arecaceae	
45.	<i>Plectocomia assamica</i>	Arecaceae	Hathibeth

<b>Bamboo</b>			
46.	<i>Bambusa pallida</i>	Poaceae	Bijli
47.	<i>Dendrocalamus hamiltonii</i>	Poaceae	Kako
48.	<i>Pseudostachyum polymorphum</i>	Poaceae	Bojal
<b>Climber</b>			
49.	<i>Acacia pennata</i>	Mimosaceae	
50.	<i>Dalhousea bractiata</i>	Fabaceae	
51.	<i>Mikania micrantha</i>	Asteraceae	
52.	<i>Piper</i> sp.	Piperaceae	
<b>Fern</b>			
53.	<i>Phagopteris auriculata</i>	Thlypteridaceae	

### Site 2: Siberite – Gengi

Sr. No.	Botanical Name	Family	Local Name
<b>Trees</b>			
1.	<i>Abroma augusta</i>	Sterculiaceae	
2.	<i>Ailanthus grandis</i>	Simaroubaceae	
3.	<i>Albizia lucida</i>	Mimosaceae	
4.	<i>Albizia procera</i>	Mimosaceae	
5.	<i>Albizia stipulate</i>	Mimosaceae	
6.	<i>Altingia excelsa</i>	Altingiaceae	
7.	<i>Amoora wallichii</i>	Meliaceae	
8.	<i>Anthocephalus chinensis</i>	Rubiaceae	
9.	<i>Aralia armata</i>	Araliaceae	
10.	<i>Artocarpus lacoocha</i>	Moraceae	
11.	<i>Artocarpus integrifolia</i>	Moraceae	
12.	<i>Callicarpa arborea</i>	Verbenaceae	
13.	<i>Canarium strictum</i>	Burseraceae	
14.	<i>Castanopsis indica</i>	Fagaceae	
15.	<i>Cinnamomum glaucescens</i>	Lauraceae	
16.	<i>Cinamomum</i> sp.	Lauraceae	
17.	<i>Dalbergia assamica</i>	Fagaceae	
18.	<i>Dalbergia pinnata</i>	Fabaceae	
19.	<i>Duabanga grandiflora</i>	Sonneratiaceae	
20.	<i>Dysoxylum</i> spp.	Meliaceae	
21.	<i>Elaeocarpus</i> sp.	Elaeocarpaceae	
22.	<i>Elaeocarpus sphaericus</i>	Elaeocarpaceae	
23.	<i>Eurya acuminate</i>	Theaceae	
24.	<i>Ficus</i> sp.	Moraceae	
25.	<i>Ficus drupacea</i>	Moraceae	
26.	<i>Ficus elmeri</i>	Moraceae	
27.	<i>Ficus hirta</i>	Moraceae	
28.	<i>Glochidian</i> spp.	Euphorbiaceae	
29.	<i>Grewia disperma</i>	Tiliaceae	
30.	<i>Gynocardia odorata</i>	Flacourtiaceae	
31.	<i>Heritiera acuminata</i>	Sterculiaceae	
32.	<i>Hovenia acerba</i>	Rhamnaceae	
33.	<i>Kydia glabrescence</i>	Malvaceae	
34.	<i>Leea indica</i>	Leeaceae	
35.	<i>Litsea monopetala</i>	Lauraceae	
36.	<i>Macranga denticulata</i>	Euphorbiaceae	



Sr. No.	Botanical Name	Family	Local Name
37.	<i>Macranga denticulate</i>	Euphorbiaceae	
38.	<i>Maesa</i> sp.	Maesaceae	
39.	<i>Mangifera sylvatica</i>	Anacardiaceae	
40.	<i>Melastoma</i> sp.	Melastomataceae	
41.	<i>Morus laevigata</i>	Moraceae	
42.	<i>Oreocnide integrifolia</i>	Urticaceae	
43.	<i>Pterospermum acerifolium</i>	Sterculiaceae	
44.	<i>Quercus</i> spp.	Fagaceae	
45.	<i>Rubus</i> sp.	Rosaceae	
46.	<i>Saurauia</i> sp.	Actinidiaceae	
47.	<i>Syzygium</i> sp.	Myrtaceae	
48.	<i>Terminalia chebula</i>	Combretaceae	
49.	<i>Terminalia myriocarpa</i>	Combretaceae	
50.	<i>Trema orientalis</i>	Moraceae	
51.	<i>Wendlandia paniculata</i>	Rubiaceae	
<b>Shrub</b>			
52.	<i>Capparis multiflora</i>	Capparaceae	
53.	<i>Homonoia riparia</i>	Euphorbiaceae	
54.	<i>Ixora acuminata</i>	Rubiaceae	
55.	<i>Laportea crenulata</i>	Urticaceae	
56.	<i>Maesa chisia</i>	Myrsinaceae	
57.	<i>Melastoma malabathricum</i>	Melastomataceae	
58.	<i>Morinda angustifolia</i>	Rubiaceae	
59.	<i>Osbeckia stellata</i>	Melastomataceae	
<b>Herb</b>			
60.	<i>Ageratum conyzoides</i>	Asteraceae	
61.	<i>Alpinia</i> sp.	Zingiberaceae	
62.	<i>Bidens biternata</i>	Asteraceae	
63.	<i>Centella asiatica</i>	Apiaceae	
64.	<i>Crassocephalum crepidioides</i>	Asteraceae	
65.	<i>Cuphea salamona</i>	Lythraceae	
66.	<i>Drymaria cordata</i>	Caryophyllaceae	
67.	<i>Eupatorium odoratum</i>	Asteraceae	
68.	<i>Hedychium spicatum</i>	Zingiberaceae	
69.	<i>Phrynium pubinerve</i>	Marantaceae	
70.	<i>Polygonum</i> sp.	Polygonaceae	
71.	<i>Pteris</i> sp.	Pteridaceae	
72.	<i>Sellaginella</i> sp.	Selaginellaceae	
73.	<i>Sida acutifolia</i>	Malvaceae	
74.	<i>Solanum torvum</i>	Solanaceae	
75.	<i>Spilanthes paniculatus</i>	Asteraceae	
76.	<i>Urena lobata</i>	Malvaceae	
<b>Cane/Palm/Banana</b>			
77.	<i>Calamus acanthospathus</i>	Palmae	
78.	<i>Calamus arunachalensis</i>	Palmae	
79.	<i>Calamus erectus</i>	Palmae	
80.	<i>Calamus flagellum</i>	Palmae	
81.	<i>Calamus gracilis</i>	Palmae	
82.	<i>Calamus khasianus</i>	Palmae	
83.	<i>Calamus leptospadix</i>	Palmae	
84.	<i>Musa bulbisiana</i>	Musaceae	Banana
85.	<i>Musa rosea</i>	Musaceae	Banana

Sr. No.	Botanical Name	Family	Local Name
86.	<i>Wallichia</i> sp.	Palmae	
<b>Bamboo</b>			
87.	<i>Bambusa tulda</i>	Poaceae	Jati Bamboo
88.	<i>Bambusa longispiculata</i>	Poaceae	
89.	<i>Bambusa pallida</i>	Poaceae	Bijli Bamboo
90.	<i>Dendrocalamus hamiltonii</i>	Poaceae	
91.	<i>Neohouzea helferii</i>	Poaceae	
92.	<i>Schizostachyum arunachalensis</i>	Poaceae	
93.	<i>Schizostachyum polymorphum</i>	Poaceae	
<b>Climbers</b>			
94.	<i>Bauhinia khasiana</i>	Caesalpiniaceae	
95.	<i>Mezoneurum cucullatum</i>	Caesalpiniaceae	
96.	<i>Entada purseatha</i>	Mimosaceae	
97.	<i>Gnetum scandens</i>	Gnetaceae	
98.	<i>Pegia nitida</i>	Rhamnaceae	
99.	<i>Acacia</i> sp.	Mimosaceae	
100.	<i>Roydsia suaveolens</i>	Rubiaceae	
101.	<i>Mikania micrantha</i>	Asteraceae	
102.	<i>Embelia ribes</i>	Myrsinaceae	
103.	<i>Acacia pennata</i>	Mimosaceae	
104.	<i>Dalhousea bractiata</i>	Fabaceae	
<b>Fern</b>			
105.	<i>Phagopteris auriculata</i>	Thelypteridaceae	

**Site 3: Gerukamukh – I**

Sr. No.	Botanical Name	Family	Local Name
<b>Trees</b>			
1.	<i>Acacia</i> sp.	Mimosaceae	
2.	<i>Albizia lucida</i>	Mimosaceae	
3.	<i>Albizia stipulate</i>	Mimosaceae	
4.	<i>Bridelia retusa</i>	Euphorbiaceae	Kuhir
5.	<i>Canarium strictum</i>	Burseraceae	Dhuna
6.	<i>Callicarpa</i> sp.	Verbenaceae	
7.	<i>Castanopsis indica</i>	Fagaceae	Hingori
8.	<i>Chukrasia tabularis</i>	Meliaceae	Bogipoma
9.	<i>Dalbergia pinnata</i>	Fabaceae	
10.	<i>Duabanga grandiflora</i>	Sonneratiaceae	Khokan
11.	<i>Euodia miliaefolia</i>	Rutaceae	
12.	<i>Ficus rhododendrifolia</i>	Moraceae	
13.	<i>Ficus</i> sp.	Moraceae	
14.	<i>Ficus squamata</i>	Moraceae	
15.	<i>Grewia disperma</i>	Tiliaceae	
16.	<i>Gynocardia odorata</i>	Flacourtiaceae	Chalmugra
17.	<i>Heritiera acuminata</i>	Sterculiaceae	
18.	<i>Kydia glabrescence</i>	Malvaceae	Pichola
19.	<i>Leea indica</i>	Leeaceae	
20.	<i>Litsea monopetala</i>	Lauraceae	Muga
21.	<i>Macranga denticulate</i>	Euphorbiaceae	Agra – yake
22.	<i>Musa</i> sp.	Musaceae	
23.	<i>Oreocnide integrifolia</i>	Urticaceae	
24.	<i>Oroxylum indicum</i>	Bignoniaceae	Bhatghila
25.	<i>Pandanus</i> sp.	Pandanaceae	
26.	<i>Saurauia roxburthii</i>	Saurauiaceae	
27.	<i>Terminalia chebula</i>	Combretaceae	Hilika
28.	<i>Terminalia myriocarpa</i>	Combretaceae	Hollock
29.	<i>Terminalia</i> sp.	Combretaceae	
30.	<i>Toona ciliata</i>	Meliaceae	Poma
<b>Shrub</b>			
31.	<i>Callicarpa arborea</i>	Verbenaceae	
32.	<i>Casearia vareca</i>	Bixaceae	
33.	<i>Mussaenda roxburghii</i>	Rubiaceae	
<b>Herb</b>			
34.	<i>Commelina</i> sp.	Commelinaceae	
35.	<i>Colocassia</i> sp.	Araceae	
36.	<i>Costus speciosus</i>	Costaceae	
37.	<i>Cuphea salama</i>	Lythraceae	
38.	<i>Drymaria cordata</i>	Caryophyllaceae	
39.	<i>Elatostema</i> sp.	Urticaceae	
40.	<i>Eupatorium odoratum</i>	Asteraceae	
41.	<i>Hedychium</i> sp.	Zingiberaceae	
42.	<i>Lasia spinosa</i>	Araceae	
43.	<i>Mikania cordata</i>	Asteraceae	
44.	<i>Phragmitis karka</i>	Poaceae	
45.	<i>Piper</i> sp.	Piperaceae	
46.	<i>Polygonum chinnsis</i>	Polygonaceae	
47.	<i>Rotala rotundifolia</i>	Lythraceae	

Sr. No.	Botanical Name	Family	Local Name
48.	<i>Sida acuta</i>	Malvaceae	
49.	<i>Sida rhomboidea</i>	Malvaceae	
50.	<i>Thysanolaena maxima</i>	Poaceae	Jharu
<b>Bamboo</b>			
51.	<i>Bambusa mastersii</i>	Poaceae	Betibans
52.	<i>Bambusa pallida</i>	Poaceae	Bijuli
53.	<i>Dendrocalamus hamiltonii</i>	Poaceae	Kako
<b>Cane/Palm</b>			
54.	<i>Calamus flagellum</i>	Arecaceae	Raidang
55.	<i>Calamus tenuis</i>	Arecaceae	Jati
56.	<i>Wallichia sp.</i>	Areaceae	
<b>Fern</b>			
57.	<i>Asplenium nidus</i>	Aspleniaceae	
58.	<i>Cyathia spinulosa</i>	Cyathiaceae	

**Site 4: Gerukamukh – II**

Sr. No.	Botanical Name	Family	Local Name
<b>Trees</b>			
1.	<i>Alangium begonifolium</i>	Alangiaceae	
2.	<i>Albizia sp.</i>	Mimosaceae	
3.	<i>Albizia procera</i>	Mimosaceae	
4.	<i>Albizia stipulate</i>	Mimosaceae	
5.	<i>Altingia excelsa</i>	Altingiaceae	
6.	<i>Anthocephalus chinensis</i>	Rubiaceae	
7.	<i>Aralia armata</i>	Araliaceae	
8.	<i>Bombax ceiba</i>	Malvaceae	
9.	<i>Bridelia retusa</i>	Euphorbiaceae	
10.	<i>Callicarpa arborea</i>	Verbenaceae	
11.	<i>Castanopsis indica</i>	Fagaceae	
12.	<i>Dalbergia assamica</i>	Fabaceae	
13.	<i>Dalbergia pinnata</i>	Fabaceae	
14.	<i>Duabanga grandiflora</i>	Lythraceae	
15.	<i>Dysoxylum spp.</i>	Meliaceae	
16.	<i>Elaeocarpus sphaericus</i>	Elaeocarpaceae	
17.	<i>Euodia sp.</i>	Rutaceae	
18.	<i>Ficus sp.</i>	Moraceae	
19.	<i>Ficus drupacea</i>	Moraceae	
20.	<i>Ficus elmeri</i>	Moraceae	
21.	<i>Grewia disperma</i>	Tiliaceae	
22.	<i>Gynocardia odorata</i>	Flacourtiaceae	
23.	<i>Heritiera acuminata</i>	Sterculiaceae	
24.	<i>Hovenia acerba</i>	Rhamnaceae	
25.	<i>Kydia glabrescence</i>	Malvaceae	
26.	<i>Litsea monopetala</i>	Lauraceae	
27.	<i>Macranga denticulate</i>	Euphorbiaceae	
28.	<i>Morus laevigata</i>	Moraceae	
29.	<i>Oreocnide integrifolia</i>	Urticaceae	
30.	<i>Prema barbata</i>	Lamiaceae	
31.	<i>Pterospermum acerifolium</i>	Sterculiaceae	
32.	<i>Quercus spp.</i>	Fagaceae	
33.	<i>Sapium baccatum</i>	Euphorbiaceae	
34.	<i>Saurauia sp.</i>	Actinidiaceae	
35.	<i>Sterculia villosa</i>	Malvaceae	
36.	<i>Styrax serrulatum</i>	Styraceae	
37.	<i>Syzygium spp.</i>	Myrtaceae	
38.	<i>Terminalia myriocarpa</i>	Combretaceae	
39.	<i>Trema orientalis</i>	Moraceae	
40.	<i>Wendlandia paniculata</i>	Rubiaceae	
41.	<i>Ziziphus oenoplia</i>	Rhamnaceae	
<b>Bamboo / Cane / Palm</b>			
42.	<i>Bambusa mastersii</i>	Poaceae	
43.	<i>Wallichia sp.</i>	Poaceaea	
<b>Shrub</b>			
44.	<i>Aralia sp.</i>	Araliaceae	
45.	<i>Angiopteris evecta</i>	Marattiaceae	
46.	<i>Boehmeria glomerata</i>	Urticaceae	
47.	<i>Boehmeria macrophylla</i>	Urticaceae	

Sr. No.	Botanical Name	Family	Local Name
48.	<i>Boehmeria</i> sp.	Urticaceae	
49.	<i>Cordia</i> sp.	Boraginaceae	
50.	<i>Grewia disperma</i>	Tiliaceae	
51.	<i>Ixora acuminata</i>	Rubiaceae	
52.	<i>Leea</i> sp.	Leeaceae	
53.	<i>Laportea</i> sp.	Urticaceae	
54.	<i>Maesa chisia</i>	Maesaceae	
55.	<i>Mycetia</i> sp.	Rubiaceae	
56.	<i>Oxyspora</i> sp.	Melastomataceae	
57.	<i>Rhynchosyche ellipticum</i>	Gesneriaceae	
<b>Herb</b>			
58.	<i>Ageratum conyzoides</i>	Asteraceae	
59.	<i>Achyranthes</i> sp.	Amaranthaceae	
60.	<i>Begonia</i> sp.	Begoniaceae	
61.	<i>Colocasia</i> sp.	Araceae	
62.	<i>Cuphea salomona</i>	Lythraceae	
63.	<i>Drymaria cordata</i>	Caryophyllaceae	
64.	<i>Desmodium</i> sp.	Fabeaceae	
65.	<i>Eupatorium odoratum</i>	Asteraceae	
66.	<i>Equisetum</i> sp.	Equisetaceae	
67.	Fern (unidentified)		
68.	<i>Forestia</i> sp.	Commelinaceae	
69.	<i>Mikania macrantha</i>	Asteraceae	
70.	<i>Phrynium pubinerve</i>	Marantaceae	
71.	<i>Piper</i> sp.	Piperaceae	
72.	<i>Polygonum</i> sp.	Polygonaceae	
73.	<i>Phegopteris auriculata</i>	Thelypteridaceae	
74.	<i>Pteris</i> sp.	Pteridaceae	
75.	<i>Spermacoca hispida</i>	Verbenaceae	
76.	<i>Sporobolus indica</i>	Poaceae	
77.	<i>Spilanthus paniculata</i>	Asteraceae	
78.	<i>Thunbergia coccinea</i>	Acanthaceae	
79.	<i>Thysanolaena maxima</i>	Poaceae	
80.	<i>Trevesia</i> sp.	Araliaceae	
81.	<i>Urena lobata</i>	Malvaceae	
<b>Epiphytes</b>			
82.	<i>Aeridis</i> sp.	Orchidaceae	
83.	<i>Aeschenanthus</i> sp.	Geraniaceae	
84.	<i>Asplenium</i> sp.	Fern	
85.	<i>Bulbophyllum</i> sp.	Orchidaceae	
86.	<i>Coelogyne</i> sp.	Orchidaceae	
87.	<i>Dendrobium</i> sp.	Orchidaceae	
88.	<i>Lipparis</i> sp.	Orchidaceae	
89.	<i>Lophogramma</i> sp.	Fern	
90.	<i>Luisia</i> sp.	Orchidaceae	
91.	<i>Lycopodium</i> sp.	Lycopodiaceae	
92.	<i>Microsorium</i> sp.	Polypodiaceae	
93.	<i>Pholidota</i> sp.	Orchidaceae	
94.	<i>Rhynchostylis</i> sp.	Orchidaceae	
<b>Wild Ornamentals</b>			
95.	<i>Aster</i> sp.	Asteraceae	

Sr. No.	Botanical Name	Family	Local Name
96.	<i>Begonia</i> sp.	Begoniaceae	
97.	<i>Chirita</i> sp.	Gesneriaceae	
98.	<i>Hedychium coronarium</i>	Zingiberaceae	
99.	<i>Melastoma malabathricum</i>	Melastomataceae	
100.	<i>Musa velutina</i>	Musaceae	
101.	<i>Mussaenda roxburghi</i>	Rubiaceae	
102.	<i>Oxyspora cernua</i>	Melastomataceae	
103.	<i>Phlogacanthus curviflorus</i>	Acanthaceae	
104.	<i>Phlogacanthus guttanthus</i>	Acanthaceae	
105.	<i>Rhyncoglossum</i> sp.	Gesneriaceae	
106.	<i>Thunbergia coccinea</i>	Acanthaceae	
<b>Climbers</b>			
107.	<i>Bauhinia khasiana</i>	Caesalpiniaceae	
108.	<i>Mezoneurum cucullatum</i>	Caesalpiniaceae	
109.	<i>Entada purseatha</i>	Mimosaceae	
110.	<i>Pegia nitida</i>	Rhamnaceae	
111.	<i>Acacia</i> sp.	Mimosaceae	
112.	<i>Roydsia suaveolens</i>	Rubiaceae	
113.	<i>Mikania micrantha</i>	Asteraceae	
114.	<i>Embelia ribes</i>	Myrsinaceae	

Source:

Environment Impact Assessment and Environment Management Plan for Subansiri Lower Project, Arunachal Pradesh and Assam (2000 MW), NHPC/WAPCOS, Gurgaon

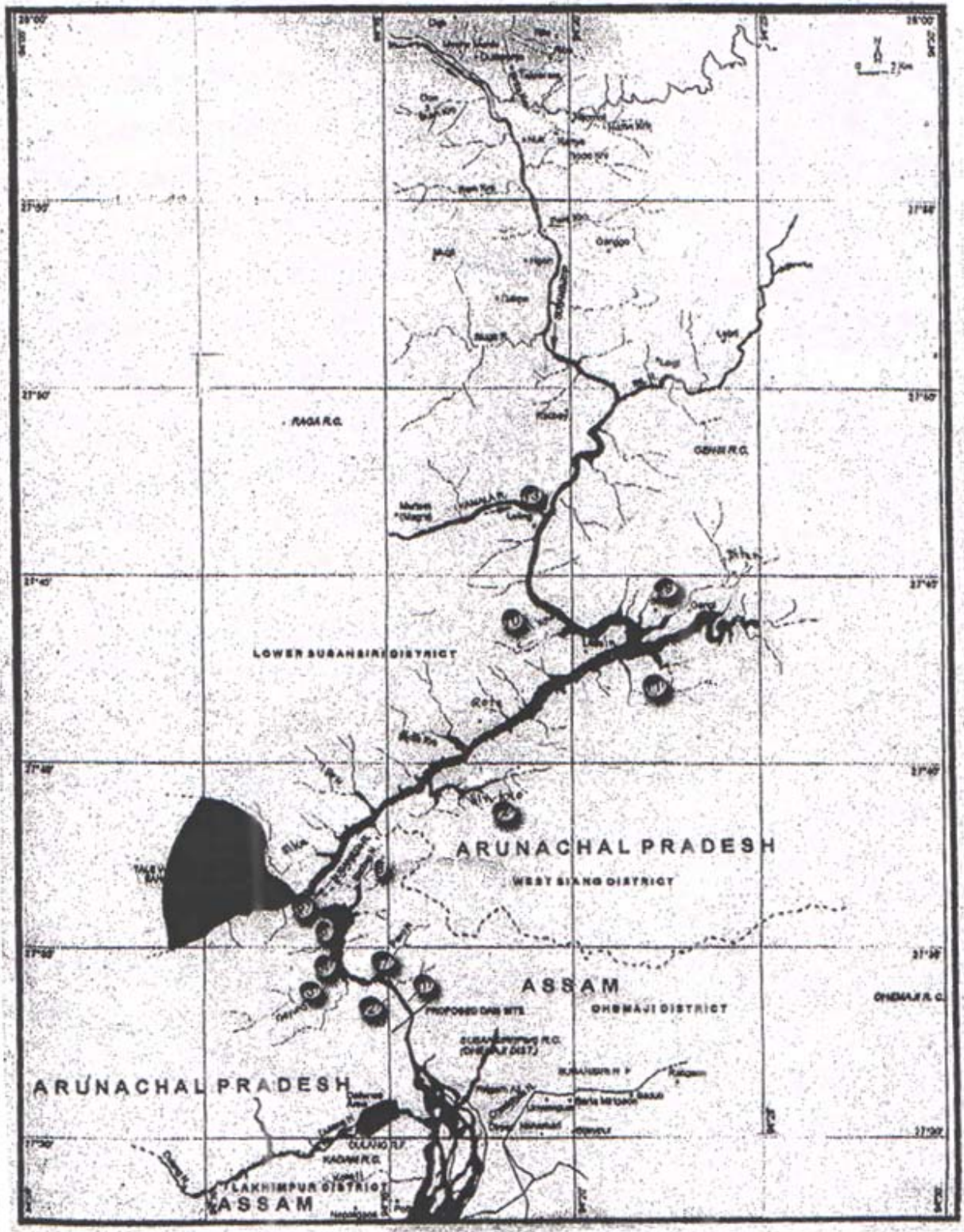




## **Annexure – 6.8**

**Map & Habit / Distribution of Plant species in different study sites in the submergence area of Lower Subansiri Hydro Power Project**





**Field Survey Carried out during January 2006 to December 2007**

Source:  
 Final report on biodiversity study in the submergence area of Subansiri Lower HE Project  
 – Floral Aspects, Department of Botany, Gauhati University, NHPC.

## Habit and Distribution of Plant species in different study sites in the submergence area of Lower Subansiri Hydro Power Project

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
<b>(A)</b>	<b>Angiosperms</b>														
<b>1.</b>	<b>Acanthaceae</b>														
1.	<i>Justicia simplex</i>	Herb	+	-	-	-	-	-	+	-	-	-	-	-	-
2.	<i>Phlogacanthus curviflorus</i>	Shrub	-	-	+	-	-	-	-	+	-	+	+	+	-
3.	<i>Phlogacanthus guttatus</i>	Herb	-	-	-	-	-	-	-	-	-	+	-	-	+
4.	<i>Phlogacanthus tubiflorus</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	-	+
5.	<i>Strobilanthes coloratus</i>	Herb	-	-	-	-	-	-	+	-	-	-	+	-	-
6.	<i>Strobilanthes flaccidifolius</i>	Shrub	-	-	-	-	-	-	-	-	+	-	+	-	-
7.	<i>Strobilanthes multidentis</i>	Herb	-	-	-	-	-	-	+	-	-	-	+	-	-
8.	<i>Thunbergia coccinea</i>	Climber	+	+	-	-	-	-	-	-	-	-	+	-	-
<b>2</b>	<b>Actinidiaceae</b>														
1.	<i>Saurauia macrotricha</i>	Tree	-	-	-	-	-	-	+	+	-	-	-	-	-
2.	<i>Saurauia punduana</i>	Tree	-	-	-	-	-	-	+	-	+	-	-	-	-
3.	<i>Saurauia roxburghii</i>	Tree	-	-	-	-	-	-	+	-	-	-	-	-	-
<b>3</b>	<b>Amaranthaceae</b>														
1.	<i>Achyranthes aspara</i>	Herb	+	-	-	-	-	+	-	-	-	-	-	-	-
2.	<i>Deeringia amaranthiodes</i>	Herb	-	+	-	-	-	-	+	+	-	-	-	-	-
<b>4</b>	<b>Anacardiaceae</b>														
1.	<i>Mangifera indica</i>	Tree	-	-	-	-	-	-	-	-	-	-	-	+	-
2.	<i>Mangifera sylvatica</i>	Tree	-	-	+	+	-	-	-	-	-	+	-	-	-
<b>5</b>	<b>Apocynaceae</b>														
1.	<i>Alstonia scholaris</i>	Tree	-	+	-	-	-	-	+	-	-	-	-	-	-
2.	<i>Tabernaemontana divaricata</i>	Shrub	+	+	-	+	-	+	-	+	-	-	-	-	+
<b>6</b>	<b>Araceae</b>														
1.	<i>Calamus flagellum</i>	Herb	-	-	-	-	-	-	-	-	-	-	+	-	-
2.	<i>Calamus gracilis</i>	Herb	-	-	-	-	-	-	-	+	-	-	-	-	-
3.	<i>Calamus tenuis</i>	Herb	-	-	-	-	-	-	-	-	+	-	-	-	-
4.	<i>Pothos scandens</i>		+	+	+	-	+	+	+	-	-	-	-	-	-
<b>7</b>	<b>Araliaceae</b>														
1.	<i>Brassaiopsis palmate</i>	Tree	-	-	-	+	-	-	-	-	+	+	-	-	-
2.	<i>Brassaiopsis speciosa</i>	Climber	-	-	+	-	+	-	-	-	-	-	-	-	-
3.	<i>Schefflera venulosa</i>	Climber	-	-	-	-	+	-	-	+	-	-	+	+	-
<b>8</b>	<b>Araceae</b>														
1.	<i>Livistona jenkinsiana</i>	Tree	+	+	+	+	-	-	-	+	+	-	-	-	-

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
2.	<i>Oreodoxa regia</i>	Grass	-	-	-	-	-	-	-	-	+	-	-	-	-
<b>9</b>	<b>Asteraceae</b>														
1.	<i>Ageratum conyzoides</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	+	-
2.	<i>Blumea densiflora</i>	Herb	-	-	-	-	+	-	+	-	-	-	-	-	-
3.	<i>Blumea glomerata</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	+	-
4.	<i>Crassocephalum crepidiodes</i>	Herb	-	-	-	-	-	-	+	-	-	-	-	-	-
5.	<i>Eclipta prostrate</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	+	-
6.	<i>Emilia sonchifolia</i>	Herb	-	-	+	-	-	-	-	-	-	-	-	-	-
7.	<i>Eupatorium odoratum</i>	Herb	-	-	-	-	+	-	-	-	-	-	-	-	-
8.	<i>Gnaphalium indicum</i>	Herb	-	-	-	-	+	-	-	+	-	-	+	-	-
9.	<i>Mikania micrantha</i>	Climber	+	+	-	-	-	-	-	-	-	-	-	-	-
10.	<i>Mikania scandens</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	-	+
11.	<i>Siegesbeckia orientalis</i>		-	-	-	-	-	-	-	-	-	-	-	-	-
12.	<i>Spilanthes paniculata</i>	Herb	+	+	+	-	-	-	-	-	-	-	-	-	-
13.	<i>Vermonia cinera</i>	Herb	+	+	-	-	-	-	-	-	-	-	+	-	-
14.	<i>Vernonia volkameriaefolia</i>	Herb	-	-	-	-	+	-	-	+	-	-	-	-	+
<b>10</b>	<b>Balsaminaceae</b>														
1.	<i>Impatiens racemulosa</i>	Herb	-	-	-	-	+	-	-	-	+	+	-	-	-
2.	<i>Impatiens roylei</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	-	+
<b>11</b>	<b>Begoniaceae</b>														
1.	<i>Begonia aborensis</i>	Herb	-	-	-	-	-	-	-	-	+	-	+	-	-
2.	<i>Begonia annulata</i>	Herb	-	-	+	-	-	-	-	-	+	-	-	-	-
3.	<i>Begonia burkillii</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	+	-
4.	<i>Begonia roxburghii</i>	Herb	-	-	+	+	+	-	-	+	-	+	-	-	-
5.	<i>Begonia scintilans</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	-	+
6.	<i>Begonia tessaricarpa</i>	Herb	-	-	-	-	-	-	-	-	-	+	-	-	-
7.	<i>Begonia thomsonii</i>	Herb	-	-	-	-	-	-	-	-	-	+	-	-	-
<b>12</b>	<b>Bombacaceae</b>														
1.	<i>Bombax ceiba</i>	Tree	-	-	+	-	-	-	-	-	-	+	-	-	-
<b>13</b>	<b>Boraginaceae</b>														
1.	<i>Cynoglossum glochidiatum</i>	Shrub	+	-	-	-	-	-	-	+	-	+	+	-	-
<b>14</b>	<b>Brassicaceae</b>														
1.	<i>Nasturtium indicum</i>	-	-	-	-	-	-	-	-	+	-	+	+	-	-
<b>15</b>	<b>Burseraceae</b>														
1.	<i>Garuga pinnata</i>	Tree	-	-	+	+	+	+	-	-	-	-	-	-	-
<b>16</b>	<b>Caesalpinaceae</b>														
1.	<i>Bauhinia variegata</i>	Tree	-	-	-	-	-	-	-	-	-	+	-	-	-
2.	<i>Tamarindus indica</i>	Tree	-	-	-	+	-	+	-	-	-	-	+	-	-

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
<b>17</b>	<b>Cannabaceae</b>														
1.	<i>Cannabis sativa</i>	Herb	-	-	-	-	-	+	-	+	-	-	-	-	-
<b>18</b>	<b>Caryophallaceae</b>														
1.	<i>Drymaria cordata</i>	Herb	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>19</b>	<b>Clusiaceae</b>														
1.	<i>Calophyllum inophyllum</i>	Tree	-	-	-	-	-	-	-	-	-	-	-	+	-
2.	<i>Garcinia pendunculata</i>	Tree	-	+	-	-	-	-	+	+	-	-	+	-	-
3.	<i>Mesua assamica</i>	Tree	-	-	-	-	-	-	-	-	-	-	+	+	-
4.	<i>Mesua ferrea</i>	Tree	-	-	+	-	-	-	-	+	-	-	+	-	-
<b>20</b>	<b>Combretaceae</b>														
1.	<i>Terminalia arjuna</i>	Tree	-	-	-	+	-	-	-	-	-	+	-	-	-
2.	<i>Terminalia myriocarpa</i>	Tree	+	-	-	+	-	-	-	-	-	-	-	+	-
<b>21</b>	<b>Commelinaceae</b>														
1.	<i>Commelina benghalensis</i>	Herb	+	-	+	-	-	-	-	-	-	-	-	-	-
2.	<i>Floscopa scandens</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	-	+
<b>22</b>	<b>Convolvulaceae</b>														
1.	<i>Argyria nervosa</i>	Climber	-	-	-	-	-	-	+	-	-	-	+	-	-
<b>23</b>	<b>Curcubitaceae</b>														
1.	<i>Luffa cylindrica</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	-	+
2.	<i>Melothria heterophylla</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	+	-
3.	<i>Momordica cochinchinensis</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	-	+
4.	<i>Momordica dioca</i>														
5.	<i>Mukia scabrella</i>														
6.	<i>Solena amplexicaulis</i>	Climber	-	-	+	-	-	-	-	-	-	-	-	-	-
7.	<i>Trichosanthes tricuspidata</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	+	-
<b>24</b>	<b>Cuscutaceae</b>														
1.	<i>Cuscuta reflexa</i>	Climber	-	-	-	-	-	-	-	+	+	-	-	-	-
<b>25</b>	<b>Cyperaceae</b>														
1.	<i>Carex baccans</i>	Grass	-	+	+	+	-	-	+	+	+	-	-	-	-
2.	<i>Cyperus compactus</i>	Grass	+	-	-	-	-	-	-	-	-	-	-	-	-
3.	<i>Cyperus compressus</i>	Grass	-	-	-	-	-	-	-	-	-	+	-	-	-
4.	<i>Cyperus diffusus</i>	Grass	-	-	-	+	-	-	-	-	-	-	-	-	-
5.	<i>Cyperus digitatus</i>	Grass	-	-	-	-	-	+	-	-	-	-	-	-	-
6.	<i>Cyperus exaltatus</i>	Grass	+	-	-	-	-	-	+	-	-	-	-	-	-
7.	<i>Cyperus pilosus</i>	Grass	-	-	-	-	-	-	-	-	-	+	-	-	-
8.	<i>Cyperus rotundus</i>	Grass	+	-	-	+	-	-	+	-	-	-	-	-	-
9.	<i>Scleria terrestria</i>	Grass	-	-	-	-	-	-	-	-	-	-	-	-	+
<b>26</b>	<b>Dilleniaceae</b>														

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1.	<i>Dillenia indica</i>	Tree	+	+	-	-	+	-	+	+	-	+	-	+	-
<b>27</b>	<b>Dioscoreaceae</b>														
1.	<i>Dioscorea alata</i>	Climber	-	+	+	-	-	-	-	-	-	-	-	+	+
2.	<i>Dioscorea floribunda</i>	Climber	-	-	-	-	-	-	-	-	+	+	-	-	-
<b>28</b>	<b>Dipterocarpaceae</b>														
1.	<i>Dipterocarpus manii</i>	Tree	-	+	-	-	-	+	-	-	+	-	+	-	-
2.	<i>Dipterocarpus retusus</i>	Tree	-	+	-	-	-	-	-	-	-	-	-	-	-
<b>29</b>	<b>Euphorbiaceae</b>														
1.	<i>Croton caudatus</i>	Shrub	+	-	+	-	-	-	+	-	-	-	-	-	-
2.	<i>Drypetes roxburghii</i>	Tree	-	-	-	-	-	-	-	-	-	-	-	-	+
3.	<i>Euphorbia hirta</i>	Herb	-	+	-	-	-	-	-	-	-	-	-	-	-
4.	<i>Macaranga denticulate</i>	Tree	-	-	-	-	-	-	-	+	-	+	-	-	-
5.	<i>Mallotus roxburghianus</i>	Tree	-	-	-	-	+	-	-	+	+	-	-	-	-
<b>30</b>	<b>Fabaceae</b>														
1.	<i>Derris indica</i>	Tree	-	-	-	-	+	-	+	+	+	-	-	-	-
2.	<i>Indigofera hirsuta</i>	Shrub	-	-	-	-	+	+	+	-	-	-	-	-	-
<b>31</b>	<b>Fagaceae</b>														
1.	<i>Castanopsis indica</i>	Tree	-	-	+	-	-	-	-	-	+	+	+	-	+
<b>32</b>	<b>Gesneriaceae</b>														
1.	<i>Boeica filiformis</i>	Herb	+	+	-	-	-	+	+	-	-	-	-	-	-
2.	<i>Rhynchosyche ellipticum</i>	Shrub	-	-	-	-	-	-	-	-	+	-	-	-	-
<b>33</b>	<b>Lamiaceae</b>														
1.	<i>Gomphostemma parviflorum</i>	Shrub	-	-	+	-	-	+	-	-	-	-	-	-	-
<b>34</b>	<b>Lauraceae</b>														
1.	<i>Litsea nitida</i>	Tree	-	-	-	-	-	-	-	-	-	+	-	-	+
<b>35</b>	<b>Leeaceae</b>														
1.	<i>Leea indica</i>	Shrub	-	-	-	-	-	-	-	-	+	-	-	-	+
<b>36</b>	<b>Liliaceae</b>														
1.	<i>Gloriosa superba</i>	Climber	-	-	+	-	-	-	-	-	-	-	-	-	-
<b>37</b>	<b>Loranthaceae</b>														
1.	<i>Dendrophthoe falcata</i>	Herb	-	-	-	-	-	-	-	+	-	-	-	-	+
<b>38</b>	<b>Magnoliaceae</b>														
1.	<i>Michelia champaca</i>	Tree	-	-	-	+	-	-	-	-	-	+	-	-	+
<b>39</b>	<b>Malvaceae</b>														
1.	<i>Abelmoschus moschatus</i>	Herb	-	-	-	-	-	-	-	-	-	+	-	-	-
2.	<i>Abutilon indicum</i>	Herb	-	+	-	-	-	-	-	-	-	-	+	-	-
<b>40</b>	<b>Melastomataceae</b>														
1.	<i>Melastoma malabathricum</i>	Shrub	-	-	-	-	-	-	-	+	-	-	-	-	-

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2.	<i>Osbeckia chinensis</i>	Shrub	+	-	-	+	-	+	+	-	-	-	-	-	-
3.	<i>Oxyspora cemua</i>	Shrub	-	-	-	-	-	-	-	+	-	-	-	-	+
4.	<i>Oxyspora paniculata</i>	Grass	-	-	-	-	-	-	+	-	-	-	-	-	-
<b>41</b>	<b>Meliaceae</b>														
1.	<i>Azadirachta indica</i>	Tree	-	-	-	-	-	-	+	-	-	-	+	-	-
<b>42</b>	<b>Menispermaceae</b>														
1.	<i>Cissampelos pareira</i>	Climber	-	-	-	-	-	-	-	-	+	-	-	+	-
2.	<i>Stephania glabra</i>	Climber	-	-	+	-	+	-	-	-	-	-	-	-	-
3.	<i>Stephania hernandifolia</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	+	+
<b>43</b>	<b>Mimosaceae</b>														
1.	<i>Mimosa himalayana</i>	Climber	+	-	-	-	-	-	-	-	-	+	+	+	-
<b>44</b>	<b>Moraceae</b>														
1.	<i>Artocarpus chama</i>	Tree	-	-	-	-	-	-	-	-	-	+	-	-	-
2.	<i>Artocarpus heterophyllus</i>	Tree	+	-	-	-	+	-	-	-	-	-	-	-	-
3.	<i>Ficus benghalensis</i>	Tree	+	-	-	-	+	-	-	-	-	-	-	-	-
4.	<i>Ficus drupacea</i>	Tree	-	-	-	-	-	-	-	-	-	-	-	+	-
5.	<i>Ficus filicauda</i>	Tree	-	-	-	-	-	-	+	+	-	-	-	-	-
6.	<i>Ficus lepidosa</i>	Tree	-	+	+	-	-	-	-	-	-	+	-	-	-
7.	<i>Morus laevigata</i>	Tree	-	-	-	-	+	-	-	+	-	-	-	-	-
<b>45</b>	<b>Musaceae</b>														
1.	<i>Musa balbisiana</i>	Herb	+	+	+	+	-	+	-	-	-	-	-	-	-
2.	<i>Musa velutina</i>	Herb	-	-	-	-	-	-	+	-	-	-	-	+	+
<b>46</b>	<b>Myrsinaceae</b>														
1.	<i>Ardisia humilis</i>	Shrub	-	+	-	-	-	-	+	-	-	-	-	-	-
2.	<i>Maesa indica</i>	Herb	-	-	-	-	-	+	-	+	-	-	-	-	-
<b>47</b>	<b>Onagraceae</b>														
1.	<i>Ludwigia perennis</i>	Herb	-	-	-	-	-	-	+	-	-	-	-	-	+
<b>48</b>	<b>Orchidaceae</b>														
1.	<i>Anoectochilus sikkimensis</i>	Epiphyte	-	+	-	-	-	-	-	-	-	-	-	-	-
2.	<i>Bulbophyllum capillipes</i>	Epiphyte	-	-	-	-	+	-	-	-	-	-	-	+	-
3.	<i>Bulbophyllum pectinatus</i>	Epiphyte	-	-	-	-	-	-	+	-	-	-	-	-	-
4.	<i>Coelogyne rigida</i>	Epiphyte	-	-	-	-	-	-	+	-	+	-	-	-	-
5.	<i>Cymbidium aloifolium</i>	Epiphyte	-	-	-	-	-	-	-	-	-	+	-	-	-
6.	<i>Dendrobium aphyllum</i>	Epiphyte	-	-	+	-	+	+	+	-	-	-	-	-	-
7.	<i>Goodyera procera</i>	Epiphyte	-	-	-	-	+	+	-	+	+	+	+	-	-
8.	<i>Pholidota wattii</i>	Epiphyte	-	-	+	-	-	-	-	+	-	-	-	-	+
9.	<i>Rhynchostylis retusa</i>	Epiphyte	-	-	-	-	+	-	-	+	+	-	+	-	+
10.	<i>Vanda coerulea</i>	Epiphyte	-	-	-	-	-	+	-	+	-	-	-	+	-
<b>49</b>	<b>Oxalidaceae</b>														



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1.	<i>Oxalis comiculata</i>	Herb	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>50</b>	<b>Piperaceae</b>														
1.	<i>Piper betel</i>	Climber	+	-	+	-	-	+	-	-	-	-	-	-	-
2.	<i>Piper thomsonii</i>	Climber	-	-	-	-	+	-	-	-	-	-	+	-	-
<b>51</b>	<b>Poaceae</b>														
1.	<i>Bambusa pallida</i>	Grass	-	-	-	-	-	-	-	-	+	-	+	-	-
2.	<i>Bambusa tulda</i>	Grass	-	-	-	-	-	-	-	-	-	+	-	-	-
3.	<i>Brachiaria mutica</i>	Grass	-	-	-	-	-	-	-	-	-	-	-	-	+
4.	<i>Brachiaria villosa</i>	Grass	-	-	-	-	-	+	+	-	+	-	-	-	-
5.	<i>Cynodon dactylon</i>	Grass	-	-	-	-	-	-	-	-	-	-	+	-	-
6.	<i>Dendrocalamus hamiltonii</i>	Grass	-	-	-	-	-	-	-	-	+	+	-	-	-
7.	<i>Digitaria pruriens</i>	Grass	+	-	-	-	-	-	-	-	-	-	-	-	-
8.	<i>Eleusine indica</i>	Grass	+	-	-	+	-	+	-	-	-	-	-	-	-
9.	<i>Eragrostis gangetica</i>	Grass	-	-	-	+	-	-	-	-	-	+	-	-	-
10.	<i>Eragrostis unioloides</i>	Grass	-	-	+	-	-	-	+	+	-	-	-	-	-
11.	<i>Imperata cylindrical</i>	Grass	-	+	-	-	+	+	-	-	-	-	-	-	-
12.	<i>Isachene globosa</i>	Grass	-	-	-	+	-	-	-	-	-	-	-	-	-
13.	<i>Microstegium vimineum</i>	Grass	-	-	-	-	-	-	-	-	-	-	-	+	-
14.	<i>Neyraudia reynaudiana</i>	Grass	-	-	-	-	-	-	-	-	-	+	-	-	-
15.	<i>Oplismenus burmanii</i>	Grass	-	-	-	-	-	-	-	-	-	-	-	-	+
16.	<i>Panicum monatum</i>	Grass	-	-	+	-	-	-	+	-	-	-	-	-	-
17.	<i>Panicum notatum</i>	Grass	-	-	-	-	-	-	+	-	-	+	-	-	-
18.	<i>Panicum repens</i>	Grass	+	-	-	-	-	-	-	-	+	-	-	-	-
19.	<i>Panicum sarmentosum</i>	Grass	-	+	-	-	-	-	+	-	-	-	-	-	-
20.	<i>Panicum walense</i>	Grass	+	-	-	-	-	+	-	+	-	-	-	-	-
21.	<i>Paspalum compactum</i>	Grass	-	-	-	-	-	-	-	-	-	-	-	+	-
22.	<i>Paspalum orbiculare</i>	Grass	-	-	-	+	-	-	-	-	-	+	-	-	-
23.	<i>Paspalum scrobiculatum</i>	Grass	-	-	-	-	-	-	-	-	-	-	+	-	-
24.	<i>Pennisetum polystichion</i>	Grass	-	-	-	-	-	-	-	-	-	-	-	+	-
25.	<i>Phragmites karka</i>	Grass	-	+	+	-	-	+	-	+	+	-	-	-	-
26.	<i>Phyllostachys bambusoides</i>	Grass	+	-	-	+	-	-	+	-	-	+	-	-	+
27.	<i>Pogonatherum crinitum</i>	Grass	-	-	-	-	+	-	+	-	-	-	-	+	-
28.	<i>Pogonatherum paniceum</i>	Grass	-	-	+	-	-	-	-	+	-	-	-	-	-
29.	<i>Saccherum spontaneum</i>	Grass	-	-	-	+	+	+	-	+	-	+	-	-	+
30.	<i>Setaria glauca</i>	Grass	-	-	-	-	+	-	-	-	-	-	-	-	-
31.	<i>Setaria plamifolia</i>	Grass	+	-	-	+	-	-	+	-	-	-	-	-	-

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
32.	<i>Setaria paniculifera</i>	Grass	+	-	-	-	-	-	-	+	-	-	-	-	-
33.	<i>Sporobolus diander</i>	Grass	-	-	-	+	-	+	-	-	-	-	-	-	-
34.	<i>Sporobolus indicus</i>	Grass	+	-	-	-	-	-	-	-	-	-	-	-	-
35.	<i>Thysanolaena agrostis</i>	Grass	+	-	-	-	-	-	-	-	-	-	-	-	-
<b>52.</b>	<b>Polygonaceae</b>														
1.	<i>Polygonum aletum</i>	Shrub	-	-	-	-	+	-	+	+	-	-	-	-	-
2.	<i>Polygonu capitatum</i>	Shrub	-	-	-	-	+	+	-	-	-	+	-	-	-
3.	<i>Polygonum chinensis</i>	Herb	-	-	-	-	+	+	-	-	-	-	-	-	-
4.	<i>Polygonum hydropiper</i>	Herb	+	+	-	+	-	-	-	+	+	-	-	-	-
5.	<i>Polygonum paniculatum</i>	Shrub	-	+	-	+	-	-	-	-	-	+	-	-	-
<b>53.</b>	<b>Polygonaceae</b>														
1.	<i>Fragaria indica</i>	Herb	-	-	-	-	-	-	-	-	-	-	-	+	-
<b>54.</b>	<b>Rubiaceae</b>														
1.	<i>Anthocephalus chinensis</i>	Tree	-	-	-	-	-	-	-	-	-	-	-	+	-
2.	<i>Coffea benghalensis</i>	Shrub	-	+	-	-	-	-	-	-	-	-	-	-	-
3.	<i>Hedyotis scandens</i>	Herb	-	-	-	-	-	-	-	-	-	-	+	-	-
4.	<i>Ixora acuminata</i>	Shrub	-	-	+	-	-	-	-	-	-	-	-	-	-
5.	<i>Mussaenda globa</i>	Herb	-	-	-	+	-	+	-	+	-	-	-	-	-
6.	<i>Mussaenda roxburghii</i>	Herb	-	-	+	+	+	-	+	+	-	-	-	-	+
7.	<i>Ophiorrhiza nutans</i>	Shrub	+	+	-	-	-	-	-	-	-	-	-	-	-
8.	<i>Ophiorrhiza thomsoni</i>	Shrub	-	-	-	+	-	-	-	-	-	+	-	-	-
<b>55.</b>	<b>Rutaceae</b>														
1.	<i>Aegle marmelos</i>	Tree	-	-	-	-	-	-	-	-	-	-	-	-	+
2.	<i>Citrus medica</i>	Shrub	-	-	-	-	-	-	-	-	+	-	-	-	+
3.	<i>Micromelum minutum</i>	Shrub	-	-	-	+	+	+	-	-	-	-	-	-	-
4.	<i>Toddallia aculeata</i>	Climber	-	-	-	+	+	-	-	-	-	-	-	-	-
5.	<i>Toddalla asiatica</i>	Shrub	+	-	-	-	-	-	-	+	+	-	-	+	-
6.	<i>Zanthoxylum aphyllum</i>	Shrub	-	-	-	-	-	-	-	-	-	-	-	-	+
<b>56.</b>	<b>Saxifragaceae</b>														
1.	<i>Itea macrophylla</i>	Shrub	+	-	-	-	-	-	-	-	-	-	+	-	+
<b>57.</b>	<b>Scrophulariaceae</b>														
1.	<i>Mazus pumilus</i>	Herb	+	+	+	+	+	-	-	-	+	-	-	-	+
2.	<i>Scoparia dulcis</i>	Herb	-	+	-	-	-	-	-	-	-	-	+	-	-
3.	<i>Torenla vagans</i>	Herb	-	-	-	-	-	-	-	+	-	-	-	-	-
<b>58.</b>	<b>Smilacaceae</b>														
1.	<i>Smilax prolifera</i>	Climber	+	+	+	+	+	-	-	-	+	-	-	-	+
<b>59.</b>	<b>Solanaceae</b>														
1.	<i>Solanum gilo</i>	Shrub	-	-	+	-	-	-	-	-	-	-	+	-	-

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
2.	<i>Solanum nigrum</i>	Herb	-	-	-	-	-	+	-	-	-	-	-	-	-
3.	<i>Solanum torvum</i>	Shrub	-	+	-	-	-	-	-	-	-	-	-	-	-
<b>60.</b>	<b>Steruliaceae</b>														
1.	<i>Abroma augusta</i>	Shrub	-	-	-	-	-	-	-	-	+	-	-	-	-
<b>61.</b>	<b>Taccaceae</b>														
1.	<i>Tacca integrifolia</i>	Herb	-	-	-	-	-	-	-	-	-	+	-	+	-
<b>62.</b>	<b>Tamaricaceae</b>														
1.	<i>Tamarix dioica</i>	Shrub	-	-	-	+	+	+	+	-	+	+	-	-	-
<b>63.</b>	<b>Thymelaeaceae</b>														
1.	<i>Aquilaria malaccensis</i>	Tree	-	-	-	+	-	-	-	-	-	-	-	-	-
<b>64.</b>	<b>Tiliaceae</b>														
1.	<i>Triumfetta rhombolidea</i>	Shrub	-	-	+	-	-	-	-	-	-	-	-	-	-
<b>65.</b>	<b>Utricaceae</b>														
1.	<i>Boehmeria glomerulifera</i>	Shrub	-	-	-	-	+	-	-	-	-	-	-	-	-
2.	<i>Boehmeria macrophylla</i>	Shrub	+	-	-	-	+	+	-	-	-	-	-	+	-
3.	<i>Boehmeria sidaefolia</i>	Shrub	-	-	-	-	-	-	-	-	-	-	-	-	+
4.	<i>Debregeasia longifolia</i>	Shrub	-	-	-	-	-	-	-	-	-	-	-	-	+
5.	<i>Elatostema rupestre</i>	Shrub	-	+	-	+	+	+	+	-	-	-	-	-	-
6.	<i>Laportea crenulata</i>	Shrub	-	-	-	+	-	-	-	-	-	-	-	-	-
7.	<i>Pilea scripta</i>	Shrub	-	-	-	-	+	-	-	+	-	-	-	-	-
8.	<i>Urtica dioica</i>	Herb	-	-	+	-	-	+	-	-	+	+	-	-	+
9.	<i>Villebrunea integrifolia</i>	Herb	-	-	-	-	-	-	-	-	-	+	+	-	-
<b>66.</b>	<b>Verbenaceae</b>														
1.	<i>Callicarpa arborea</i>	Tree	-	-	+	+	-	-	-	-	-	-	-	-	-
2.	<i>Clerodendrum viscosum</i>	Shrub	-	-	-	-	+	-	-	-	-	-	+	-	-
3.	<i>Stachytarpheta jamalensis</i>	Herb	-	-	+	-	-	-	-	-	-	+	-	-	-
4.	<i>Tectona grandis</i>	Tree	+	+	-	-	-	-	-	+	+	-	+	-	-
<b>67.</b>	<b>Violaceae</b>														
1.	<i>Viola tricolor</i>	Herb	-	-	+	-	+	+	-	-	-	-	-	-	-
<b>68.</b>	<b>Vitaceae</b>														
1.	<i>Ampelocissus latifolia</i>	Climber	-	-	-	-	-	-	-	-	-	+	-	-	-
2.	<i>Cayratia pedata</i>	Climber	-	-	-	-	-	-	-	-	-	-	-	-	+
<b>69.</b>	<b>Zingiberaceae</b>														
1.	<i>Alpinia nigra</i>	Herb	-	+	-	-	-	+	-	-	+	+	-	-	-
2.	<i>Zingiber rubens</i>	Herb	-	-	-	-	-	-	-	+	-	-	-	+	-
3.	<i>Zingiber zerumbet</i>	Herb	-	-	-	-	-	-	-	-	+	-	-	-	+
<b>(B)</b>	<b>Pteridophytes</b>														
<b>70.</b>	<b>Adiantaceae</b>														
1.	<i>Adiantum assemioa</i>	Fern	+	+	-	-	-	+	-	-	-	-	-	-	-
<b>71.</b>	<b>Angiopteris</b>														
1.	<i>Angiopteris evecta</i>	Fern	-	+	+	+	+	+	-	+	-	-	-	-	-
<b>72.</b>	<b>Aspleniaceae</b>														
1.	<i>Asplenium nidus</i>	Fern	-	-	-	-	+	-	-	-	-	-	-	-	-
<b>73.</b>	<b>Athyriaceae</b>														
1.	<i>Athyrium</i>	Fern	+	-	-	-	-	-	+	-	-	-	-	-	-

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
	<i>anisopterum</i>														
2.	<i>Athyrium japonicum</i>	Fern	-	+	-	-	-	-	-	+	-	-	-	-	-
3.	<i>Droathyrium boryanum</i>	Fern	-	-	-	+	+	-	-	-	-	-	-	-	-
<b>74.</b>	<b>Cryptogrammaceae</b>														
1.	<i>Onychium siliculosum</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	+	-
<b>75.</b>	<b>Cyatheaceae</b>														
1.	<i>Cyathea gigantea</i>	Fern	-	-	+	-	-	-	-	-	-	-	-	-	-
<b>76.</b>	<b>Dennstaedtiaceae</b>														
1.	<i>Microlepia speluncae</i>	Fern	+	-	-	-	-	-	-	-	-	-	-	-	+
<b>77.</b>	<b>Dryopteridaceae</b>														
1.	<i>Paranema cytheoides</i>	Fern	-	-	-	-	-	-	-	-	-	-	+	-	-
2.	<i>Pleocnemia winitii</i>	Fern	-	-	-	-	-	-	-	-	-	-	+	-	-
3.	<i>Polystichum biaristatum</i>	Fern	-	-	-	-	-	-	-	-	+	-	-	-	-
4.	<i>Tectaria polymorpha</i>	Fern	-	-	-	-	-	-	-	-	-	-	+	-	-
<b>78.</b>	<b>Equisetaceae</b>														
1.	<i>Equisetum debile</i>	Fern	-	-	+	+	-	+	-	-	-	-	-	-	-
<b>79.</b>	<b>Hypolepidaceae</b>														
1.	<i>Pteridium aquilinum</i>	Fern	-	-	-	-	-	-	+	+	-	-	-	-	-
<b>80.</b>	<b>Lindsaeaceae</b>														
1.	<i>Lindsaea himalaica</i>	Fern	-	+	-	-	-	-	-	-	-	-	-	-	-
<b>81.</b>	<b>Lomariopsidaceae</b>														
1.	<i>Bolbitis heteroclita</i>	Fern	-	-	-	+	-	-	+	-	-	-	-	-	-
<b>82.</b>	<b>Lycopodiaceae</b>														
1.	<i>Lycopodium squarrosum</i>	Fern	+	+	-	+	+	-	-	+	-	-	-	-	-
<b>83.</b>	<b>Polypodiaceae</b>														
1.	<i>Belvisia spicata</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	+	-
2.	<i>Drymoglossum heterophyllum</i>	Fern	-	-	-	-	-	-	-	-	-	-	+	-	-
3.	<i>Lepisorus nudus</i>	Fern	+	-	-	-	-	-	-	-	-	-	-	-	-
4.	<i>Leptochilus axillaries</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	-	+
5.	<i>Microsorium membranaceum</i>	Fern	-	-	-	-	-	-	+	-	-	-	-	-	-
<b>84.</b>	<b>Pteridaceae</b>														
1.	<i>Pityrogramma calomelanos</i>	Fern	-	-	-	-	-	-	+	-	-	-	-	-	-
2.	<i>Pteris biaurita</i>	Fern	+	-	-	-	-	-	+	-	-	-	-	-	-
3.	<i>Pteris cretica</i>	Fern	+	-	-	-	-	-	+	-	-	-	-	-	-
4.	<i>Pteris quadriaurita</i>	Fern	-	-	-	-	-	-	-	-	+	-	-	-	-
5.	<i>Pteris wallichiana</i>	Fern	-	-	-	+	-	-	-	-	+	-	-	-	-
<b>85.</b>	<b>Selaginellaceae</b>														
1.	<i>Selaginella repanda</i>	Fern	-	+	-	-	-	+	-	-	+	-	-	-	-
2.	<i>Selaginella subdiaphana</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	-	+
<b>86.</b>	<b>Thelypteridaceae</b>														
1.	<i>Ampelopteris prolifera</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	+	-
2.	<i>Christella arida</i>	Fern	-	-	-	-	-	+	-	-	-	-	-	-	-
3.	<i>Christella</i>	Fern	-	-	-	-	-	-	-	-	+	-	-	-	-

Sr. No.	Plant Species	Habit	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
	<i>cylindrothrix</i>														
4.	<i>Macrothelypteris omata</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	+	-
5.	<i>Parathelypteris glandulifera</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	+	-
6.	<i>Pronephrium articulatum</i>	Fern	-	-	-	-	-	-	-	-	+	-	-	-	-
<b>87.</b>	<b>Vittariaceae</b>														
1.	<i>Vittaria flexuosa</i>	Fern	-	-	-	-	-	-	-	-	-	-	-	-	+

### Summary

(A)	Angiosperms	Family - 69	Total species 228
(B)	Pteridophytes	Family - 18	Total species 37

Source:

Final report on biodiversity study in the submergence area of Subansiri Lower HE Project – Floral Aspects, Department of Botany, Gauhati University, NHPC.

The study locations in submergence area of Lower Subansiri HEP are:

1. Dam site – 1
2. Dam site – 2
3. Gayung Nala
4. Rakshashmukh
5. Gandhi Tola
6. Sipu Nala
7. Pava Nala
8. Sachap Nala
9. Siberite
10. Sidi Kro
11. Sigar River
12. Sin Kro
13. Kamla River



## **Annexure – 6.9**

**List of Orchid species identified from submergence area of Lower Subansiri HEP and their rehabilitation in Orchidaria in Tipi and Gerukamukh**





Sl. No.	Name of the species	Frequency of distribution in submergence area	Status as per red data of BSI/IUCN	Rehabilitated at
	<b>Epiphytic species:</b>			
1.	<i>Acampe carinata</i> , ( <i>A. papillosa</i> )	Scattered	Not Evaluated (NE)/ Least Concerned (LC)	Tipi & Itanagar
2.	<i>Acampe rigida</i>	Scattered	“	Tipi & Itanagar
3.	<i>Aerides multiflora</i>	Scattered	“	Tipi & Itanagar
4.	<i>Aerides odorata</i>	Scattered	“	Tipi, Itanagar & Gerukamukh
5.	<i>Aerides rosea</i> ( <i>A. fieldingii</i> )	Common	Indeterminate	Tipi, Itanagar & Gerukamukh
6.	<i>Bulbophyllum affine</i>	Scattered	“	Tipi & Itanagar
7.	<i>Bulbophyllum caryeanum</i>	Scattered	“	Tipi & Itanagar
8.	<i>Bulbophyllum cauliflorum</i>	Scattered	“	Tipi & Itanagar
9.	<i>Bulbophyllum clarkeii</i>	Scattered	“	Tipi & Itanagar
10.	<i>Bulbophyllum delitescence</i>	Scattered	“	Tipi, Itanagar & Gerukamukh
11.	<i>Bulbophyllum gambleii</i>	Common	“	Tipi & Itanagar
12.	<i>Bulbophyllum ebulbum</i>	Scattered	“	Sessa
13.	<i>Bulbophyllum griffithii</i>	Scattered	“	Tipi & Itanagar
14.	<i>Bulbophyllum helenae</i>	Scattered	“	Tipi & Itanagar
15.	<i>Bulbophyllum khasyanum</i>	Scattered	“	Tipi & Itanagar
16.	<i>Bulbophyllum monanthum</i>	Scattered	“	Tipi & Itanagar
17.	<i>Bulbophyllum odoratissimum</i>	Common	“	Tipi, Itanagar & Gerukamukh
18.	<i>Bulbophyllum reptans</i>	Scattered	“	Tipi & Itanagar
19.	<i>Bulbophyllum scabratum</i>	Scattered	“	Tipi & Itanagar
20.	<i>Cleisostoma subulatum</i>	Common	“	Tipi, Itanagar & Gerukamukh
21.	<i>Coelogyne fimbriata</i>	Common	“	Tipi & Itanagar
22.	<i>Coelogyne fuscescens</i>	Common	“	Tipi & Itanagar
23.	<i>Coelogyne prolifera</i>	Common	“	Tipi & Itanagar
24.	<i>Cymbidium aloifolium</i>	Common	“	Tipi, Itanagar & Gerukamukh
25.	<i>Cymbidium bicolor</i>	Common	Not Evaluated (NE)/ Least Concerned (LC)	Tipi, Itanagar & Gerukamukh
26.	<i>Cymbidium dayanum</i>	Scattered	“	Tipi & Itanagar
27.	<i>Cymbidium elegans</i>	Scattered	“	Itanagar & Sessa
28.	<i>Cymbidium iridioides</i>	Scattered	“	Tipi & Itanagar
29.	<i>Dendrobium acinaciforme</i>	Common	“	Tipi & Itanagar
30.	<i>Dendrobium aduncum</i>	Scattered	“	Tipi & Itanagar
31.	<i>Dendrobium aphyllum</i>	Common	“	Tipi, Itanagar & Gerukamukh
32.	<i>Dendrobium chrysanthum</i>	Scattered	“	Tipi & Itanagar

Sl. No.	Name of the species	Frequency of distribution in submergence area	Status as per red data of BSI/IUCN	Rehabilitated at
33.	<i>Dendrobium cumulatum</i>	Scattered	“	Tipi & Itanagar
34.	<i>Dendrobium devonianum</i>	Scattered	“	Tipi & Itanagar
35.	<i>Dendrobium hookerianum</i>	Scattered	“	Tipi & Itanagar
36.	<i>Dendrobium moschatum</i>	Common	“	Tipi, Itanagar & Gerukamukh
37.	<i>Dendrobium nobile</i>	Scattered	“	Tipi, Itanagar & Gerukamukh
38.	<i>Dendrobium sulcatum</i>	Scattered	“	Tipi, Itanagar & Gerukamukh
39.	<i>Dendrobium vexabile</i>	Extremely Rare	“	Tipi & Itanagar
40.	<i>Eria amica</i>	Common	“	Tipi & Itanagar
41.	<i>Eria ferrugenea</i>	Scattered	“	Tipi & Itanagar
42.	<i>Eria paniculata</i>	Scattered	“	Tipi & Itanagar
43.	<i>Eria pannea</i>	Common	“	Tipi & Itanagar
44.	<i>Eria lasiopetala</i>	Common	“	Tipi, Itanagar & Gerukamukh
45.	<i>Eria pudica</i>	Scattered	“	Tipi, Itanagar & Gerukamukh
46.	<i>Eria spicata</i>	Scattered	“	Tipi & Itanagar
47.	<i>Eria stricta</i>	Common	“	Tipi, Itanagar & Gerukamukh
48.	<i>Flickingeria fugax</i>	Scattered	“	Tipi & Itanagar
49.	<i>Liparis elliptica</i>	Common	“	Itanagar
50.	<i>Liparis mannii</i>	Common	“	Tipi & Itanagar
51.	<i>Liparis viridiflora</i>	Common	“	Tipi, Itanagar & Gerukamukh
52.	<i>Liparis viridiflora</i> var. <i>spathulata</i>	Common	“	Tipi & Itanagar
53.	<i>Luisia trichorhiza</i>	Common	“	Tipi, Itanagar & Gerukamukh
54.	<i>Luisiopsis inconspicua</i>	Common	“	Tipi & Itanagar
55.	<i>Micropera mannii</i>	Common	“	Tipi, Itanagar & Gerukamukh
56.	<i>Micropera botusa</i>	Common	“	Tipi & Itanagar
57.	<i>Oberonia acaulis</i>	Common	“	Tipi & Itanagar
58.	<i>Oberonia anthropophora</i>	Scattered	“	Tipi & Itanagar
59.	<i>Ornithochilus difformis</i>	Scattered	“	Tipi & Itanagar
60.	<i>Otochilus alba</i>	Scattered	“	Tipi & Itanagar
61.	<i>Otochilus fusca</i>	Scattered	“	Tipi & Itanagar
62.	<i>Pennilabium struthio</i>	Extremely Rare	“	Tipi & Itanagar
63.	<i>Phalaenopsis mannii</i>	Scattered	“	Tipi & Itanagar
64.	<i>Pholidota articulate</i>	Common	“	Tipi, Itanagar & Gerukamukh
65.	<i>Pholidota imbricate</i>	Common	“	Tipi, Itanagar & Gerukamukh
66.	<i>Podochilus khasianus</i>	Scattered	“	Itanagar & Sessa
67.	<i>Podochilus cultratus</i>	Scattered	“	Itanagar & Sessa
68.	<i>Pomatocalpa undulate</i>	Extremely Rare	“	Tipi & Itanagar

Sl. No.	Name of the species	Frequency of distribution in submergence area	Status as per red data of BSI/IUCN	Rehabilitated at
69.	<i>Pteroceras teres</i>	Common	“	Tipi, Itanagar & Gerukamukh
70.	<i>Rhynchostylis retusa</i>	Common	“	Tipi & Itanagar
71.	<i>Robiquetia spathulata</i>	Scattered	“	Tipi & Itanagar
72.	<i>Schoenorchis gemmata</i>	Scattered	“	Tipi & Itanagar
73.	<i>Tylostylis discolor</i>	Common	“	Tipi & Itanagar
74.	<i>Vanda bicolor</i>	Scattered	“	Tipi & Itanagar
	<b>Terrestrial species:</b>		“	
75.	<i>Arundina graminifolia</i>	Common	“	Tipi, Itanagar & Gerukamukh
76.	<i>Calanthe brevicornu</i>	Scattered	“	Tipi & Itanagar
77.	<i>Calanthe sylvatica</i>	Common	“	Tipi, Itanagar & Gerukamukh
78.	<i>Eulophia zollingeri</i>	Scattered	“	Tipi & Itanagar
79.	<i>Goodyera procera</i>	Common	“	Tipi, Itanagar & Gerukamukh
80.	<i>Phaius tankervilleae</i>	Common	“	Tipi & Itanagar
81.	<i>Spiranthes sinensis</i>	Common	“	Tipi, Itanagar & Gerukamukh
82.	<i>Tropidia curculigoides</i>	Scattered	“	Tipi, Itanagar & Gerukamukh

Survey and Identification of Orchids upto species level in submergence areas of Subansiri Lower Hydroelectric Project and rehabilitation of Rare and Endangered Orchid species in Orchidaria of State Forest Research Institute and NHPC, Gerukamukh, 2009



## **Annexure – 6.10**

### **Checklist of Plants of Family Ericaceae of Talle Wildlife Sanctuary in Lower Subansiri District of Arunachal Pradesh**



Sr. No.	Name of Species	Distribution	Conservation Status	Endemic
1.	<i>Agapetes atrosanguinea</i>	Near Pange, 1800 m , Manipolyang to Pange 1800 m	Vulnerable (as per IUCN)	Endemic to Arunachal Pradesh
2.	<i>A. buxifolia</i>	Manipolyang to Pange, 1700-1800 m	Vulnerable (as per IUCN)	
3.	<i>A. incurvata</i>	Pange to Lebbya-Penggo Pass, 1900 m	Common	
4.	<i>A. miranda</i>	Lebbya-Penggo Pass, 2725 m	Endangered (as per IUCN)	
5.	<i>A. praestigiosa</i>	Pange to Talle Valley (actually Pange to Lebbya-Penggo Pass) 1900-2000 m	Vulnerable (as per IUCN)	
6.	<i>A. refracta</i>	Lebbya Penggo Pass, 2732 m	Vulnerable (as per IUCN)	
7.	<i>A. smithiana</i> var. <i>major</i>	Pange to Talle Valley (actually Lebbya-Penggo Pass) 2725 m	Vulnerable (as per IUCN)	
8.	<i>Gaultheria brevistipes</i>	Pange to Talle Valley 2200-2800 m	Common	
9.	<i>G. fragrantissima</i>	Pange to Talle Valley, 2500-2800 m	Common	
10.	<i>G. seshagiriana</i>	Pange to Talle Valley, 2000-2100 m	Common	Endemic to Arunachal Pradesh (West Kameng, Lower Subansiri)
11.	<i>G. nummularioides</i>	Pange to Talle Valley 2100 m	Common	
12.	<i>Leucothoe griffithiana</i>	Pange to Talle Valley 2400-2800 m	Vulnerable (as per IUCN)	
13.	<i>Lyonia ovalifolia</i>	Manypoliang to Pange, 1500 m	Common	
14.	<i>Rhododendron arboreum</i> ssp. <i>delavayi</i>	Pange to Lebbya – Penggo Pass 2000 m	Vulnerable (as per IUCN)	
15.	<i>R. boothii</i>	Talle Valley	Vulnerable (as per IUCN)	
16.	<i>R. dalhousiae</i>	Talle Valley	Common	
17.	<i>R. vaccinioides</i>	Tale Valley	Common	
18.	<i>Vaccinium dendrocharis</i> ssp. <i>talle</i>	Talle Valley, near Lebya-Penggo Pass, 2725 m	Endangered (as per IUCN)	Endemic to Arunachal Pradesh (Lower Subansiri)
19.	<i>V. dunalianum</i> var. <i>dunalianum</i>	Pange to Talle Valley 1700-2200 m	Common	
20.	<i>V. dunalianum</i> var. <i>brevifolium</i>	Talley Valley, Lower Subansiri District, 2000 m	Vulnerable (as per IUCN)	
21.	<i>V. dunalianum</i> var.	Talle Valley, Lower Subansiri	Vulnerable (as	

	<i>megaphyllum</i>		per IUCN)	
22.	<i>V. nummularia</i>	Talley Valley, 2400 m	Common	
23.	<i>V. nuttallii</i>	Pange to Tale Valley, 2200-2500 m	Vulnerable (as per IUCN)	
24.	<i>V. retusum</i>	Lebya-Penggo Pass, Tale Valley, 2700 m	Common	
25.	<i>V. subdissitifolium</i>	Pange to Talle Valley, 1600 – 2800 m	Vulnerable (as per IUCN)	

Source:

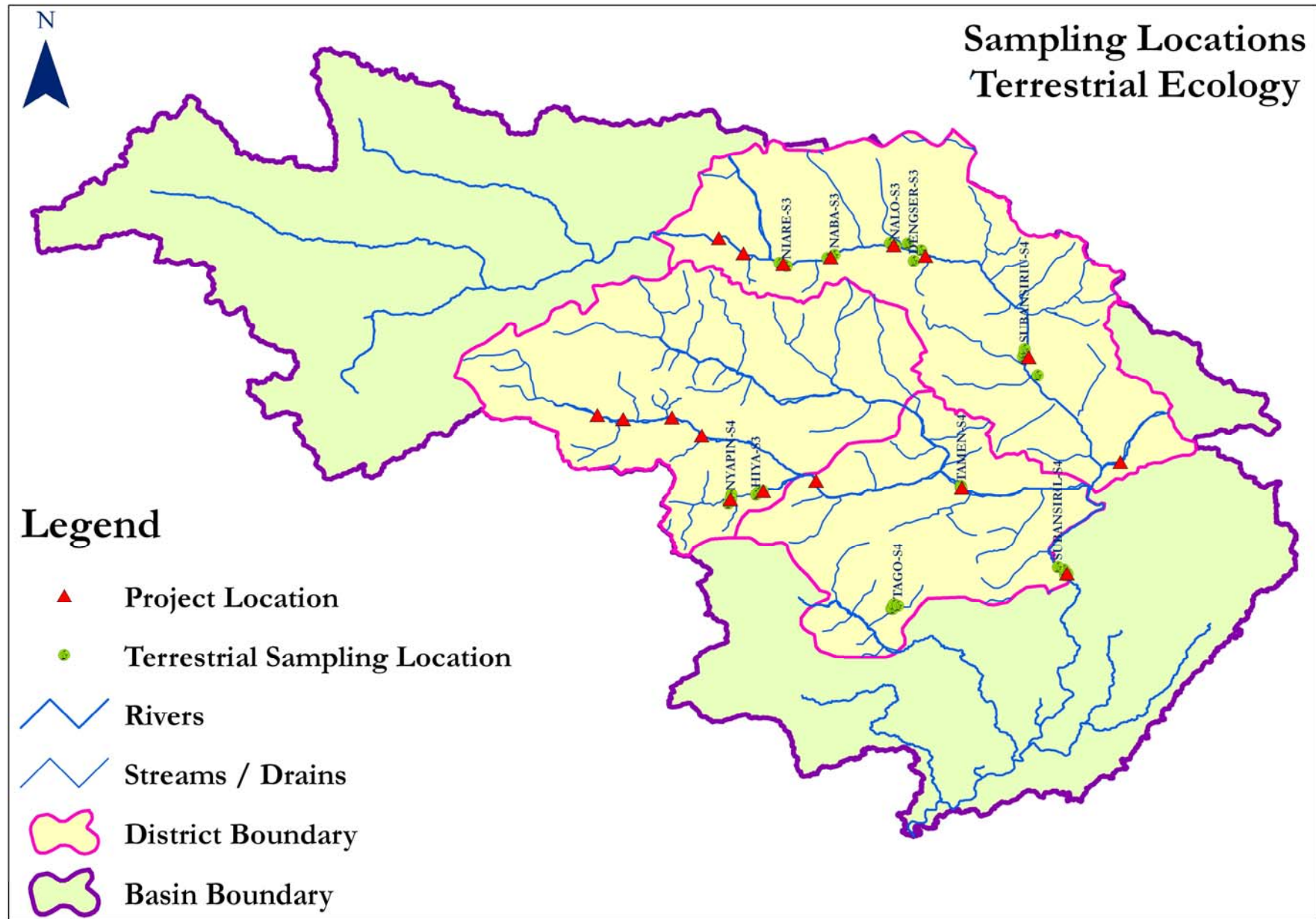
Panda, S. & M. Sanjappa (2012). Checklist of Ericaceae of Talle Wildlife Sanctuary in Lower Subansiri District of Arunachal Pradesh, India. *Journal of Threatened Taxa* 4(1): 2322–2327.



## **Annexure – 6.11**

**Map Showing Terrestrial Sampling Locations & Phytosociological characters of plant species at different sampling locations**





**HEPs and Terrestrial ecology sampling locations**



## Phytosociological characters of tree, shrub and herb species at various sampling locations at HEPs sites

Sampling Period – Pre monsoon (April 2012)

Sampling Period – Monsoon (October 2013)

Sampling Period – Post monsoon (November 2013)

### 1. Site- Tago

#### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Bauhinia purpurea</i>	Fabaceae	75	75.00	1.00	53.72	125	75.00	1.67	65.86	50	50.00	1.00	25.51	50	75.00	0.67	26.96
<i>Bombex ceiba</i>	Malvaceae	50	50.00	1.00	29.11	50	50.00	1.00	47.31	25	25.00	1.00	12.58				
<i>Canarium strictum</i>	Burseraceae	50	25.00	2.00	23.51	50	50.00	1.00	22.51	50	50.00	1.00	25.95	100	50.00	2.00	45.90
<i>Castanopsis indica</i>	Fagaceae					50	50.00	1.00	23.30	50	25.00	2.00	20.17	75	50.00	1.50	32.84
<i>Celtis sp</i>	Ulmaceae	25	25.00	1.00	14.83	25	25.00	1.00	11.20	25	25.00	1.00	11.83				
<i>Duabanga grandiflora</i>	Lythraceae	50	50.00	1.00	33.04	50	25.00	2.00	21.92	50	25.00	2.00	21.58	50	25.00	2.00	18.04
<i>Ficus semicordata</i>	Moraceae	50	50.00	1.00	37.22	50	50.00	1.00	24.70	50	50.00	1.00	24.38				
<i>Lagerstroemia parviflora</i>	Lythraceae	25	25.00	1.00	12.58	50	25.00	2.00	19.01	50	25.00	2.00	20.39	50	50.00	1.00	22.89
<i>Mangifera sp</i>	Anacardiaceae	50	25.00	2.00	26.30												
<i>Oroxylum indicum</i>	Bignoniaceae	50	50.00	1.00	30.12	25	25.00	1.00	10.82	75	50.00	1.50	40.16	75	25.00	3.00	29.63
<i>Pinus sp</i>	Pinaceae									50	25.00	2.00	20.39	100	50.00	2.00	45.90
<i>Ricinus cuminis</i>	Euphorbiaceae	50	50.00	1.00	39.57	50	50.00	1.00	24.70	75	50.00	1.50	44.28	125	50.00	2.50	53.64
<i>Terminalia myriocarpa</i>	Bignoniaceae					50	50.00	1.00	28.67	50	25.00	2.00	36.31	75	50.00	1.50	35.31
<i>Thuja sp</i>	Cupressaceae									50	25.00	2.00	17.51	50	25.00	2.00	15.60
<b>Total</b>		<b>475</b>				<b>575</b>				<b>650</b>				<b>750</b>			

#### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Bamboosa sp</i>	Poaceae													100	13	2	7
<i>Bohmeria macrophylla</i>	Urticaceae	650	38	4	27	750	38	5	30	700	63	3	39	650	63	3	40
<i>Calamus latifolius</i>	Arecaceae													300	25	3	29
<i>Calamus sp</i>	Arecaceae	450	25	5	24	600	25	6	32	300	25	3	28				
<i>Cassia mimosoides</i>	Leguminoceae	250	25	3	15	200	25	2	12	350	25	4	25	350	25	4	22
<i>Cassia occidentalis</i>	Caesalpiniaceae													400	25	4	22
<i>Cassia sp</i>	Leguminoceae	350	25	4	17												
<i>Cassia tora</i>	Caesalpiniaceae	300	25	3	13	200	25	2	13	350	25	4	15	350	25	4	17
<i>Chromolaena odorata</i>	Asteraceae	600	50	3	25	500	38	3	25	350	25	4	21	350	25	4	17
<i>Dendrocalamus sp</i>	Poaceae	500	25	5	44	550	25	6	54	200	25	2	20	200	25	2	20
<i>Eupatorium sp</i>	Asteraceae	650	50	3	29												

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Jatropha sp</i>	Euphorbiaceae	200	25	2	22	250	25	3	29	400	25	4	30				
<i>Lantana sp</i>	Verbenaceae									300	25	3	22	300	25	3	17
<i>Litsea sp</i>	Lauraceae									100	13	2	9				
<i>Livistona jenkinsiana</i>	Arecaceae													200	13	4	23
<i>Musa acuminata</i>	Musaceae													250	25	3	39
<i>Musa sp</i>	Musaceae	350	25	4	30	150	13	3	26	100	13	2	19	100	13	2	10
<i>Opuntia sp</i>	Cactaceae									100	25	1	11				
<i>Osbeckia odorata</i>	Melastomataceae	450	38	3	23	350	38	2	23	500	38	3	25	550	38	4	28
<i>Parthenium sp</i>	Asteraceae	650	50	3	26	900	38	6	32	1150	75	4	50	1100	75	4	51
<i>Rubus ellipticus</i>	Rosaceae									100	13	2	5	100	13	2	6
<i>Rubus sp</i>	Rosaceae					200	25	2	12								
<i>Solanum sp</i>	Solanaceae					200	25	2	12	250	50	1	17	250	50	1	18
<i>Triumfetta pilosa</i>	Tiliacea									200	25	2	13	200	25	2	14
<i>Zanthoxylem sp</i>	Rutaceae	100	13	2	6												
<b>Total</b>		<b>5500</b>				<b>4850</b>				<b>5450</b>				<b>5750</b>			

#### Phytosociological characters of herb species (rainy season) at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Adiantum spp</i>	Pteridaceae													7500	20	4	15
<i>Ageratina adenophora</i>	Asteraceae	11000	50	2	18	7500	45	2	19	5500	30	2	19				
<i>Ageratum conyzoides</i>	Asteraceae	24000	60	4	46	6000	35	2	28	14000	50	3	48	17500	35	5	59
<i>Agrotis sp</i>	Poaceae	7000	15	5	15	3500	10	4	6	3000	15	2	8				
<i>Alocasia fallax</i>	Araceae	3500	15	2	9	2000	10	2	8	1500	5	3	10	2500	15	2	12
<i>Alpinia allughas</i>	Zingiberaceae	2000	10	2	12	1000	5	2	4	1500	5	3	6				
<i>Alpinia sp</i>	Zingiberaceae	2500	10	3	8	500	5	1	2	1000	5	2	7	3000	10	3	12
<i>Amaranthus spinosus</i>	Amaranthaceae	3000	15	2	6	3500	10	4	7	4500	15	3	10	3500	10	4	9
<i>Amaranthus viridis</i>	Amaranthaceae	2500	10	3	4	3500	10	4	7	2500	15	2	7	2000	10	2	7
<i>Anaphalis sp</i>	Asteraceae													4000	10	4	8
<i>Artimesia parviflora</i>	Asteraceae	3500	15	2	6	2000	10	2	4	3000	15	2	7	2000	10	2	6
<i>Bidens bipinnata</i>	Asteraceae	5000	20	3	7	6000	10	6	7	5500	20	3	10	3500	5	7	5
<i>Borreria articularis</i>	Rubiaceae	2000	10	2	4	3500	10	4	5	2000	5	4	3				
<i>Chenopodium album</i>	Chenopodiaceae													500	5	1	2
<i>Chrysopogon aciculatus</i>	Araceae	4000	10	4	8	6000	20	3	10	5000	15	3	11	5500	20	3	14
<i>Colocasia esculenta</i>	Araceae	3000	20	2	9	1500	10	2	5								
<i>Colocasia spp</i>	Araceae	2000	10	2	5												
<i>Commelina benghalensis</i>	Commelinaceae	2000	10	2	5	2500	10	3	5	3500	15	2	8	2000	5	4	4
<i>Cyanotis vaga</i>	Commelinaceae	4000	10	4	5	2000	10	2	4	2500	5	5	3	3500	10	4	7
<i>Cynodon dactylon</i>	Poaceae	11000	30	4	16	14000	25	6	17	10500	30	4	18	4000	10	4	8

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Fragaria indica</i>	Rosaceae	9000	20	5	9	7500	20	4	10	5500	10	6	7	6000	10	6	10
<i>Geranium wallichiana</i>	Geraniaceae													2000	5	4	4
<i>Girardiana diversifolia</i>	Urticaceae									3500	15	2	14	5500	15	4	30
<i>Hedychium sprictum</i>	Zingiberaceae	1500	10	2	6	2500	10	3	17								
<i>Iris hookery</i>	Iridaceae									1500	10	2	9	1000	10	1	9
<i>Mikania micrantha</i>	Asteraceae	6000	25	2	9	7000	30	2	13	3000	5	6	4	2500	10	3	6
<i>Oxalis Corniculata</i>	Oxalidaceae	14000	35	4	15	15000	55	3	24	11000	40	3	22	6000	20	3	15
<i>Pilea pumila</i>	Urticaceae	3000	10	3	4	4500	20	2	9	5000	15	3	10	3500	15	2	9
<i>Polygonum capitatum</i>	Polygonaceae					5500	15	4	8	5500	20	3	12	2500	15	2	10
<i>Pteridium sp</i>	Dennstaedtiaceae	1500	10	2	3												
<i>Pteris quadriaurita</i>	Pteridaceae	7000	15	5	14	8500	20	4	21	6000	10	6	13	5500	20	3	17
<i>Solanum indicum</i>	Solanaceae	2000	15	1	6												
<i>Solanum trivom</i>	Solanaceae					1000	10	1	4	3500	15	2	10				
<i>Solaum sp</i>	Solanaceae	2000	10	2	3	3500	10	4	5	1000	5	2	2				
<i>Spilanthes paniculata</i>	Asteraceae	22500	50	5	37	16000	50	3	48	8000	30	3	21	8500	30	3	21
<i>Thysanolaena sp</i>	Poaceae	2000	10	2	3												
<i>Tinospora cordifolia</i>	Menispermaceae	4000	20	2	6	1500	10	2	4								
<b>Total</b>		<b>166500</b>				<b>137500</b>				<b>119000</b>				<b>96500</b>			

Site Code	Site Description
S1	Left Bank of Pyne river near proposed Dam Site
S2	Left Bank of Pyne river upstream, submergence area
S3	Right Bank of Pyne river 1 km upstream of Dam site
S4	Right Bank of Pyne river 2 km upstream of Dam site

## 2. Site- Nyepin

### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Acacia sp</i>	Mimosaceae					25	25	1	20								
<i>Albezia lebbek</i>	Mimosaceae									25	25	1	15				
<i>Albezia sp</i>	Mimosaceae					50	50	1	56								
<i>Bauhinia purpurea</i>	Fabaceae	50	25	2	23	75	50	2	82	75	50	2	42	50	25	2	26
<i>Bombex ceiba</i>	Malvaceae					25	25	1	26	50	25	2	31				
<i>Canarium strictum</i>	Burseraceae	50	50	1	31	25	25	1	24	50	25	2	23	50	25	2	27
<i>Castanopsis indica</i>	Fagaceae	50	50	1	33	25	25	1	22	50	25	2	25	75	25	3	39
<i>Chukrasia tabularis</i>	Meliaceae													75	25	3	46

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Duabanga grandiflora</i>	Lythraceae	25	25	1	18					75	25	3	42	100	50	2	77
<i>Oroxylum indicum</i>	Bignoniaceae	75	25	3	37	25	25	1	22	50	25	2	23	50	25	2	28
<i>Pandanus nepalensis</i>	Pandanaceae	50	50	1	33	25	25	1	30	50	25	2	25	50	25	2	26
<i>Ricinus cuminis</i>	Euphorbiaceae	125	50	3	71												
<i>Syzygium cuminii</i>	Myrtaceae	50	25	2	23					25	25	1	17				
<i>Terminalia myricarpa</i>	Bignoniaceae	75	50	2	58	50	50	1	112	75	50	2	56	50	25	2	31
<i>Toona ciliata</i>	Miliaceae					50	50	1	95								
<b>Total</b>		<b>550</b>				<b>375</b>				<b>525</b>				<b>500</b>			

### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Bohmeria macrophylla</i>	Urticaceae	300	38	2	28	200	25	2	16	150	13	3	11	200	13	4	15
<i>Calamus latifolius</i>	Arecaceae	200	25	2	22	250	25	3	23	150	13	3	17	100	13	2	12
<i>Cassia mimosoides</i>	Leguminosae	250	25	3	23	150	25	2	14	150	25	2	15	150	25	2	19
<i>Cassia occidentalis</i>	Caesalpiniaceae	200	25	2	19	350	38	2	31								
<i>Chromolaena odorata</i>	Asteraceae	300	25	3	21	300	25	3	22	300	25	3	22	300	25	3	25
<i>Debregiasia longifolia</i>	Urticaceae									200	38	1	25	200	38	1	32
<i>Dendrocalamus sp</i>	Poaceae	350	25	4	34	300	38	2	40								
<i>Imperata arundinacea</i>	Poaceae	300	25	3	18	400	50	2	34	200	25	2	20				
<i>Lantana sp</i>	Verbenaceae	300	25	3	25	350	38	2	31								
<i>Leucas sp</i>	Lamiaceae									250	25	3	16				
<i>Livistona jenkinsiana</i>	Arecaceae	200	13	4	22	350	38	2	39	250	25	3	33	250	25	3	47
<i>Musa acuminata</i>	Musaceae	250	25	3	29	200	25	2	29								
<i>Musa sp</i>	Musaceae									400	25	4	67	150	13	3	19
<i>Mussaenda sp</i>	Rubiaceae									150	25	2	13	200	25	2	25
<i>Opuntia sp</i>	Cactaceae					100	13	2	10	100	13	2	9	100	13	2	12
<i>Parthenium sp</i>	Asteraceae	700	63	3	42												
<i>Ribes sp</i>	Grossulariaceae													250	25	3	20
<i>Rubia sp</i>	Rubiaceae									200	25	2	17	200	25	2	22
<i>Rubus ellipticus</i>	Rosaceae	100	13	2	6	150	25	2	12								
<i>Rubus sp</i>	Rosaceae					200	25	2	14	200	25	2	14	200	25	2	17
<i>Solanum sp</i>	Solanaceae	100	25	1	10	150	25	2	12								
<i>Sorbus sp</i>	Rosaceae									150	25	2	14	200	25	2	26
<i>Triumfetta pilosa</i>	Tiliaceae	200	25	2	14	250	38	2	19								
<i>Zanthoxylum sp</i>	Rutaceae	100	25	1	12	50	13	1	5	50	13	1	6	100	13	2	11
<b>Total</b>		<b>3850</b>				<b>3750</b>				<b>2900</b>				<b>2600</b>			



**Phytosociological characters of herb species (rainy season) at different sampling locations**

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Adiantum philippense</i>	Pteridaceae	2500	5	5	4	15500	30	5	48								
<i>Ageratum conyzoides</i>	Asteraceae	22000	40	6	55	6000	10	6	12	5500	30	2	23	6000	30	2	23
<i>Agrotis sp</i>	Poaceae	2000	10	2	8	2000	10	2	9	3000	10	3	8	2000	10	2	7
<i>Alocasia fallax</i>	Araceae	2500	10	3	8	1500	10	2	8	6000	20	3	25	3500	20	2	22
<i>Alocasia fornicata</i>	Araceae	3500	10	4	13	1000	5	2	8	6000	20	3	28	4000	20	2	26
<i>Alpinia allughas</i>	Zingiberaceae	2500	5	5	7	3000	15	2	12								
<i>Amaranthus viridis</i>	Amaranthaceae	5500	25	2	18	4000	10	4	8	5500	15	4	16	2500	15	2	12
<i>Artemisia indica</i>	Asteraceae	1000	5	2	2	3000	5	6	5	2000	10	2	7	2500	10	3	7
<i>Bidens bipinnata</i>	Asteraceae	4500	5	9	5					8500	20	4	17				
<i>Centella asiatica</i>	Apiaceae					3000	10	3	7	2000	10	2	6	2500	10	3	6
<i>Chrysopogon aciculatus</i>	Poaceae	2500	15	2	7												
<i>Colocasia esculenta</i>	Araceae	3500	15	2	9	1500	5	3	4								
<i>Colocasia forniculata</i>	Araceae	4000	15	3	11	1500	5	3	8	2500	10	3	13	4000	10	4	14
<i>Commelina benghalensis</i>	Commelinaceae	3500	25	1	8	1000	10	1	4								
<i>Cyanotis vaga</i>	Commelinaceae	6000	10	6	9									3500	15	2	9
<i>Cynodon dactylon</i>	Poaceae	9500	20	5	13	6000	25	2	17	9000	25	4	21	2500	25	1	14
<i>Cyperus irria</i>	Cyperaceae	3000	15	2	6	1500	5	3	4	2000	10	2	6	3500	10	4	8
<i>Dioscorea spp</i>	Dioscoreaceae	3000	25	1	11	500	5	1	2					6500	20	3	34
<i>Fagopyrum dibotris</i>	Polygonaceae	1000	10	1	3	1000	5	2	3					1500	5	3	3
<i>Fragaria indica</i>	Rosaceae	5500	10	6	8	3500	10	4	8	1000	5	2	4	3500	5	7	7
<i>Girardiana diversifolia</i>	Urticaceae					6500	20	3	28	5500	20	3	33				
<i>Girardiana zeylenica</i>	Urticaceae	5000	20	3	9									6000	10	6	20
<i>Impatiens arguta</i>	Balsaminaceae	5500	10	6	7	3000	10	3	7	1000	5	2	3	2000	5	4	4
<i>Impatiens bicornuta</i>	Balsaminaceae									2500	10	3	7				
<i>Mikania micrantha</i>	Asteraceae	7000	15	5	9									15500	40	4	33
<i>Oxalis Corniculata</i>	Oxalidaceae	16500	35	5	24	9500	25	4	23	7000	15	5	23	9000	25	4	30
<i>Polypodium amoenum</i>	Polypodiaceae									2000	10	2	6				
<i>Pteridium aquilinum</i>	Pteridaceae													5500	20	3	14
<i>Pteris quadriaurita</i>	Pteridaceae	2500	15	2	6												
Selaginella sp.	Pteridaceae	3000	5	6	4	4000	10	4	8	6000	15	4	14				
<i>Sida rhombifolia</i>	Malvaceae													2000	10	2	6
<i>Spilanthes paniculata</i>	Asteraceae	15500	40	4	33	9500	40	2	29	16500	30	6	40				
<i>Strobilanthes sp.</i>	Acanthaceae	2500	10	3	4												
<i>Thysanolaena maxima</i>	Poaceae					8000	25	3	37								
<b>Total</b>		<b>145000</b>				<b>96000</b>				<b>93500</b>				<b>88000</b>			

Site Code	Site Description
S1	Left Bank Upstream near Dam site
S2	Left Bank 1 km Downstream of Dam site
S3	Right Bank 1km Upstream of Dam Site
S4	Right Bank Upstream, Influenced Zone

### 3. Site- Hiya

#### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Aesculus assamica</i>	Sapindaceae					50	25	2	26	75	50	2	38
<i>Albezia lebbek</i>	Mimosaceae									100	75	1	64
<i>Bauhinia purpurea</i>	Fabaceae	50	25	2	20	75	25	3	39	150	50	3	68
<i>Bombex ceiba</i>	Malvaceae									25	25	1	17
<i>Canarium strictum</i>	Burseraceae	50	50	1	29	75	50	2	52	25	25	1	15
<i>Castanopsis indica</i>	Fagaceae	50	50	1	31	50	50	1	57	75	50	2	42
<i>Duabanga grandiflora</i>	Lythraceae	25	25	1	17								
<i>Erythrina suberosa</i>	Fabaceae					50	25	2	40	25	25	1	13
<i>Oroxylum indicum</i>	Bignoniaceae	75	25	3	33	75	50	2	65	50	25	2	28
<i>Pandanus nepalensis</i>	Pandanaceae	50	50	1	31	25	25	1	21	25	25	1	15
<i>Ricinus cuminis</i>	Euphorbiaceae	125	50	3	65								
<i>Syzygium cuminii</i>	Myrtaceae	50	25	2	21								
<i>Terminalia myricarpa</i>	Bignoniaceae	75	50	2	53								
<b>Total</b>		<b>550</b>				<b>400</b>				<b>550</b>			

#### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Apluda mutica</i>	Poaceae					350	25	4	17	400	25	4	22
<i>Bohmeria macrophylla</i>	Urticaceae	300	38	2	26	250	38	2	20	350	25	4	21
<i>Calamus latifolius</i>	Arecaceae	200	25	2	21	150	13	3	11				
<i>Calamus sp</i>	Arecaceae					300	25	3	38	250	25	3	22
<i>Cassia mimosoides</i>	Leguminosae	250	25	3	21	200	25	2	15	250	25	3	18
<i>Cassia occidentalis</i>	Caesalpiniaceae	200	25	2	17	150	25	2	18	200	25	2	17
<i>Chromolaena odorata</i>	Asteraceae	300	25	3	19	250	25	3	22	100	25	1	16
<i>Dendrocalamus sp</i>	Poaceae	350	25	4	31								
<i>Imperata arundinacea</i>	Poaceae	300	25	3	16	300	25	3	19	150	25	2	15
<i>Lantana sp</i>	Verbenaceae	300	25	3	23	300	38	2	25				
<i>Livistona jenkinsiana</i>	Arecaceae	200	13	4	20	100	13	2	14	350	38	2	41

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Musa acuminata</i>	Musaceae	250	25	3	27	350	25	4	41	400	25	4	80
<i>Oxyspora paniculata</i>	Melastomataceae									100	38	1	19
<i>Parthenium sp</i>	Asteraceae	700	63	3	38	750	50	4	40	200	13	4	11
<i>Rubus ellipticus</i>	Rosaceae	100	13	2	6								
<i>Rubus sp</i>	Rosaceae					100	13	2	6	100	13	2	7
<i>Solanum sp</i>	Solanaceae	100	25	1	9	100	13	2	6	50	13	1	6
<i>Triumfetta pilosa</i>	Tiliacea	200	25	2	13								
<i>Zanthoxylum sp</i>	Rutaceae	100	25	1	11	50	13	1	6	50	13	1	6
<b>Total</b>		<b>3850</b>				<b>3700</b>				<b>2950</b>			

### Phytosociological characters of herb species (rainy season) at different sampling locations

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Adiantum sp</i>	Pteridaceae									3000	20	2	8
<i>Ageratina adenophora</i>	Asteraceae	5500	30	2	11	4000	15	3	6	4000	15	3	7
<i>Ageratum conyzoides</i>	Asteraceae	19000	55	3	44	24500	50	5	61	24500	55	4	39
<i>Agrotis sp</i>	Poaceae	6000	20	3	9	2500	25	1	7	2500	15	2	8
<i>Alocasia fallax</i>	Araceae	3000	10	3	5	2000	15	1	6	2000	15	1	6
<i>Alocasia fornicata</i>	Araceae	6000	20	3	20	5500	25	2	14	5500	20	3	15
<i>Alpinia allughas</i>	Zingiberaceae	4000	10	4	16	1500	5	3	3	1500	5	3	6
<i>Amaranthus spinosus</i>	Amaranthaceae	5500	20	3	9	3000	20	2	7				
<i>Amaranthus viridis</i>	Amaranthaceae	6000	15	4	10	5500	15	4	12	5500	15	4	13
<i>Artimesia parviflora</i>	Asteraceae	2500	20	1	5	3000	20	2	6	3000	5	6	3
<i>Bidens bipinnata</i>	Asteraceae	5000	20	3	6	4000	20	2	6	4000	5	8	4
<i>Bidens sp</i>	Asteraceae	6000	20	3	7								
<i>Borreria articularis</i>	Rubiaceae	3000	15	2	5	3500	15	2	5	3500	15	2	5
<i>Chenopodium spp</i>	Chenopodiaceae	3500	15	2	6	4000	15	3	7	4000	15	3	7
<i>Chrysopogon aciculatus</i>	Poaceae	3000	20	2	7	3500	15	2	7	3500	15	2	6
<i>Colocasia esculenta</i>	Araceae	2000	10	2	7	2500	10	3	6	2500	10	3	7
<i>Commelina benghalensis</i>	Commelinaceae	1000	5	2	3	5500	20	3	7	5500	25	2	9
<i>Cyanotis vaga</i>	Commelinaceae	3500	10	4	4	3000	10	3	4	3000	10	3	4
<i>Cynodon dactylon</i>	Poaceae	12000	35	3	15	6000	35	2	14	6000	40	2	13
<i>Dioscorea alata</i>	Dioscoreaceae	6000	25	2	11	5000	25	2	9	5000	25	2	9
<i>Dioscorea bulbifera</i>	Dioscoreaceae					2000	10	2	4				
<i>Fragaria indica</i>	Rosaceae	9500	30	3	11	5500	20	3	8	5500	15	4	8
<i>Geranium sp</i>	Geraniaceae									2000	5	4	3
<i>Girardiana zeylenica</i>	Urticaceae					5500	10	6	7	5500	15	4	9
<i>Hedychium sprictum</i>	Zingiberaceae	2000	10	2	7								
<i>Impatiens arguta</i>	Balsaminaceae									2500	10	3	4

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Leucas sp</i>	Lamiaceae					2000	10	2	4				
<i>Mikania micrantha</i>	Asteraceae	8500	25	3	9	9500	25	4	12	9500	15	6	9
<i>Oxalis Corniculata</i>	Oxalidaceae	22000	65	3	28	17000	60	3	25	17000	55	3	25
<i>Pilea sp.</i>	Urticaceae									2000	10	2	4
<i>Pteridium sp</i>	Pteridaceae	2500	15	2	4								
<i>Pteris quadriaurita</i>	Pteridaceae	5000	15	3	8	3500	15	2	6	3500	15	2	6
<i>Selaginella sp.</i>	Pteridaceae									6000	15	4	8
<i>Smilax perfoliata</i>	Smilacaceae					2000	10	2	3				
<i>Solanum indicum</i>	Solanaceae	3500	20	2	6								
<i>Solanum tri</i>	Solanaceae	1500	10	2	3								
<i>Spilanthes paniculata</i>	Asteraceae	20500	60	3	27	30500	60	5	43	30500	50	6	46
<i>Strobilanthes sp</i>	Acanthaceae									2000	10	2	3
<i>Thysanolaena maxima</i>	Poaceae									2000	10	2	6
<b>Total</b>		<b>177500</b>				<b>166000</b>				<b>176500</b>			

#### Site Code

#### Site Description

S1	Left Bank Upstream near Dam site
S2	Left Bank 1 km Upstream of Dam site
S3	Left Bank 4km Upstream of Dam Site

#### 4. Site- Dengser

#### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Aesculus assamica</i>	Sapindaceae	75	50	2	53	75	50	2	43	50	50	1	36
<i>Ailanthus excels</i>	Simaroubaceae					25	25	1	14	50	25	2	33
<i>Albezia lebbek</i>	Mimosaceae	50	50	1	36	50	50	1	35	50	50	1	38
<i>Bauhinia purpurea</i>	Fabaceae	25	25	1	16								
<i>Bombex ceiba</i>	Malvaceae	25	25	1	17	25	25	1	19	50	25	2	34
<i>Canarium strictum</i>	Burseraceae	25	25	1	17	25	25	1	15	50	25	2	31
<i>Castanopsis indica</i>	Fagaceae	75	50	2	60	75	50	2	51	25	50	1	26
<i>Cyathea spinulosa</i>	Cyatheaceae									50	25	2	29
<i>Ehretia acuminata</i>	Ehretiaceae					50	25	2	24				
<i>Erythrina suberosa</i>	Fabaceae	25	25	1	15								
<i>Gmelina arborea</i>	Lamiaceae	100	25	4	68	50	25	2	33	50	25	2	37
<i>Pandanus nepalensis</i>	Pandanaceae	25	25	1	16	50	50	1	33	50	50	1	36
<i>Toona ciliata</i>	Meliaceae					50	50	1	33				

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
		425				475				425			

### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Apluda mutica</i>	Poaceae	550	25	6	26	200	25	2	15				
<i>Bohmeria macrophylla</i>	Urticaceae	200	25	2	20	250	25	3	19	300	38	2	22
<i>Calamus floribundus</i>	Arecaceae	350	25	4	34	450	25	5	45	200	13	4	16
<i>Calamus sp</i>	Arecaceae	300	25	3	30	500	25	5	61	500	38	3	43
<i>Cassia mimosoides</i>	Leguminoceae	200	25	2	21	150	25	2	17				
<i>Cassia occidentalis</i>	Caesalpiniaceae	150	25	2	16	200	25	2	18	150	25	2	14
<i>Dendrocalamus sp</i>	Poaceae									600	38	4	82
<i>Imperata arundinacea</i>	Poaceae	300	25	3	23	250	25	3	22				
<i>Livistona jenkinsiana</i>	Arecaceae	100	13	2	16	150	25	2	20	200	25	2	17
<i>Musa sp</i>	Musaceae	350	25	4	58	400	25	4	35	750	25	8	46
<i>Mussaenda roxburghii</i>	Rubiaceae					100	25	1	12	150	25	2	13
<i>Oxyspora paniculata</i>	Melastomataceae	100	13	2	9	100	13	2	8	100	13	2	7
<i>Parthenium sp</i>	Asteraceae	550	25	6	26	200	13	4	11	500	25	5	23
<i>Ribes sp</i>	Grossulariaceae					100	25	1	12	50	25	1	10
<i>Rubus sp</i>	Rosaceae	150	25	2	13								
<i>Solanum sp</i>	Solanaceae	100	13	2	7	50	13	1	6	100	13	2	7
<b>Total</b>		<b>3400</b>				<b>3100</b>				<b>3600</b>			

### Phytosociological characters of herb species (rainy season) at different sampling locations

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Adiantum sp.</i>	Pteridaceae	2500	15	2	6	2000	10	2	5	1500	5	3	5
<i>Ageratina adenophora</i>	Asteraceae	3500	15	2	12	8500	20	4	23	5500	25	2	31
<i>Ageratum conyzoides</i>	Asteraceae	11500	55	2	38	6000	15	4	16	8000	25	3	37
<i>Alocasia fallax</i>	Araceae	1000	5	2	2	1500	5	3	4	2000	10	2	11
<i>Alocasia fornicata</i>	Araceae	2000	10	2	7	1000	10	1	5	1500	15	1	11
<i>Alpinia sp</i>	Zingiberaceae					3500	15	2	26	1000	5	2	14
<i>Alpinia allughas</i>	Zingiberaceae	3000	15	2	16								
<i>Amaranthus viridis</i>	Amaranthaceae	4000	15	3	11	3000	15	2	10				
<i>Begonia sp.</i>	Bigoniaceae	2500	10	3	5	3000	10	3	7				
<i>Bidens bipinnata</i>	Asteraceae	5000	10	5	7	8000	10	8	10	1500	5	3	5
<i>Borreria articularis</i>	Rubiaceae	2500	15	2	6	1500	5	3	3	5000	10	5	13
<i>Chenopodium sp</i>	Chenopodiaceae	2500	15	2	11								

Scientific Name	Family	S1				S2				S3			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Chrysopogon aciculatus</i>	Araceae	2000	15	1	5								
<i>Colocasia esculenta</i>	Araceae	2500	10	3	5	1000	10	1	5	3500	10	4	15
<i>Cynodon dactylon</i>	Poaceae	5000	40	1	14	2500	10	3	5				
<i>Fragaria indica</i>	Rosaceae	5000	15	3	8	2000	15	1	6	1500	5	3	5
<i>Geranium sp.</i>	Geraniaceae					3500	10	4	7	1500	10	2	7
<i>Girardiana zeylenica</i>	Urticaceae	6000	15	4	10	5000	15	3	10				
<i>Hedychium spicatum</i>	Zingiberaceae					1500	10	2	8	2500	10	3	21
<i>Impatiens arguta</i>	Balsaminaceae	3000	10	3	6								
<i>Mikania micrantha</i>	Asteraceae	10000	20	5	15	2000	10	2	5				
<i>Nephrolepis cordifolia</i>	Polypodiaceae	3500	10	4	6	1500	10	2	5	1000	5	2	4
<i>Oxalis Corniculata</i>	Oxalidaceae	11000	20	6	17	14500	20	7	23	11500	40	3	42
<i>Paederia foetida</i>	Rubiaceae	3500	15	2	8								
<i>Pilea sp.</i>	Urticaceae									4000	10	4	14
<i>Pothos scandens</i>	Araceae					3500	15	2	8	2000	10	2	8
<i>Pteris quadriaurita</i>	Pteridaceae	6000	15	4	9	5500	20	3	11	3000	10	3	10
<i>Pteris vitta</i>	Pteridaceae	5500	15	4	10	6500	15	4	12				
<i>Selaginella sp.</i>	Pteridaceae	6500	10	7	8								
<i>Spilanthes paniculata</i>	Asteraceae	16500	50	3	43	22000	60	4	62				
<i>Thysanolaena maxima</i>	Poaceae	3000	10	3	13	3000	15	2	18	2000	10	2	25
<i>Tinospora cardifolia</i>	Menispermaceae									2500	10	3	10
<i>Viola diffusa</i>	Violaceae					2000	10	2	5	5500	10	6	14
<b>Total</b>		<b>129000</b>				<b>114000</b>				<b>66500</b>			

#### Site Code

S1  
S2  
S3

#### Site Description

Left Bank near Dam  
Left Bank Upstream of Dam site  
Right Bank Upstream of Dam Site

### 5. Site- Middle Subansiri

#### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Ailanthus excels</i>	Simaroubaceae	25	25	1	19	25	25	1	16								
<i>Albezia lebbek</i>	Mimosaceae	50	50	1	40	75	50	2	55	50	50	1	71	25	50	1	44
<i>Bauhinia purpurea</i>	Fabaceae	50	50	1	44	75	50	2	42	25	50	1	44	25	50	1	36
<i>Bombex ceiba</i>	Malvaceae	50	50	1	58	50	50	1	49	25	25	1	42	25	25	1	31
<i>Castanopsis indica</i>	Fagaceae	25	50	1	25												

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Celtis sp</i>	Ulmaceae													25	25	1	35
<i>Duabanga grandiflora</i>	Lythraceae	50	25	2	35	50	25	2	30								
<i>Ficus Sp</i>	Moraceae					50	25	2	25	25	25	1	30	25	25	1	25
<i>Pandanus nepalensis</i>	Pandanaceae	25	25	1	16												
<i>Ricinus cuminis</i>	Euphorbiaceae									25	50	1	36	50	50	1	64
<i>Sapium sp</i>	Euphorbiaceae	100	50	2	64	100	50	2	58	25	50	1	36	25	50	1	33
<i>Terminalia Myricarpa</i>	Bignoniaceae					25	50	1	24								
<i>Toona ciliata</i>	Meliaceae									25	25	1	42	25	25	1	32
<b>Total</b>		<b>375</b>				<b>450</b>				<b>200</b>				<b>225</b>			

### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Bamboosa tulda</i>	Poaceae	200	13	4	16												
<i>Bohmeria macrophylla</i>	Urticaceae	300	38	2	21	500	50	3	24	250	25	3	25	200	25	2	20
<i>Calamus sp</i>	Arecaceae	500	38	3	42	650	38	4	48	200	13	4	34				
<i>Calotropis procera</i>	Apocynaceae									150	25	2	17				
<i>Cassia occidentalis</i>	Caesalpiniaceae	150	25	2	13	350	25	4	15	200	25	2	31				
<i>Cassia tora</i>	Leguminoceae									200	25	2	20	150	25	2	17
<i>Dendrocalamus sp</i>	Poaceae	1100	38	7	92	1700	50	9	113	300	13	6	46	250	13	5	34
<i>Euphorbia sp</i>	Euphorbiceae													200	25	2	19
<i>Girardinia diversifolia</i>	Urticaceae									100	13	2	14	100	13	2	12
<i>Jatropha sp</i>	Euphorbeacea													200	13	4	66
<i>Lantana sp</i>	Asteraceae					350	38	2	22	250	25	3	33	300	38	2	37
<i>Livistona jenkinsiana</i>	Arecaceae	200	25	2	17												
<i>Musa sp</i>	Musaceae	750	25	8	44												
<i>Mussaenda roxburghii</i>	Rubiaceae	150	25	2	12	200	25	2	11								
<i>Oxyspora paniculata</i>	Melastomataceae	100	13	2	7	350	38	2	17	100	13	2	9				
<i>Parthenium sp</i>	Asteraceae	500	25	5	21	900	50	5	32	1050	50	5	64	1100	38	7	60
<i>Ribes sp</i>	Grossulariaceae	50	25	1	10	150	38	1	13								
<i>Solanum sp</i>	Solanaceae	100	13	2	7	100	13	2	5	50	13	1	7	50	13	1	7
<i>Triumfetta pilosa</i>	Tiliacea													200	25	2	28
<b>Total</b>		<b>4100</b>				<b>5250</b>				<b>2850</b>				<b>2750</b>			

### Phytosociological characters of herb species (rainy season) at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Ageratina adenophora</i>	Asteraceae	7000	35	2	25	11500	40	3	30	6500	40	2	38	9000	30	3	47
<i>Ageratum conyzoides</i>	Asteraceae	16500	50	3	73	10500	45	2	32	7000	45	2	42	11000	35	3	66

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Agrotis sp</i>	Poaceae	6000	15	4	11	5500	25	2	16	3000	25	1	20	3000	25	1	24
<i>Alocasia fallax</i>	Araceae	2500	15	2	14	3000	20	2	23								
<i>Amaranthus spinosus</i>	Amaranthaceae	3500	15	2	9	3500	25	1	17	3000	25	1	24				
<i>Amaranthus viridis</i>	Amaranthaceae	4000	10	4	11												
<i>Anaphalis sp</i>	Asteraceae					2000	10	2	5	1500	10	2	7	3500	10	4	11
<i>Artimesia parviflora</i>	Asteraceae	3000	10	3	6	2500	10	3	6	1000	5	2	4	1500	10	2	9
<i>Bidens pilosa</i>	Asteraceae	5500	20	3	10	3000	20	2	9	1500	5	3	5	2000	10	2	9
<i>Borreria articularis</i>	Rubiaceae	1500	5	3	3	1000	5	2	3	1000	5	2	4	1500	5	3	5
<i>Colocasia esculenta</i>	Araceae	2500	15	2	10	1500	15	1	13	1500	15	1	19	1500	15	1	23
<i>Commelina benghalensis</i>	Commelinaceae	1500	5	3	3												
<i>Crassocephalum crepidioides</i>	Asteraceae	1000	5	2	2												
<i>Costos speciosus</i>	Zingiberaceae	2000	15	1	9	2500	15	2	11	2000	15	1	15	2000	15	1	13
<i>Cyanotis vaga</i>	Commelinaceae	1500	5	3	3												
<i>Cynodon dactylon</i>	Poaceae	5500	15	4	10	4000	15	3	11	4000	10	4	14	1000	5	2	4
<i>Drymaria cordata</i>	Caryophyllaceae	6000	20	3	12					3500	20	2	18	2000	10	2	9
<i>Embelia ribes</i>	Myrsinaceae					2000	10	2	5	1000	10	1	6	1000	5	2	4
<i>Erianthus sp</i>	Poaceae					2000	5	4	4	500	5	1	4	500	5	1	3
<i>Eupatorium sp</i>	Asteraceae	7000	15	5	14	5000	15	3	17	3000	15	2	23	3000	15	2	20
<i>Mikania micrantha</i>	Asteraceae	5500	15	4	10	5000	20	3	14								
<i>Oxalis Corniculata</i>	Oxalidaceae	16500	35	5	28	9500	35	3	29	4500	35	1	34	4500	15	3	19
<i>Oxalis latifolia</i>	Oxalidaceae	3000	10	3	5												
<i>Pilea pumila</i>	Urticaceae	5500	15	4	10	3500	15	2	11								
<i>Piper spp</i>	Piperaceae					3000	10	3	10								
<i>Pteridium sp</i>	Pteridaceae					3500	15	2	10								
<i>Solanum indicum</i>	Solanaceae	1000	10	1	4									500	5	1	3
<i>Solanum sp</i>	Solanaceae									500	5	1	3				
<i>Spilanthes paniculata</i>	Asteraceae	10500	20	5	18	9500	20	5	23	4500	20	2	20	5000	15	3	30
<i>Thysanolaena maxima</i>	Poaceae	500	5	1	2												
<b>Total</b>		<b>119000</b>				<b>93500</b>				<b>49500</b>				<b>52500</b>			

Site Code	Site Description
S1	Left Bank near Tamen Bridge & Upstream
S2	Left Bank Upstream of Dam site
S3	Right Bank Upstream of Dam Site
S4	Right Bank near Dam site



## 6. Site- Upper Subansiri

### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Adina Sp</i>	Rubiaceae									25	25	1	13				
<i>Aesculus assamica</i>	Sapindaceae	25	25	1	13	25	25	1	10								
<i>Ailanthus excelsa</i>	Simaroubaceae	25	25	1	14	50	25	2	22					50	50	1	28
<i>Albizia chenensis</i>	Mimosaceae					25	25	1	12								
<i>Albizia lebbeck</i>	Mimosaceae									25	25	1	13				
<i>Albizia lucida</i>	Mimosaceae	25	25	1	13					25	25	1	14	50	25	2	28
<i>Albizia procera</i>	Mimosaceae									25	25	1	15				
<i>Altingia excelsa</i>	Altingiaceae					50	25	2	18								
<i>Artocarpus lakoocha</i>	Moraceae									25	25	1	13				
<i>Bahunia sp</i>	Fabaceae					50	25	2	16					25	25	1	13
<i>Bombax ceiba</i>	Malvaceae					25	25	1	14								
<i>Butea monosperma</i>	Fabaceae	25	25	1	16					50	25	2	26				
<i>Castanopsis indica</i>	Fagaceae	25	25	1	14	50	50	1	22								
<i>Cedrela toona</i>	Meliaceae					25	25	1	11								
<i>Chukrasia tabularis</i>	Meliaceae					50	25	2	19					50	25	2	25
<i>Crypteronia paniculata</i>	Crypteroniaceae					50	50	1	24								
<i>Cyathea spinulosa</i>	Cyatheaceae	25	25	1	13									25	25	1	13
<i>Duabanga grandiflora</i>	Lythraceae	50	50	1	37	50	50	1	28	25	50	1	21	50	50	1	32
<i>Endospermum chinense</i>	Euphorbiaceae									25	25	1	14	25	25	1	13
<i>Erythrina suberosa</i>	Fabaceae	25	25	1	15												
<i>Ficus roxburghii</i>	Moraceae													75	50	2	50
<i>Ficus semicordata</i>	Moraceae	50	50	1	31	50	50	1	31	50	25	2	29				
<i>Gmelina arborea</i>	Lamiaceae	25	25	1	14					25	25	1	16	25	25	1	13
<i>Kydia calycina</i>	Malvaceae	50	50	1	35					50	25	2	29				
<i>Oroxylum indicum</i>	Bignoniaceae									25	25	1	13				
<i>Pandanus nepalensis</i>	Pandanaceae													25	25	1	13
<i>Phoebe goalparensis</i>	Lauraceae	25	25	1	15									25	25	1	13
<i>Pterospermum acerifolium</i>	Malvaceae					25	25	1	11					25	25	1	12
<i>Sapium baccatum</i>	Euphorbiaceae									25	25	1	15	25	25	1	13
<i>Schima wallichii</i>	Theaceae					50	50	1	21								
<i>Talauma hodgsonii</i>	Magnoliaceae									25	25	1	13				
<i>Terminalia myriocarpa</i>	Combretaceae	50	50	1	44	75	50	2	40	75	25	3	56	50	25	2	35
<i>Trema orientalis</i>	Ulmaceae	50	50	1	24												
<b>Total</b>		<b>475</b>				<b>650</b>				<b>500</b>				<b>525</b>			

### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Apluda mutica</i>	Poaceae	550	38	4	14	600	38	4	18								
<i>Bambusa pallida</i>	Poaceae	800	25	8	31	800	38	5	58	300	25	3	15	850	25	9	38
<i>Bambusa tulda</i>	Poaceae					550	38	4	33	350	25	4	15	400	25	4	15
<i>Boehmeria macrophylla</i>	Urticaceae	700	38	5	16	550	50	3	21								
<i>Buddleia asiatica</i>	Buddleiaceae									400	25	4	12	200	13	4	7
<i>Calamus erectus</i>	Arecaceae	300	25	3	9					400	25	4	19	350	25	4	13
<i>Calamus flagellum</i>	Arecaceae	350	25	4	11					650	38	4	29	400	25	4	14
<i>Calamus latifolius</i>	Arecaceae									400	25	4	13				
<i>Calamus sp</i>	Arecaceae					300	13	6	9								
<i>Callicarpa sp.</i>	Verbenaceae	300	25	3	9												
<i>Calotropis procera</i>	Apocynaceae					100	13	2	5	250	25	3	10	350	25	4	13
<i>Cassia mimosoides</i>	Leguminoceae					550	25	6	16	150	25	2	8	50	13	1	4
<i>Cassia occidentalis</i>	Caesalpiniaceae					150	38	1	12								
<i>Clerodendrum serratum</i>	Verbenaceae	100	13	2	4					50	13	1	3				
<i>Dendrocalamus hamiltonii</i>	Poaceae	2250	50	11	93					600	50	3	46	1100	38	7	57
<i>Girardinia diversifolia</i>	Urticaceae	350	25	4	9	500	25	5	15								
<i>Imperata arundinacea</i>	Poaceae	650	50	3	18	400	38	3	16								
<i>Jatropha sp</i>	Euphorbeacea													50	13	1	4
<i>lactuca indica</i>	Asteraceae	300	38	2	12	350	38	2	15	300	25	3	10				
<i>Lasianthus hookeri</i>	Rubiacea													50	13	1	4
<i>Livistona jenkinsiana</i>	Arecaceae	700	50	4	21	200	13	4	7	300	38	2	16				
<i>Melastoma malabathricum</i>	Melastomataceae									300	25	3	10				
<i>Musa acuminata</i>	Musaceae	1150	38	8	32	800	13	16	47	750	25	8	43	800	25	8	42
<i>Musa balbisiana</i>	Musaceae									600	25	6	32	900	25	9	50
<i>Musa sp</i>	Musaceae					500	13	10	21								
<i>Opuntia sp</i>	Cactaceae					50	13	1	4					50	13	1	4
<i>Osbeckia nepalensis</i>	Melastomataceae									50	13	1	3				
<i>Oxyspora paniculata</i>	Melastomataceae	550	38	4	15					50	13	1	3	50	13	1	4
<i>Pinanga gracilis</i>	Arecaceae													50	13	1	4
<i>Randia dumetorum</i>	Rubiacea									50	13	1	3	50	13	1	4
<i>Saccharum spontaneum</i>	Poaceae									50	13	1	3	100	13	2	5
<i>Solanum erianthum</i>	Solanacea	50	13	1	3					50	13	1	3	50	13	1	4
<i>Solanum torvum</i>	Solanacea	50	13	1	3												
<i>Triumfetta pilosa</i>	Tiliacea					100	13	2	5					100	13	2	5
<i>Xanthium sp.</i>	Asteraceae													100	13	2	5
<b>Total</b>		<b>9150</b>				<b>6500</b>				<b>6050</b>				<b>6050</b>			

**Phytosociological characters of herb species (rainy season) at different sampling locations**

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Abroma augusta</i>	Malvaceae	2500	10	3	7					3500	15	2	10	3000	10	3	9
<i>Acacia pinata</i>	Mimosaceae	5000	25	2	13	3000	15	2	11	4500	15	3	12	4000	15	3	14
<i>Adiantum caudatum</i>	Pteridaceae	17000	60	3	42	5500	30	2	30	6500	25	3	24	5500	15	4	31
<i>Ageratum conyzoides</i>	Asteraceae	10500	55	2	27	8000	35	2	37	9000	35	3	45	7500	20	4	38
<i>Agrotis sp</i>	Poaceae	2000	15	1	5												
<i>Alocasia fallax</i>	Araceae	2500	10	3	9	3500	15	2	17	3000	20	2	20	2000	10	2	16
<i>Alpinia allughas</i>	Zingiberaceae	3500	10	4	40	1500	10	2	13	2000	20	1	19	3000	15	2	21
<i>Alpinia malaccensis</i>	Zingiberaceae	3000	15	2	18	2500	15	2	19	3000	20	2	22	3500	20	2	25
<i>Amaranthus spinosus</i>	Amaranthaceae	2000	10	2	5	2500	10	3	8	1000	20	1	8				
<i>Amaranthus viridis</i>	Amaranthaceae	1000	10	1	3	1500	10	2	5	3000	15	2	9	1500	15	1	8
<i>Anaphalis sp</i>	Asteraceae	2500	15	2	6	3500	15	2	10								
<i>Arundina graminifolia</i>	Orchidaceae					3500	10	4	10	4000	15	3	13				
<i>Bidens bipinnata</i>	Asteraceae					3500	10	4	8	6000	15	4	15	1500	10	2	6
<i>Coleus sp</i>	Lamiaceae	4500	10	5	7									6000	15	4	15
<i>Colocasia antiquorum</i>	Araceae	3000	10	3	10	4000	10	4	11	3500	15	2	12	3500	20	2	16
<i>Colocasia sp</i>	Araceae	2000	15	1	10	2500	15	2	9								
<i>Commelina benghalensis</i>	Commelinaceae	2000	10	2	4												
<i>Crassocephalum crepidioides</i>	Asteraceae	1500	10	2	4												
<i>Cynodon dactylon</i>	Poaceae	5000	10	5	7	3000	10	3	7	1500	5	3	4	3500	10	4	9
<i>Dioscorea alata</i>	Dioscoreaceae	3500	10	4	7	3500	10	4	8	2000	5	4	5				
<i>Drymaria diandra</i>	Caryophyllaceae	3000	20	2	7									1500	5	3	4
<i>Euphorbia hirta</i>	Euphorbiaceae	2000	10	2	4												
<i>Ficus scandens</i>	Moraceae	3000	10	3	6												
<i>Girardiana diversifolia</i>	Urticaceae	3000	15	2	8	3500	15	2	20	4500	15	3	19	2500	10	3	8
<i>Hyptis suaveolens</i>	Lamiaceae									2000	10	2	6	2500	5	5	6
<i>Impatiens acuminata</i>	Ranunculaceae					1500	10	2	5								
<i>Mikania micrantha</i>	Asteraceae	5000	20	3	9	3500	20	2	11	4000	15	3	10	4500	20	2	14
<i>Nephrolepis cordifolia</i>	Polypodiaceae									2000	10	2	6				
<i>Oxalis Corniculata</i>	Oxalidaceae	2500	10	3	5	2000	10	2	6	1000	5	2	3	1500	5	3	5
<i>Pilea pumila</i>	Urticaceae	1500	10	2	4	3000	10	3	7	3500	10	4	8	4000	10	4	9
<i>Piper sp</i>	Piperaceae	2500	30	1	12	1000	5	2	3								
<i>Pteris quadriaurita</i>	Pteridaceae	5500	15	4	8	4000	10	4	8	4500	10	5	9	3500	10	4	9
<i>Rubia cordifolia</i>	Rubiaceae									2000	5	4	5				
<i>Solanum indicum</i>	Solanaceae	1500	10	2	4	1000	5	2	3								
<i>Solanum nigrum</i>	Solanaceae													4000	15	3	12
<i>Spilanthes paniculata</i>	Asteraceae	8000	25	3	15	6000	15	4	18	7000	15	5	18	7500	25	3	25
<i>Tinospora cordifolia</i>	Menispermaceae					2500	10	3	7								
<b>Total</b>		<b>110500</b>				<b>79500</b>				<b>83000</b>				<b>76000</b>			

Site Code	Site Description
S1	Left Bank downstream near Sippi Village
S2	Right Bank near Dam site
S3	Right Bank Upstream near Marah Village
S4	Right Bank near Naccho Village

## 7. Site- Lower Subansiri

### Phytosociological characters of tree species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Albezia lebbek</i>	Mimosaceae	75	50	2	32	75	50	2	56	25	25	1	20	25	25	1	23
<i>Albezia lucida</i>	Mimosaceae													50	50	1	54
<i>Albezia sp</i>	Mimosaceae									50	50	1	44				
<i>Bauhinia purpurea</i>	Fabaceae	75	50	2	34	50	50	1	36	75	50	2	71	25	50	1	28
<i>Bombex ceiba</i>	Malvaceae	50	50	1	34	50	50	1	39								
<i>Castanopsis indica</i>	Fagaceae	25	25	1	11	25	25	1	16	50	25	2	35				
<i>Duabanga grandiflora</i>	Lythraceae	50	25	2	28	50	25	2	34	50	25	2	47	50	25	2	50
<i>Ficus sp</i>	Moraceae					75	50	2	53								
<i>Macranga sp</i>	Euphorbiaceae									50	50	1	43	25	50	1	30
<i>Oroxylum indicum</i>	Bignoniaceae	50	50	1	27	50	50	1	39	25	25	1	20				
<i>Pandenus nepalensis</i>	Pandanaceae									25	25	1	20	25	25	1	21
<i>Sapium sp</i>	Euphorbiaceae	50	50	1	25	50	25	2	26					25	25	1	19
<i>Syzygium cumini</i>	Myrtaceae	75	50	2	30												
<i>Terminalia myricarpa</i>	Bignoniaceae	75	50	2	48									100	50	2	74
<i>Toona ciliata</i>	Meliaceae	50	50	1	30												
<b>Total</b>		<b>575</b>				<b>425</b>				<b>350</b>				<b>325</b>			

### Phytosociological characters of shrub species at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Apluda mutica</i>	Poaceae	200	25	2	11	150	13	3	8	200	25	2	13	100	25	1	10
<i>Artimesia sp</i>	Asteraceae	150	13	3	6	200	25	2	10								
<i>Bamboosa pallida</i>	Poaceae	550	25	6	30	600	25	6	27	500	25	5	30	200	13	4	10
<i>Bohmeria macrophylla</i>	Articeae	300	38	2	17	200	13	4	7	250	13	5	9	200	25	2	12
<i>Calamus flagellum</i>	Arecaceae					900	25	9	59	1050	38	7	78	850	50	4	64
<i>Calamus sp</i>	Arecaceae	800	38	5	41	700	25	7	34	550	25	6	25	900	25	9	39
<i>Cassia occidentalis</i>	Caesalpiniaceae	450	38	3	26	200	25	2	12	100	13	2	6	100	25	1	10
<i>Chromolaena odorata</i>	Asteraceae					600	50	3	26	850	50	4	35	500	38	3	24

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Dendrocalamus sp</i>	Poaceae	1050	25	11	76	750	25	8	45	900	25	9	56	300	25	3	18
<i>Livistona jenkinsiana</i>	Arecaceae													200	25	2	13
<i>Musa sp</i>	Musaceae													600	38	4	80
<i>Mussaenda roxburghii</i>	Rubiaceae	150	38	1	13	300	50	2	19	200	25	2	13	200	25	2	13
<i>Oxyspora paniculata</i>	Melastomataceae	200	25	2	11	250	25	3	11	300	25	3	14				
<i>Parthenium sp</i>	Asteraceae	850	50	4	30	750	38	5	25	200	13	4	8	100	13	2	6
<i>Ribes sp</i>	Saxifragaceae	150	13	3	6	150	13	3	6	100	13	2	6				
<i>Smilax sp</i>	Smilacaceae									50	13	1	5				
<i>Solanum sp</i>	Solanaceae	200	25	2	11	150	13	3	6								
<i>Zizhipus sp</i>	Rhamnaceae	300	25	3	21	50	13	1	5								
<b>Total</b>		<b>5350</b>				<b>5950</b>				<b>5250</b>				<b>4250</b>			

### Phytosociological characters of herb species (rainy season) at different sampling locations

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Achyranthes bidentata</i>	Amaranthaceae					3000	5	6	9					3000	10	3	8
<i>Adiantum philippense</i>	Pteridaceae									5500	15	4	14				
<i>Ageratina adenophora</i>	Asteraceae	6000	30	2	29	3500	20	2	16	8500	30	3	39	2500	20	1	11
<i>Ageratum conyzoides</i>	Asteraceae	6500	35	2	34	9500	40	2	49	7000	25	3	31	11500	35	3	43
<i>Alocasia fallax</i>	Araceae	2000	15	1	30					3500	15	2	45				
<i>Amaranthus spinosus</i>	Amaranthaceae	2500	25	1	15	2000	10	2	13	3500	15	2	14	5500	20	3	17
<i>Anaphalis sp</i>	Asteraceae	2500	10	3	7	2500	5	5	6	2500	10	3	7	2500	10	3	6
<i>Artemisia indica</i>	Asteraceae	1500	10	2	6	2000	5	4	6	1500	10	2	6	1500	5	3	4
<i>Artimesia parviflora</i>	Asteraceae	2500	10	3	7	2500	5	5	7	2500	10	3	8	2000	5	4	5
<i>Begonia nepalensis</i>	Begoniaceae									1000	5	2	3				
<i>Bidens biternata</i>	Asteraceae	2000	5	4	5					2000	5	4	5				
<i>Bidens pilosa</i>	Asteraceae					2000	5	4	5					2000	5	4	4
<i>Borreria articularis</i>	Rubiacea	1000	5	2	3												
<i>Chenopodium sp</i>	Chenopodiaceae													3500	10	4	8
<i>Colocasia esculenta</i>	Araceae	1500	15	1	15	1500	15	1	22	1500	15	1	16	3000	15	2	15
<i>Costos speciosus</i>	Costaceae	2500	10	3	7	3000	10	3	10	2500	10	3	8				
<i>Cynodon dactylon</i>	Poacea	4000	10	4	9	2000	10	2	8	5500	10	6	11	2500	10	3	7
<i>Cyperus irria</i>	Cyperaceae	1500	5	3	4												
<i>Diplazium esculentum</i>	Athyriaceae									4000	15	3	12				
<i>Elatostema sessile</i>	Urticaceae	3500	15	2	14	4000	15	3	20					4000	15	3	14
<i>Embelia ribes</i>	Myrsinaceae	3500	10	4	9	1500	10	2	8					1500	10	2	6
<i>Eupatorium sp</i>	Asteraceae	5000	15	3	15	7500	15	5	24	4000	10	4	10	5500	15	4	15
<i>Fagopyrum dibotris</i>	Polygonaceae					2000	5	4	5					1500	5	3	4
<i>Hedychium spicatum</i>	Zingiberaceae									1500	10	2	11				

Scientific Name	Family	S1				S2				S3				S4			
		Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
<i>Lucus sp</i>	Burseraceae	3000	10	3	8	3000	10	3	10	4000	10	4	10	3500	10	4	9
<i>Mikania micrantha</i>	Asteraceae	4000	15	3	11	4000	15	3	14	2000	10	2	7	6000	15	4	14
<i>Oxalis Corniculata</i>	Oxalidaceae	11000	20	6	32	11500	20	6	44	4000	5	8	7	11000	25	4	26
<i>Persicaria chinensis</i>	Polygonaceae									1500	5	3	4				
<i>Pteridium aquilinum</i>	Pteridaceae					2000	10	2	8					1000	5	2	3
<i>Pteridium sp</i>	Pteridaceae	4000	15	3	12					2000	10	2	7				
<i>Spilanthes paniculata</i>	Asteraceae	10500	20	5	28	5500	10	6	16	8500	20	4	25	17000	40	4	69
<i>Thysanolaena maxima</i>	Poaceae													2000	5	4	14
<b>Total</b>		<b>80500</b>				<b>74500</b>				<b>78500</b>				<b>92500</b>			

Site Code	Site Description
S1	Left bank near Dam Site
S2	Right bank down stream
S3	Right Bank upstream 1 km from Dam site
S4	Right Bank upstream 3 km from Dam site

## 8. Site- Nalo

### Phytosociological characters of tree species at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Ailanthus excelsa</i>	Simaroubaceae	25	25	1.00	18.45	50	50.00	1.00	49.52	50	50.00	1.00	40.32
2	<i>Albizia lucida</i>	Mimosaceae	50	50	1.00	39.43	75	75.00	1.00	71.09	75	75.00	1.00	55.02
3	<i>Butea monosperma</i>	Fabaceae	75	75	1.00	59.68	25	25.00	1.00	18.38	25	25.00	1.00	15.22
4	<i>Cyathea spinulosa</i>	Cyatheaceae	25	25	1.00	20.20	25	25.00	1.00	17.42	25	25.00	1.00	15.22
5	<i>Duabanga grandiflora</i>	Lythraceae	25	25	1.00	21.85	50	50.00	1.00	40.16	50	50.00	1.00	33.60
6	<i>Erythrina suberosa</i>	Fabaceae	50	50	1.00	33.69	50	50.00	1.00	37.24	50	50.00	1.00	41.92
7	<i>Gmelina arborea</i>	Lamiaceae	50	50	1.00	41.19								
8	<i>Terminalia myriocarpa</i>	Combretaceae	25	25	1.00	20.20	50	50.00	1.00	49.52	50	25.00	2.00	37.31
9	<i>Trema orientalis</i>	Ulmaceae	50	50	1.00	45.31								
10	<i>Ficus semicordata</i>	Moraceae					25	25.00	1.00	16.66	25	25.00	1.00	15.22
11	<i>Kydia calycina</i>	Malvaceae									50	50.00	1.00	46.16

### Phytosociological characters of shrub species at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Bambusa pallida</i>	Poaceae	550	50.00	2.75	53.80	1150	50.00	5.75	77.41	2200	37.50	14.67	89.44
2	<i>Boehmeria macrophylla</i>	Urticaceae	800	37.50	5.33	21.97								
3	<i>Calamus erectus</i>	Arecaceae	700	37.50	4.67	33.68	800	37.50	5.33	49.74	700	37.50	4.67	34.88

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
4	<i>Calamus flagellum</i>	Arecaceae	300	37.50	2.00	13.37	700	37.50	4.67	42.28	300	25.00	3.00	14.25
5	<i>Callicarpa sp.</i>	Verbenaceae	350	37.50	2.33	16.92								
6	<i>Clerodendrum serratum</i>	Verbenaceae	300	37.50	2.00	23.00								
7	<i>Dendrocalamus hamiltonii</i>	Poaceae	300	25.00	3.00	12.32	300	50.00	1.50	32.73	350	37.50	2.33	22.20
8	<i>Girardinia diversifolia</i>	Urticaceae	600	37.50	4.00	18.33								
9	<i>Livistona jenkinsiana</i>	Arecaceae	400	25.00	4.00	12.07	300	25.00	3.00	16.27				
10	<i>lactuca indica</i>	Asteraceae	700	37.50	4.67	20.28								
11	<i>Musa acuminata</i>	Musaceae	550	37.50	3.67	36.71	600	37.50	4.00	24.71	300	50.00	1.50	27.94
12	<i>Oxyspora paniculata</i>	Melastomataceae	350	37.50	2.33	18.63					600	50.00	3.00	25.52
13	<i>Solanum torvum</i>	Solanaceae	600	37.50	4.00	18.90	400	37.50	2.67	20.01	400	37.50	2.67	18.08
14	<i>Alpinia sp</i>	Zingiberaceae					300	25.00	3.00	14.49	700	50.00	3.50	53.43
15	<i>Musseanda roxburghii</i>	Rubiaceae					350	37.50	2.33	22.35	300	25.00	3.00	14.25

#### Phytosociological characters of herb species (rainy season) at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Abroma augusta</i>	Malvaceae	2000	5.00	4.00	3.73								
2	<i>Adiantum caudatum</i>	Pteridaceae	10500	40.00	2.63	27.99	1000	5.00	2.00	3.03	1500	5.00	3.00	3.58
3	<i>Ageratum conyzoides</i>	Asteraceae	14000	45.00	3.11	36.94	12000	30.00	4.00	35.08	11500	30.00	3.83	31.46
4	<i>Agrotis sp</i>	Poaceae	2000	15.00	1.33	6.23	16500	35.00	4.71	50.16	17000	45.00	3.78	52.47
5	<i>Alocasia fallax</i>	Araceae	2000	10.00	2.00	6.37	5500	20.00	2.75	23.91	1500	15.00	1.00	7.18
6	<i>Alocasia sp</i>	Araceae									2500	10.00	2.50	8.68
7	<i>Alpinia allughas</i>	Zingiberaceae	3500	10.00	3.50	24.56	3500	10.00	3.50	45.61	3000	10.00	3.00	42.60
8	<i>Alpinia malaccensis</i>	Zingiberaceae	3000	15.00	2.00	21.61								
9	<i>Amaranthus spinosus</i>	Amaranthaceae	2000	10.00	2.00	7.03					3500	15.00	2.33	17.74
10	<i>Amaranthus viridis</i>	Amaranthaceae	1000	10.00	1.00	3.72	1500	10.00	1.50	6.47	2000	10.00	2.00	6.64
11	<i>Anaphalis sp</i>	Asteraceae	3000	15.00	2.00	7.24								
12	<i>Arundina graminifolia</i>	Orchidaceae									1000	5.00	2.00	3.02
13	<i>Bidens bipinnata</i>	Asteraceae					3000	5.00	6.00	5.58	3000	5.00	6.00	5.24
14	<i>Borreria articularis</i>	Rubiaceae					1500	10.00	1.50	5.97	2500	10.00	2.50	6.67
15	<i>Chrysopogon aciculatus</i>	Poaceae									1000	5.00	2.00	2.80
16	<i>Coleus sp.</i>	Lamiaceae	3000	10.00	3.00	7.38								
17	<i>Colocasia antiquorum</i>	Araceae	3000	10.00	3.00	18.67								
18	<i>Colocasia esculenta</i>	Araceae					1000	10.00	1.00	5.89	2500	10.00	2.50	16.73
19	<i>Commelina benghalensis</i>	Commelinaceae	2500	10.00	2.50	8.31	1500	5.00	3.00	3.83	1500	10.00	1.50	5.19
20	<i>Crassocephalum crepidioides</i>	Asteraceae	1500	10.00	1.50	4.48								
21	<i>Cyanotis vaga</i>	Poaceae									5500	10.00	5.50	12.02
22	<i>Cynodon dactylon</i>	Poaceae	6000	10.00	6.00	10.41	6000	5.00	12.00	10.60	6000	10.00	6.00	11.75
23	<i>Dioscorea alata</i>	Dioscoreaceae	4000	10.00	4.00	9.05								

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
24	<i>Drymaria diandra</i>	Caryophyllaceae	3000	20.00	1.50	8.49								
25	<i>Ficus scandens</i>	Moraceae	3000	10.00	3.00	7.38								
26	<i>Girardiana diversifolia</i>	Urticaceae	3000	15.00	2.00	8.63								
27	<i>Impatiens acuminata</i>	Ranunculaceae					3000	10.00	3.00	7.73	3000	15.00	2.00	8.84
28	<i>Mikania micrantha</i>	Asteraceae	6000	20.00	3.00	11.88	3000	5.00	6.00	5.94	3000	10.00	3.00	7.23
29	<i>Oxalis Corniculata</i>	Oxalidaceae	3000	10.00	3.00	6.35	3000	5.00	6.00	5.58	3000	5.00	6.00	5.24
30	<i>Pilea pumila</i>	Urticaceae	1500	15.00	1.00	6.09	3000	15.00	2.00	9.51	6000	15.00	4.00	12.18
31	<i>Piper spp</i>	Piperaceae	3000	30.00	1.00	19.20					1500	15.00	1.00	6.80
32	<i>Pteridium sp</i>	Pteridaceae					2500	10.00	2.50	6.78	3000	10.00	3.00	7.75
33	<i>Pteris quadriaurita</i>	Pteridaceae	6000	15.00	4.00	12.32	1500	15.00	1.00	7.40	3000	30.00	1.00	13.68
34	<i>Selaginella sp</i>	Pteridaceae	1500	5.00	3.00	2.82	3000	30.00	1.00	14.87				
35	<i>Solanum indicum</i>	Solanaceae									2000	5.00	4.00	4.51
36	<i>Spilanthes paniculata</i>	Asteraceae	6000	25.00	2.40	13.13	5500	10.00	5.50	12.59				
37	<i>Stenochlaena palustris</i>	Blechnaceae					1000	5.00	2.00	3.03				
38	<i>Thysanolaena sp</i>	Poaceae					1000	5.00	2.00	3.24				
39	<i>Tinospora cordifolia</i>	Menispermaceae					3500	15.00	2.33	18.13				
40	<i>Vitis latifolia</i>	Vitaceae					2500	10.00	2.50	9.08				

#### Site Code

#### Site Description

S1	Downstream of damsite
S2	Dam site
S3	Upstream of damsite

### 9. Site- Naba

#### Phytosociological characters of tree species at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Ailanthus excelsa</i>	Simaroubaceae	25	25	1.00	26.23	25.00	25.00	1.00	28.09				
2	<i>Albizia lucida</i>	Mimosaceae	25	25	1.00	33.88	50.00	75.00	0.67	72.72	25	50.00	0.50	47.91
3	<i>Butea monosperma</i>	Fabaceae	25	25	1.00	40.79	25.00	25.00	1.00	23.33	50	75.00	0.67	66.82
4	<i>Cyathea spinulosa</i>	Cyatheaceae	25	25	1.00	27.98	75.00	50.00	1.50	65.20	50	25.00	2.00	27.46
5	<i>Duabanga grandiflora</i>	Lythraceae	25	25	1.00	29.63								
6	<i>Erythrina suberosa</i>	Fabaceae					50.00	25.00	2.00	37.23	50	25.00	2.00	27.46
7	<i>Ficus semicordata</i>	Moraceae					25.00	25.00	1.00	21.23	50	50.00	1.00	44.68
8	<i>Gmelina arborea</i>	Lamiaceae	25	25	1.00	35.64								
9	<i>Kydia calycina</i>	Malvaceae	25	25	1.00	28.13					50	50.00	1.00	58.20
10	<i>Terminalia myriocarpa</i>	Combretaceae	25	25	1.00	27.98	50	25	2	52.20	50	25.00	2.00	27.46
11	<i>Trema orientalis</i>	Ulmaceae	50	25	2.00	49.75								



**Phytosociological characters of shrub species at different sampling locations**

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Boehmeria macrophylla</i>	Urticaceae	550	50.00	2.75	56.23								
2	<i>Calamus erectus</i>	Arecaceae	800	37.50	5.33	25.51	600	37.50	4.00	33.13	700	37.50	4.67	30.11
3	<i>Calamus flagellum</i>	Arecaceae	700	37.50	4.67	36.58	950	37.50	6.33	36.73	300	25.00	3.00	13.01
4	<i>Callicarpa sp.</i>	Verbenaceae	300	37.50	2.00	15.61					350	37.50	2.33	17.98
5	<i>Clerodendrum serratum</i>	Verbenaceae	350	37.50	2.33	19.22								
6	<i>Dendrocalamus hamiltonii</i>	Poaceae	300	37.50	2.00	24.98	350	37.50	2.33	29.38	300	50.00	1.50	24.26
7	<i>Girardinia diversifolia</i>	Urticaceae	300	25.00	3.00	14.03								
8	<i>Livistona jenkinsiana</i>	Arecaceae	600	37.50	4.00	31.12								
9	<i>Musa acuminata</i>	Musaceae	400	25.00	4.00	14.09								
10	<i>Oxyspora paniculata</i>	Melastomataceae	700	37.50	4.67	23.56					400	37.50	2.67	16.98
11	<i>Solanum torvum</i>	Solanaceae	550	37.50	3.67	39.06	550	37.50	3.67	23.04	200	25.00	2.00	10.52
12	<i>Bambusa pallida</i>	Poaceae					2250	50.00	11.25	124.19	2200	37.50	14.67	114.29
13	<i>Alpinia sp</i>	Zingiberaceae					400	25.00	4.00	15.96	700	50.00	3.50	33.44
14	<i>Musseanda roxburghii</i>	Rubiacea					350	37.50	2.33	20.83	600	50.00	3.00	23.94
15	<i>Rubus sp</i>	Rubiacea					400	25.00	4.00	16.74	300	25.00	3.00	15.48

**Phytosociological characters of herb species (rainy season) at different sampling locations**

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Adiantum caudatum</i>	Pteridaceae	10500	40.00	2.63	37.05	1000	5.00	2.00	3.13				
2	<i>Ageratum conyzoides</i>	Asteraceae	14000	45.00	3.11	48.36	12000	30.00	4.00	31.64	22500	35.00	6.43	41.26
3	<i>Agrotis sp</i>	Poaceae									11500	30.00	3.83	35.20
4	<i>Alocasia fallax</i>	Araceae	2000	15.00	1.33	8.63	6000	35.00	1.71	31.36	11000	45.00	2.44	51.13
5	<i>Alocasia sp</i>	Araceae									1500	15.00	1.00	8.50
6	<i>Alpinia malaccensis</i>	Zingiberaceae	2000	10.00	2.00	8.44	5500	20.00	2.75	20.23				
7	<i>Amaranthus spinosus</i>	Amaranthaceae	3500	10.00	3.50	30.03	3500	10.00	3.50	30.49				
8	<i>Amaranthus viridis</i>	Amaranthaceae	3000	15.00	2.00	26.84					2500	10.00	2.50	9.80
9	<i>Anaphalis sp</i>	Asteraceae	2000	10.00	2.00	9.23					3000	10.00	3.00	45.32
10	<i>Arundina graminifolia</i>	Orchidacea									3500	15.00	2.33	19.62
11	<i>Bidens bipinnata</i>	Asteraceae					1500	10.00	1.50	6.27				
12	<i>Borreria articularis</i>	Rubiaceae					3000	5.00	6.00	5.58	2000	10.00	2.00	7.64
13	<i>Chrysopogon aciculatus</i>	Araceae									1000	5.00	2.00	3.51
14	<i>Coleus sp.</i>	Lamiaceae	1000	10.00	1.00	5.19								
15	<i>Colocasia esculenta</i>	Araceae					1500	10.00	1.50	5.97				
16	<i>Commelina benghalensis</i>	Commelinaceae	3000	15.00	2.00	9.95					3000	5.00	6.00	5.90
17	<i>Crassocephalum crepidioides</i>	Asteraceae	3000	10.00	3.00	9.76								
18	<i>Cyanotis vaga</i>	Commelinaceae									2500	10.00	2.50	7.70

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
19	<i>Cynodon dactylon</i>	Poaceae	3000	10.00	3.00	23.03	1000	10.00	1.00	5.69	1000	5.00	2.00	3.28
20	<i>Drymaria diandra</i>	Caryophyllaceae	2500	10.00	2.50	10.79								
21	<i>Ficus scandens</i>	Moraceae	1500	10.00	1.50	6.15								
22	<i>Impatiens acuminata</i>	Ranunculaceae									2500	10.00	2.50	18.22
23	<i>Mikania micrantha</i>	Asteraceae	6000	10.00	6.00	13.70	1500	5.00	3.00	3.84				
24	<i>Oxalis Corniculata</i>	Oxalidaceae	4000	10.00	4.00	11.86	6000	5.00	12.00	9.97	1500	10.00	1.50	6.11
25	<i>Pilea pumila</i>	Urticaceae					3000	10.00	3.00	7.72	5500	10.00	5.50	13.39
26	<i>Piper spp</i>	Urticaceae	3000	20.00	1.50	11.76								
27	<i>Polygonum capitatum</i>	Polygonaceae					3000	5.00	6.00	5.58	6000	10.00	6.00	13.13
28	<i>Pteridium sp</i>	Dennstaedtiaceae					3000	5.00	6.00	5.80				
29	<i>Pteris quadriaurita</i>	Pteridaceae	3000	10.00	3.00	9.76								
30	<i>Solanum indicum</i>	Solanaceae									3000	15.00	2.00	10.29
31	<i>Spilanthes paniculata</i>	Asteraceae	9000	15.00	6.00	19.47	27500	40.00	6.88	96.70				
32	<i>Stenochlaena palustris</i>	Blechnaceae					2500	10.00	2.50	6.92				
33	<i>Thysanolaena sp</i>	Poaceae					1500	15.00	1.00	7.68				
34	<i>Vitis latifolia</i>	Vitaceae					3000	30.00	1.00	15.41				

#### Site Code

S1  
S2  
S3

#### Site Description

Downstream of damsite  
Dam site  
Upstream of damsite

### 10. Site- Niare

#### Phytosociological characters of tree species at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Ailanthus excelsa</i>	Simaroubaceae	50	25.00	2.00	36.18	50	25.00	2.00	57.94				
2	<i>Albizia lucida</i>	Mimosaceae	25	25.00	1.00	35.30								
3	<i>Butea monosperma</i>	Fabaceae	25	25.00	1.00	42.72	50	25.00	2.00	89.78	50	25.00	2.00	61.88
4	<i>Cyathea spinulosa</i>	Cyatheaceae	50	25.00	2.00	38.05	50	25.00	2.00	48.64	50	25.00	2.00	40.63
5	<i>Duabanga grandiflora</i>	Lythraceae	25	25.00	1.00	30.73								
6	<i>Kydia calycina</i>	Malvaceae	25	25.00	1.00	29.13					50	25.00	2.00	61.56
7	<i>Gmelina arborea</i>	Lamiaceae	25	25.00	1.00	37.19								
8	<i>Trema orientalis</i>	Ulmaceae	50	25.00	2.00	50.70								
9	<i>Erythrina suberosa</i>	Fabaceae					25	25.00	1.00	39.87	50	25.00	2.00	41.99
10	<i>Ficus semicordata</i>	Moraceae					25	25.00	1.00	30.33	50	25.00	2.00	46.97
11	<i>Terminalia myriocarpa</i>	Combretaceae					25	25.00	1.00	33.43	50	25.00	2.00	46.97

### Phytosociological characters of shrub species at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Alpinia sp</i>	Zingiberaceae					400	37.50	2.67	21.19	800	37.50	5.33	29.98
2	<i>Bambusa pallida</i>	Poaceae					1650	37.50	11.00	108.33	4450	37.50	29.67	132.40
3	<i>Boehmeria macrophylla</i>	Urticaceae	550	50.00	2.75	35.43								
4	<i>Calamus erectus</i>	Arecaceae					600	25.00	6.00	27.86	850	37.50	5.67	30.57
5	<i>Calamus flagellum</i>	Arecaceae	800	37.50	5.33	64.77	950	25.00	9.50	31.75	400	25.00	4.00	14.12
6	<i>Clerodendrum serratum</i>	Verbenaceae	700	37.50	4.67	47.03	600	50.00	3.00	28.52				
7	<i>Dendrocalamus hamiltonii</i>	Poaceae	300	37.50	2.00	18.09	350	25.00	3.50	23.55	300	50.00	1.50	25.50
8	<i>Girardinia diversifolia</i>	Urticaceae	350	37.50	2.33	23.16								
9	<i>Livistona jenkinsiana</i>	Arecaceae	300	37.50	2.00	31.86								
10	<i>Musa acuminata</i>	Musaceae	300	25.00	3.00	16.90	400	37.50	2.67	24.60	300	25.00	3.00	15.39
11	<i>Mussenda roxburghii</i>	Rubiaceae	300	37.50	2.00	17.94	300	25.00	3.00	15.49	600	37.50	4.00	19.79
12	<i>Oxyspora paniculata</i>	Melastomataceae	600	37.50	4.00	28.28					400	37.50	2.67	17.11
13	<i>Solanum torvum</i>	Solanaceae	400	25.00	4.00	16.53	550	25.00	5.50	18.72	200	12.50	4.00	6.91
14	<i>Calamus sp</i>	Arecaceae									150	12.50	3.00	8.23

### Phytosociological characters of herb species (rainy season) at different sampling locations

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
1	<i>Adiantum caudatum</i>	Pteridaceae					1000	15.00	0.67	6.52				
2	<i>Ageratum conyzoides</i>	Asteraceae	14000	50.00	2.80	58.49	12000	30.00	4.00	28.36	22500	40.00	5.63	48.86
3	<i>Alocasia fallax</i>	Araceae	2000	15.00	1.33	10.02	6000	35.00	1.71	29.50	11000	30.00	3.67	31.52
4	<i>Alpinia allughas</i>	Zingiberaceae					5500	20.00	2.75	18.67				
5	<i>Alpinia malaccensis</i>	Zingiberaceae	2000	10.00	2.00	9.81								
6	<i>Amaranthus spinosus</i>	Amaranthaceae	3500	10.00	3.50	34.73								
7	<i>Amaranthus viridis</i>	Amaranthaceae	3000	20.00	1.50	33.11	3500	25.00	1.40	35.23	2500	20.00	1.25	14.40
8	<i>Bidens bipinnata</i>	Asteraceae					1500	10.00	1.50	5.77				
9	<i>Coleus sp.</i>	Lamiaceae	2000	10.00	2.00	10.72								
10	<i>Colocasia esculenta</i>	Araceae					3000	5.00	6.00	4.79				
11	<i>Commelina benghalensis</i>	Commelinaceae	1000	10.00	1.00	6.02					4000	20.00	2.00	15.13
12	<i>Crassocephalum crepidioides</i>	Asteraceae	3000	15.00	2.00	11.60								
13	<i>Cynodon dactylon</i>	Poaceae	3000	10.00	3.00	11.39	1500	10.00	1.50	5.47	3500	10.00	3.50	9.66
14	<i>Drymaria diandra</i>	Caryophyllaceae	4000	10.00	4.00	28.23								
15	<i>Ficus scandens</i>	Moraceae	2500	30.00	0.83	20.88								
16	<i>Mikania micrantha</i>	Asteraceae					1000	10.00	1.00	5.31				
17	<i>Oxalis Corniculata</i>	Oxalidaceae	1500	10.00	1.50	7.15	16500	35.00	4.71	28.34				
18	<i>Pilea pumila</i>	Urticaceae					6000	5.00	12.00	8.46				
19	<i>Piper spp</i>	Piperaceae	6000	10.00	6.00	16.11								
20	<i>Pteris quadriaurita</i>	Pteridaceae	4000	10.00	4.00	13.87	3000	10.00	3.00	6.86	3500	10.00	3.50	11.04

Sl. No.	Scientific Name	Family	S1				S2				S3			
			Den	Fre	Ab	IVI	Den	Fre	Ab	IVI	Den	Fre	Ab	IVI
21	<i>Spilanthes paniculata</i>	Asteraceae	12000	20.00	6.00	27.86	17500	30.00	5.83	27.63	17500	10.00	17.50	103.42
22	<i>Thysanolaena sp</i>	Poaceae					3000	5.00	6.00	4.79				
23	<i>Vitis latifolia</i>	Vitaceae					27500	25.00	11.00	84.30				
24	<i>Alocasia sp</i>	Araceae									1500	15.00	1.00	13.08
25	<i>Arundina graminifolia</i>	Orchidacea									1500	10.00	1.50	12.81
26	<i>Borreria articularis</i>	Rubiaceae									1500	15.00	1.00	10.48
27	<i>Chrysopogon aciculatus</i>	Araceae									1000	10.00	1.00	6.58
28	<i>Cyanotis vaga</i>	Commelinaceae									3500	15.00	2.33	11.98
29	<i>Impatiens acuminata</i>	Balsaminaceae									3500	10.00	3.50	11.04

Code	Site Description
S1	Downstream of damsite
S2	Dam site
S3	Upstream of damsite

## **Annexure – 6.12**

### **List of Fauna reported in Subansiri Basin, Arunachal Pradesh**



### MAMMALS

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
1.	<i>Suncus murinus soccatus</i> House shrew	SORICIDAE	Arunachal Pradesh	A very variable species with a number of genetically distinct population
2.	<i>Suncus murinus grifithii</i> House shrew	SORICIDAE	Arunachal Pradesh	A very variable species with a number of genetically distinct population which almost behave like semispecies (Hasler et al. 1977)
3.	<i>Anourosorex squamipes</i> Szechuan Burrowing shrew	SORICIDAE	Arunachal Pradesh	
4.	<i>Euroscaptor micrura</i> Himalayan mole	TALPIDAE	Arunachal Pradesh	This speices was treated under the genus Talpa Linnaeus by Ellerman and Morrision-Soctt 1951, Honacki et al. 1982 and Corbet and Hill 1992. However, Abe et al. 1991 placed it under the genus Euroscaptor
5.	<i>Tupaia belangeri assamensis</i> Common Tree shrew	TUPAIIDAE	Arunachal Pradesh	Ellerman and Morrision-Scott 1951 considered belangeri as a subspecies of T. glis (Diard). However, on the basis of incomptable keryotypes, Elliot et al. 1969 and Arrighi et al. (1969), considered belangeri as a full species. The name was followed by corbet and Hill 1992 and Wilson (In Wilson and Reeder 1993)
6.	<i>Cynopterus brachyotis</i> Lesser dog faced fruit bat	PTEROPODIDAE	Arunachal Pradesh	There is difference of opinions as regard the allocation of different names under this speices (Corbet and Hill 1992, Wilson and Reeder 1993)

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
7.	<i>Cynopterus sphinx sphinx</i> Short nosed fruit bat	PTEROPODIDAE	Arunachal Pradesh	This species is most common frugivorous bat in India
8.	<i>Megaerops niphanae</i> Niphan's Tail less fruit bat	PTEROPODIDAE	Arunachal Pradesh	Some of the earlier records of <i>megaerops ecaudatus</i> Temminck from India, Thailand and Vietnam have been referred to <i>Megaerops niphanae</i> Yenbutra & Felten by Corbet & Hill (1992)
9.	<i>Rousettus leschenaulti leschenaulti</i> Fulvous fruit bat	PTEROPODIDAE	Arunachal Pradesh	Agrawal and Bhattacharyya (1977) recorded <i>R. amplexicaudatus</i> Geoffroy from Tripura on the basis of specimens collected by them. Rookmaaker and Bergmans (1981) considered the record to be more probably of <i>R.leschenaulti</i>
10.	<i>Sphaerias blanfordi</i> Blanford's fruit bat	PTEROPODIDAE	Arunachal Pradesh	This species has been reported from Mizoram (Mandal et al. 2000)
11.	<i>Eonycteris spelaea</i> Long tailed fruit bat	PTEROPODIDAE	Arunachal Pradesh	Only recently this species was found to be widely distributed in the greater parts of India (Bhat et al. 1980, Das et al. 1995, Mandal et al. 2000)
12.	<i>Macroglossus sobrinus sobrinus</i> Long-tongued fruit bat	PTEROPODIDAE	Arunachal Pradesh	Ellerman and Morrison-Scot (1951) treated <i>sobrinus</i> as a subspecies of <i>M. minimus</i> (Geoffroy). However, most of the recent authors (Lekagul and McNeely 1977, Honacki et al. 1982, Hill 1983, Corbet and Hill 1999, Koopman in



Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
				Wilson and Reeder (1993) considered the two as distinct species.
13.	<i>Taphozous nudiventris kachhensis</i> Naked-rumped Tomb bat	EMBALLONURIDAE	Arunachal Pradesh	Ellerman and Morrison-Scot (1951) considered <i>kachhensis</i> as a distinct species. Felten (1962) revised the group and concluded that <i>kachhensis</i> should be treated as subspecies of the widely distributed species <i>T. nudiventris</i> . This view was held by most of the recent workers (Including Corbet and Hill 1986, 1992, Koopman; In Wilson & Reeder 1993).
14.	<i>Megaderma lyra lyra</i> Indian false vampire	MEGADERMATIDAE	Arunachal Pradesh	Sinha (1977) after reviewing the species, concluded that the entire Indian population belonged to the nominate subspecies
15.	<i>Rhinolophus ferrumequinum tragatus</i> Greater Horseshoe bat	RHINOLOPHIDAE	Arunachal Pradesh	Nil
16.	<i>Rhinolophus lepidus lepidus</i> Blyth's Horseshoe bat	RHINOLOPHIDAE	Arunachal Pradesh	Corbet and Hill (1992) treated <i>R. monticola</i> Andersen as a synonym of <i>R. lepidus</i> Blyth
17.	<i>Rhinolophus rouxi rouxi</i> Peninsular Horseshoe bat	RHINOLOPHIDAE	Arunachal Pradesh	Lal (1983) reported a specimen of <i>Rhinolophus rouxi sinicus</i> Andersen from Arunachal Pradesh. The specimen is in fact, an immature one of the nominate subspecies
18.	<i>Hipposideros cineraceus</i> Least leaf nosed bat	HIPPOSIDERIDAE	Arunachal Pradesh	Nil

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
19.	<i>Hipposideros lankadiva</i> Indian Leaf-nosed Bat, Indian Roundleaf Bat	RHINOLOPHIDAE	Arunachal Pradesh	Nil
20.	<i>Hipposideros lorvatus leptophyllus</i> Leaf-nosed bat	RHINOLOPHIDAE	Arunachal Pradesh	Sinha 1999 synonymised subspecies grandis with leptophyllus
21.	<i>Hipposideros pomona gentilis</i>	RHINOLOPHIDAE	Arunachal Pradesh	Hill et al. 1986 revived the specific status of Pomona
22.	<i>Pipistrellus coromandra</i> Indian pipistrelle	VESPERTILIONIDIAE	Arunachal Pradesh	Nil
23.	<i>Scotomanes ornatus</i> Harlaquin bat	VESPERTILIONIDIAE	Arunachal Pradesh	Thomas (1921) described the population from Meghalaya as distinct subspecies viz. S. O. imbrencis but Das et al. 1995 synonymised imbrencis with the nominate subspecies
24.	<i>Scotophilus heathi</i> Greater yellow bat	VESPERTILIONIDIAE	Arunachal Pradesh	Ellereman and Morrision-Scott (1951) recognized two subspecies viz. S. H. Heathi and S. H. Belangeri from Indian range. Siddiqui (1961), however, synonymised belangeri with nominate subspecies
25.	<i>Tylonycteris pachypus fulvida</i> Club footed bat	VESPERTILIONIDIAE	Arunachal Pradesh	Its size is very near to pipistrellus mimus but skull is much flat so that it can be easily identified from P. mimus
26.	<i>Murina cyclotis cyclotis</i> Round-eared tube-nosed bat	VESPERTILIONIDIAE	Arunachal Pradesh	Within the Indian Union, <i>Murina cyclotis cyclotis</i> was known only from northeastern India. But Ghosh 1989 has recorded it from the Eastern Ghats of

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
				Andhra Pradesh, a substantial extension of range of distribution further south
27.	<i>Murina tubinaris</i> Scully's tube-nosed bat	VESPERTILIONIDAE	Arunachal Pradesh	Ellerman and Morrison-Scott 1950 listed tubinaris as a tentative subspecies of <i>M. huttoni</i> but Hill 1962, 1964 has shown that tubinaris should be treated as a species distinct from
28.	<i>Nycticebus coucang bengalensis</i> Slow loris	LORISIDAE	Arunachal Pradesh	Nil
29.	<i>Macaca assamensis assamensis</i> Assamese Macaque	CERCOPITHECIDAE	Arunachal Pradesh	Nil
30.	<i>Macaca arctoides</i> Stump tailed Macaque	CERCOPITHECIDAE	Arunachal Pradesh	The species arctoides was considered as a subspecies of <i>M. speciosa</i> (Cuvier) by Ellerman and Morrison-Scott (1951). However, Fooden 1969, 1976 considered as a junior synonym
31.	<i>Macaca mulatta</i> Rhesus macaque	CERCOPITHECIDAE	Arunachal Pradesh	Nil
32.	<i>Macaca nemestrina</i> Pig tailed macaque	CERCOPITHECIDAE	Arunachal Pradesh	India was not included within the range of this species by Groves (In Wilson and Reeder 1993) and Corbet and Hill 1992. But Agrwal and Alfred (in DZSI, 1994) and Das et al. 1995 have recorded it from northeast India
33.	<i>Trachypithecus pleatus pleatus</i>	CERCOPITHECIDAE	Arunachal Pradesh	Nil

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Capped langur			
34.	<i>Hylobates hoolock</i> Hoolock gibbon	HYLOBATIDAE	Arunachal Pradesh	Nil
35.	<i>Canis aureus</i> Asiatic Jackal	CANIDAE	Arunachal Pradesh	Nil
36.	<i>Canis lupus</i> Wolf	CANIDAE	Arunachal Pradesh	Nil
37.	<i>Cuon alpinus</i> Wild dog	CANIDAE	Arunachal Pradesh	Cohen (1978) has reviewed the species (in Mammalian speices)
38.	<i>Vulpes bengalensis</i> Indian fox	CANIDAE	Arunachal Pradesh	Nil
39.	<i>Catopuma temminckii</i> Asiatic golden cat	FELIDAE	Arunachal Pradesh	Hemmer (1978) and Groves (1982a) placed in <i>Catopuma</i> . Pocock (1932a), Weigel (1961), Kral and zima (1980) and kratochvi (1982) placed this under
40.	<i>Felis chaus</i> Jungle Cat	FELIDAE	Arunachal Pradesh	f. chaus Guldenstadt 1776 is invalid (Allen, 1920), affinis is the subspecies found in Arunachal Pradesh
41.	<i>Prionailurus bengalensis</i> Leopard cat	FELIDAE	Arunachal Pradesh	The nominate subspecies bengalensis is found in Arunachal Pradesh
42.	<i>Prionailurus viverrinus</i> Fishing cat	FELIDAE	Arunachal Pradesh	Nil
43.	<i>Neofelis nebulosa</i> Clouded leopard	FELIDAE	Arunachal Pradesh	Pocock (1917), weigel (1961), hemmer (1978) placed it under genus <i>Neofelis</i> where as kratochvil (1982) and Groves (1982a) placed it under
44.	<i>Pardofelis marmorata</i>	FELIDAE	Arunachal Pradesh	The subspecies of this species in India is

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Marbled cat			charltoni
45.	<i>Panthera pardus</i> Leopard/panther	FELIDAE	Arunachal Pradesh	According to Pocock (1930a, 1930b), three subspecies of this species occur in India
46.	<i>Panthera tigris</i> Tiger	FELIDAE	Arunachal Pradesh	
47.	<i>Uncia uncia</i> Snow leopard	FELIDAE	Arunachal Pradesh	
48.	<i>Herpestes urva</i> Crab eating mongoose	HERPESTIDAE	Arunachal Pradesh	Rare
49.	<i>Herpestes javanicus</i> Small Indian Mongoose	HERPESTIDAE	Arunachal Pradesh	Nil
50.	<i>Amblyonyx cinereus</i> Small clawed otter	MUSTELIDAE	Arunachal Pradesh	Subspecies of this species is concolor which is found in Arunachal Pradesh
51.	<i>Lutra lutra</i> Common otter	MUSTELIDAE	Arunachal Pradesh	Nil
52.	<i>Melogale moschata</i> Chinese ferret badger	MUSTELIDAE	Arunachal Pradesh	The subspecies of this species in India is millsii
53.	<i>Martes flavigula</i> Yellow throated marten	MUSTELIDAE	Arunachal Pradesh	In India, the nominate subspecies flavigula is found
54.	<i>Arctonyx collaris</i> Hog badger	MUSTELIDAE	Arunachal Pradesh	Subspecies of this species in Arunachal Pradesh is collaris
55.	<i>Mustela strigidorsa</i> Black striped weasel	MUSTELIDAE	Arunachal Pradesh	Nil
56.	<i>Ailurus fulgens</i> Red panda	URSIDAE	Arunachal Pradesh	This species is sometimes included in the Procyoridae

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
				because of its ringed tail, and superficial resembles of teeth and rounded skull of procyon, however, this species does not have the shared derived morphological characters that would place it there (Decker and Wozencraft, 1991)
57.	<i>Helarctos malayanus</i> Malayan Sun bear	URSIDAE	Arunachal Pradesh	Nil
58.	<i>Ursus thibetanus</i> Asiatic black bear	URSIDAE	Arunachal Pradesh	Nil
59.	<i>Arctictis binturong</i> Binturong or bear cat	VIVERRIDAE	Arunachal Pradesh	Nil
60.	<i>Paguma larvata</i> Masked palm civet	VIVERRIDAE	Arunachal Pradesh	Nil
61.	<i>Paradoxurus hermaphroditus</i> Common Palm civet, toddy cat	VIVERRIDAE	Arunachal Pradesh	Ali et al. (1988) described <i>P. jorandensis</i> from Orissa, on the basis of its light colouration. However, Das et al. (1993) considered the type of <i>P. jorandensis</i> as an albinistic specimen and treated <i>P. jorandensis</i> a synonym of <i>P. hermaphrodites</i>
62.	<i>Viverra zibetha zibetha</i> Large Indian civet	VIVERRIDAE	Arunachal Pradesh	The nominate subspecies <i>zibetha</i> of the species is found in Arunachal Pradesh
63.	<i>Viverricula indica indica</i> Small Indian civet	VIVERRIDAE	Arunachal Pradesh	Nil
64.	<i>Elephas maximus</i>	ELEPHANTIDAE	Arunachal	Nil

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	<i>indicus</i> Indian Elephant		Pradesh	
65.	<i>Sus scrofa cristatus</i> Wild boar	SUIDAE	Arunachal Pradesh	Nil
66.	<i>Muntiacus muntjak vaginalis</i> Barking deer	CERVIDAE	Arunachal Pradesh	Nil
67.	<i>Axis porcinus porcinus</i> Hog deer	CERVIDAE	Arunachal Pradesh	Honcki et al. 1982 kept this species under the genus cervus
68.	<i>Cervus unicolor</i> Sambhar	CERVIDAE	Arunachal Pradesh	Equines is the subspecies of this species
69.	<i>Bos frontalis</i> Indian bison	BOVIDAE	Arunachal Pradesh	Honacki et al. 1982 treated Bos gaurus as a sgnonym of Bos frontalis lambert
70.	<i>Bubalus bubalis</i> Water buffalo	BOVIDAE	Arunachal Pradesh	Nil
71.	<i>Budorcas taxicolor</i> Takin	BOVIDAE	Arunachal Pradesh	Nil
72.	<i>Naemorhaedus goral</i> Goral	BOVIDAE	Arunachal Pradesh	Nil
73.	<i>Naemorhaedus sumatraensis</i> Serow	BOVIDAE	Arunachal Pradesh	Nil
74.	<i>Manis pentadactyla aurita</i> Chinese pangolin	MANIDAE	Arunachal Pradesh	Nil
75.	<i>Callosciurus erythraeus intermedius</i> Pallas's squirrel	SCIUIRIDAE	Arunachal Pradesh	The species was revised by Moore ant Tate (1965) and Chkraborty (1985)
76.	<i>Callosciurus</i>	SCIUIRIDAE	Arunachal	The form inornatus

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	<i>pygerythrus stevensi</i> Irrawadi squirrel		Pradesh	allocated to this species by Ellerman and Morrison-Scott (1951) has been given specific rank by Corbet and Hill (1992)
77.	<i>Dremomys lokriah lokriah</i> Orange bellied Himalayan squirrel	SCUIRIDAE	Arunachal Pradesh	Nil
78.	<i>Dremomys pernyi</i> Perny's long nosed squirrel	SCUIRIDAE	Arunachal Pradesh	Nil
79.	<i>Ratufa bicolor gigantea</i> Malayan Giant squirrel	SCUIRIDAE	Arunachal Pradesh	Lives in high trees in dense forests and never comes to the ground
80.	<i>Tamiops macclellandi</i> Himalayan striped squirrel	SCUIRIDAE	Arunachal Pradesh	Nil
81.	<i>Belomys pearsoni</i> Hairy footed flying squirrel	SCUIRIDAE	Arunachal Pradesh	Corbet and Hill 1992 synonymised monotypic genus <i>Belomys</i> with <i>Tragopterus</i>
82.	<i>Biswamoyopterus biswasi</i> Namdapha Flying squirrel	SCUIRIDAE	Arunachal Pradesh	This species is known only by the holotype. The genus and the species are newly described taxa by Saha (1982)
83.	<i>Hylopetes alboniger</i> Particoloured Flying squirrel	SCUIRIDAE	Arunachal Pradesh	Nil
84.	<i>Petaurista petaurista</i> Red giant flying squirrel	SCUIRIDAE	Arunachal Pradesh	Reviewed by Corbet and Hill 1992, who recognized the subspecies <i>philippensis</i> as distinct species
85.	<i>Eothenomys melanogaster</i>	MURIDAE	Arunachal Pradesh	Musser and Carleton (In Wilson and Reeder,



Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	<i>libonotus</i> Pere David's vole			1993) did not include India within the scope of this species. However, Corbet and Hill 1992 on the basis of report of Hinton 1923, kept Arunachal Pradesh within its range
86.	<i>Apodemus draco</i> South China Field Mouse	MURIDAE	Arunachal Pradesh	Nil
87.	<i>Berylmys bowersi</i> Bower's rat	MURIDAE	Arunachal Pradesh	Nocturnal and fossorial. Commonly found in primary forest and in the highlands above 600m altitude.
88.	<i>Chiropodomys gliroides</i> Pencil tailed tree mouse	MURIDAE	Arunachal Pradesh	Out of five subspecies, only the nominate subspecies occurs in India (Musser, 1979)
89.	<i>Vandeleuria oleracea dumeticola</i> Indian long tailed tree mouse	MURIDAE	Arunachal Pradesh	Agrawal 2000 on the basis of examination of further material recognized only two subspecies namely <i>dumeticola</i> and <i>oleracea</i>
90.	<i>Dacnomys millardi wroughtoni</i> Millard's Rat	MURIDAE	Arunachal Pradesh	Two subspecies occur in India
91.	<i>Leopoldamys edwardsi</i> Edward's rat	MURIDAE	Arunachal Pradesh	The species <i>L. sabanus</i> reported from Meghalaya is a misidentification of <i>L. edwardsi</i> , as such <i>L. sabanus</i> does not occur in India (Musser, 1981)
92.	<i>Mus booduga</i> Common Indian field mouse	MURIDAE	Arunachal Pradesh	Nil
93.	<i>Mus cookii nagarum</i> Ryley's spiny	MURIDAE	Arunachal Pradesh	Nil

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	mouse			
94.	<i>Mus musculus castaneus</i> House mouse	MURIDAE	Arunachal Pradesh	An indoor subspecies
95.	<i>Mus pahari pahari</i> Sikkim mouse	MURIDAE	Arunachal Pradesh	Nil
96.	<i>Niviventer brahma</i> Thomas Chestnut rat	MURIDAE	Arunachal Pradesh	Ellerman (1961) treated <i>Epimys brahma</i> as a subspecies of <i>Rattus fulvescens</i> , but Musser (1970) resuscitated it as a full species under the genus <i>Niviventer</i> , and considered it more near to <i>N. eha</i> than to <i>N. fulvescens</i>
97.	<i>Niviventer fulvescens</i> Himalayan Chestnut Rat	MURIDAE	Arunachal Pradesh	Nil
98.	<i>Niviventer niviventer</i> Himalayan white bellied rat	MURIDAE	Arunachal Pradesh	The nominate subspecies is found in Arunachal Pradesh (Mishmi Hills)
99.	<i>Rattus nitidus</i> Himalayan rat	MURIDAE	Arunachal Pradesh	Agrawal (2000) has confirmed that there is no clear cut difference between <i>R. n. nitidus</i> and <i>R. n. obsoletus</i> either in colour of the undersurface of body or in the length of tail. Hence, the subspecies <i>R. nitidus obsoletus</i> is being treated here as a synonym of <i>R. nitidus nitidus</i>
100.	<i>Rattus rattus</i> Common rat	MURIDAE	Arunachal Pradesh	Nil
101.	<i>Rattus sikkimensis</i> Sikkim Rat	MURIDAE	Arunachal Pradesh	Hinton 1919 described the subspecies <i>R. rattus sikkimensis</i> , which was later synonymised with

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
				R. rattus brunneusculus by Ellerman 1961. Musser and Heaney 1985 have considered R. rattus sikkimensis as a separate species distinct from Rattus rattus. Agrawal (2000) observed that the differences between Rattus sikkimensis and Rattus rattus do not stand in collections present in ZSI especially when compared with R. r. brunneusculus or R. r. gangutrianus
102.	<i>Rattus tanezumi</i> Oriental House Rat, Tanezumi Rat	MURIDAE	Arunachal Pradesh	Wilson & Reeder (1993) mentioned the name of this species, where they synonymized many species and subspecies of India to it (andamanensis, bhotia, brevicaudus, bullock, burrus, holchu, khyensis, tistae and many others). Agrawal (2000) did not mention any subspecies of the species Rattus rattus. At present, it is better to keep this species in this list
103.	<i>Cannomys bodius</i> Bay Bamboo rat	MURIDAE	Arunachal Pradesh	Ellerman 1961 maintained three subspecies of Cannomys bodius, namely, bodius, castaneus and pater. However, Agrawal 2000 has treated all the three subspecies as synonym of the nominate subspecies
104.		HYSTRICIDAE	Arunachal Pradesh	Agrawal 2000 synonymised the subspecies assamensis

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	<i>Atherurus macrourus</i> Brush tailed Porcupine			with the nominate subspecies by examining body and skull measurements and colour
105.	<i>Hystrix brachyura subcristata</i> Himalayan crestless porcupine	HYSTRICIDAE	Arunachal Pradesh	Lekagul and McNeely 1977 thought maintained <i>hodgsoni</i> as a species distinct from <i>brachyuran</i> , yet Van Weers 1979, however kept <i>Hystrix hodgsoni</i> under <i>Hystrix brachyuran</i>
106.	<i>Platanista gangetica gangetica</i> Ganges River Dolphin, Blind River Dolphin, Ganges Susu	PLATANISTIDAE	Arunachal Pradesh	

#### AVES

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
1.	<i>Phalacrocorax fuscicollis</i> Indian Shag	PHALACROCORACIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Dutta (1998) noted a family party consisting of two adults and one immature on a large boulder in Kameng river towards Sangti, Dirang, 45 km ahead of Bomdila, W. Kameng district. Solitary bird flying along the Subansiri river, Dumporijo, U. Subansiri.
2.	<i>Dendrocygna</i>	ANATIDAE	India:	A flock consisting of

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	<i>javanica</i> Lesser Whistling Teal		Arunachal Pradesh (Upper Subansiri, Dumporijo);	four birds were seen swimming on the Subansiri river, at Dumporijo, U. Subansiri.
3.	<i>Milvus migrans</i> Sykes Pariah Kite	ACCIPITRIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazli);	Datta et al. (1998) reported this species found twice around Yazali, Lower Subansiri District.
4.	<i>Haliastur indus</i> Brahminy Kite		India: Arunachal Pradesh (Lower Subansiri, Pitapool, Yazli);	
5.	<i>Accipiter virgatus affinis</i>		India: Arunachal Pradesh (Upper Subansiri);	
6.	<i>Tetraogallus tibetanus centralis</i> Central Tibetan Snowcock	PHASIANIDAE	India: Arunachal Pradesh (Upper Subansiri);	It enters through Upper Subansiri and Siyom drainage areas of NEFA, Ali & Ripley (HB).
7.	<i>Crossoptilon crossoptilon</i> Elwes Elwes's Eared Pheasant		India: Arunachal Pradesh (Subansiri);	This bird ranges upto extreme northern fringes of the Siang, Subansiri and Lohit Frontier Divisions of NEFA.
8.	<i>Amaurornis phoenicurus chinensis</i> Whitebreasted Waterhen	RALLIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Observed and collected specimen from Upper Subansiri district. So it is well distributed in Arunachal Pradesh and it extended upto western Pradesh.
9.	<i>Gallicrex cinerea cinerea</i> Water Cock or Kora		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	It is reported by many villagers that they used to kill this bird for its meat.
10.	<i>Tringa totanus</i>	SCOLOPACIDAE	India:	This bird found on

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	<i>eurhinus</i> Eastern Redshank		Arunachal Pradesh (Upper Subansiri, Dumporijo);	the bank of Siang river, Tipi, Bhalukpong, West Kameng district and on the bank of Subansiri river, Dumporijo, Upper Subansiri District.
11.	<i>Tringa nebularia</i> Greenshank		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	A number of birds of this species on the bank of Subansiri river, Dumporijo, Upper Subansiri District.
12.	<i>Treron sphenurus sphenurus</i> Kokla or Wedgetailed Green Pigeon	COLUMBIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	
13.	<i>Treron pompadora phayrei</i> Ashyheaded Green Pigeon		India: Arunachal Pradesh (Upper Subansiri);	
14.	<i>Ducula badia griscicapilla</i> Greyheaded Imperial Pigeon		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	This species reported between 1800-4000 in Subansiri District. A flock consisting of eight birds were seen by us in between Taliha and Daichook, Daporijo, Upper Subansiri.
15.	<i>Columba pulchricollis</i> Nepal or Ashy Wood Pigeon		India: Arunachal Pradesh (Subansiri);	This species is reported from Pein and Apa Tani Valley and collected a specimen from Sovo (6000 ft.), Subansiri District.
16.	<i>Macropygia unchall tusalia</i> Bartailed Cuckoo-Dove		India: Arunachal Pradesh (Subansiri);	Betts (1956) collected a specimen from Kore (5000') Subansiri District.

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17.	<i>Streptopelia orientalis orientalis</i> Rufous Turtle-Dove		India: Arunachal Pradesh (Subansiri);	This species is reported as common in Apa Tani Valley, Subansiri District.
18.	<i>Streptopelia orientalis Agricola</i> ; Eastern Turtle-Dove		India: Arunachal Pradesh (Lower Subansiri, Yachuli);	A good population of this species.
19.	<i>Streptopelia tranquebarica humilis</i> Burmese Red Turtle-Dove		India: Arunachal Pradesh (Subansiri);	This species is not common in Subansiri District.
20.	<i>Chalcophaps indica indica</i> Indian Emerald Dove		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	This bird is in good numbers in Upper Subansiri & Dumporijo.
21.	<i>Clamator coromandus</i> Redwinged Crested Cuckoo		CUCULIDAE	India: Arunachal Pradesh (Subansiri);
22.	<i>Cuculus micropterus micropterus</i> Indian Cuckoo	India: Arunachal Pradesh (Subansiri);		It is very common in this area.
23.	<i>Cuculus canorus bakeri</i> Cuckoo	India: Arunachal Pradesh (Subansiri, Dumporijo);		Reported from above 4000 ft. in Subansiri area.
24.	<i>Cuculus poliocephalus poliocephalus</i> Small Cuckoo	India: Arunachal Pradesh (Subansiri);		Reported as a common visitor to the hills of Subansiri area.
25.	<i>Surniculus lugubris ducruroides</i> Indian Drongo-	India: Arunachal Pradesh (Subansiri);		

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	Cuckoo			
26.	<i>Centropus sinensis sinensis</i> Common Crow-Pheasant		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Reported one solitary bird in the bush at Dumporijo, Upper Subansiri.
27.	<i>Centropus toulou bengalensis</i> Lesser Coucal		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Two to three pairs were also noted in a bush at Dumporijo, Upper Subansiri. One bird was trapped in the mist net but unfortunately flew away.
28.	<i>Otus bakkamoena lettia</i> Burmese Collared Scops Owl	STRIGIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazli);	
29.	<i>Glaucidium cuculoides austerum</i> East Himalayan Barred Owlet		India: Arunachal Pradesh (Lower Subansiri, Yazli);	
30.	<i>Chaetura gigantea indica</i> Large Brownthroated Spinetail Swift		India: Arunachal Pradesh (Lower Subansiri, Apa Tani Valley);	This species reported from Pani river (2000) and Apa Tani Valley (5000), Subansiri District.
31.	<i>Apus pacificus kanoi</i> Tibetan White-rumped Swift	APODIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Many of this species were seen moving around the sky on each cloudy afternoon at Daporijo, Upper Subansiri. But doubt about the identification of this bird upto sub-species level.
32.	<i>Harpactes erythrocephalus helenae</i>	TROGONIDAE	India: Arunachal Pradesh (Subansiri);	



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	Mishmi Redheaded Trogon			
33.	<i>Harpactes wardi</i> Ward's Trogon		India: Arunachal Pradesh (Subansiri);	
34.	<i>Alcedo hercules</i> Great Blue Kingfisher		India: Arunachal Pradesh (Subansiri);	
35.	<i>Alcedo atthis bengalensis</i> Indian Small Blue Kingfisher		India: Arunachal Pradesh (Apa Tani Valley);	Reported as the only Kingfisher in Apa Tani Valley.
36.	<i>Halcyon smyrensis perpulchra</i> Eastern Whitebreasted Kingfisher		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	One bird was seen on the bank of Subansiri river at Dumporijo, Upper Subansiri district.
37.	<i>Eurystomus orientalis cyanicollis</i> Himalayan Broad-billed Roller	CORACIIDAE	India: Arunachal Pradesh (Subansiri);	This species reported as not uncommon in Paniov Valley, Subansiri area.
38.	<i>Aceros nipalensis</i> Rufousnecked Hornbill		India: Arunachal Pradesh (Subansiri);	It is not reported as common at 4000 ft. in Subansiri district.
39.	<i>Rhyticeros undulates ticehursti</i> Assam Wreathed Hornbill	BUCEROTIDAE	India: Arunachal Pradesh (Subansiri);	Reported as common upto 6000 sq. ft. in Subansiri District.
40.	<i>Buceros bicornis homrai</i> Great Pied Hornbill		India: Arunachal Pradesh (Subansiri);	Reported it at lower elevation (2000 ft) in Subansiri district.
41.	<i>Megalaima virens magnifica</i> Assam Great Barbet	RAMPHASTIDAE	India: Arunachal Pradesh (Subansiri);	Reported as common in Subansiri area.

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42.	<i>Picumnus innominatus innominatus</i> Northern Speckled Piculet	PICIDAE	India: Arunachal Pradesh (Subansiri);	Reported from Pein river, Subansiri area.
43.	<i>Sasia ochracea ochracea</i> Himalayan Rufous Piculet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Reported this bird from Pein river, Subansiri area.
44.	<i>Mulleripicus pulverulentus mohun</i> Nepal Great Slaty Woodpecker		India: Arunachal Pradesh (Subansiri);	
45.	<i>Picoides nanus nanus</i> Pigmy Woodpecker		India: Arunachal Pradesh (Pein River, Subansiri);	
46.	<i>Pitta nipalensis nipalensis</i> Bluenaped Pitta	PITTIDAE	India: Arunachal Pradesh (Apa Tani);	
47.	<i>Delichon nipalense nipalense</i> Nepal House Martin	HIRUNDINIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	A flock of more than fifty birds were seen after rain on the flat hill top in between Taliha and Daichook, Daporijo, Upper Subansiri.
48.	<i>Lanius tephronotus tephronotus</i> Eastern Tibetan Graybacked Shrike	LANIIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo, Yazali, Yachuli);	
49.	<i>Lanius schach tricolor</i> Blackheaded Shrike		India: Arunachal Pradesh (Pein Valley, Apa Tani Valley);	

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50.	<i>Oriolus traillii</i> Indian Maroon Oriole	ORIOLIDAE	India: Arunachal Pradesh (Apa Tani Valley);	This species as not uncommon.
51.	<i>Dicrurus leucophaeus hopwoodi</i> Assam Grey Drongo	DICRURIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo);	This species to occur at lower elevations in the river valleys. Whenever drizzling starts, hundred of insectivorous birds, especially drongos and swallows come from everywhere and catch insects in a agricultural farm, near Taliha.
52.	<i>Dicrurus aeneus aeneus</i> Bronzed Drongo		India: Arunachal Pradesh (Upper & Lower Subansiri, Apa Tani Valley);	Fairly common in and around Tezu, Lohit district in Nov., 1998. Several birds were seen in an agricultural field at Dumporijo, Upper Subansiri District.
53.	<i>Dicrurus remifer tectirostris</i> Lesser Racket tailed Drongo		India: Arunachal Pradesh (Lower Subansiri);	Almost in every light, several drongos of this species were feeding on insects near a bamboo cluster.
54.	<i>Dicrurus hottentottus hottentottus</i> Haircrested or Spangled Drongo		India: Arunachal Pradesh (Subansiri);	This species is not common but upto 7000 ft. in Subansiri area.
55.	<i>Cissa chinensis chinensis</i> Green Magpie	CORVIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Thinly populated in Yachuli and Yazali, Sunansiri district. Once noted in Yazali.
56.	<i>Dendroctia fromosae himalayensis</i> East Himalayan Tree Pie		India: Arunachal Pradesh (Subansiri);	To occur throughout the area (= Subansiri) but most numerous in the tropical rain forest.

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57.	<i>Corvus macrorhynchos tibetosinensis</i> Tibetan Jungle Crow	CAMPEPHAGIDAE	India: Arunachal Pradesh (Lower Subansiri);	Solitary bird was seen at Dirang, West Kameng District.
58.	<i>Hemipus picatus capitalis</i> Brownbacked Pied Flycatcher-Shrike		India: Arunachal Pradesh (Subansiri);	This species as quite common all over the hills upto 7000 ft. in Subansiri area.
59.	<i>Pericrocotus brevirostris brevirostris</i> Shortbilled Minivet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
60.	<i>Perierocotus flammeus speciosus</i> Scarlet Minivet		India: Arunachal Pradesh (Lower Subansiri, Kimun and Yazali);	Population is very thin in and around both at Yachuli and Yazali.
61.	<i>Percrocotus ethologus lactus</i> East Himalayan Longtailed Minivet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
62.	<i>Chloropsis hardwickii hardwickii</i> Orangebellied Chloropsis		India: Arunachal Pradesh (Subansiri);	
63.	<i>Pycnonotus melanicterus flavirentis</i> Blackcrested Yellow Bulbul		PYCNONOTIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);
64.	<i>Pycnonotus jocosus monticola</i> Assam Redwhishered		India: Arunachal Pradesh (Upper & Lower	Arunachal Pradesh in lower elevation. Plenty in Dirak and Mahadebpur, Lohit district. Common at

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	Bulbul		Subansiri, Daporijo, Pein Valley);	Yachuli, Lower Subansiri district. Fairly common at Taliha and Damporijo, Upper Subansiri district.
65.	<i>Pycnonotus cafer stanfordii</i> Burmese Redvented Bulbul		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Fairly good population in and around Forest Rest House, Tezu, Lohit district.
66.	<i>Alophoixus flaveolus flaveolus</i> White throated Bulbul		India: Arunachal Pradesh (Lower Subansiri, Yazali);	
67.	<i>Hypsipetes mcclellandi mcclellandi</i> Rufousbellied Bulbul		India: Arunachal Pradesh (Kore, Subansiri);	
68.	<i>Hypsipetes flavalus flavalus</i> Brownneared Bulbul		India: Arunachal Pradesh (Pein Valley);	
69.	<i>Hypsipetes madagascariensis psaroides</i> Himalayan Black Bulbul		India: Arunachal Pradesh (Subansiri);	This bird as very common in the Subansiri area and moving around in noisy flocks.
70.	<i>Hypsipetes madagascariensis nigrescens</i> Assam Black Bulbul		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
71.	<i>Pomatorhinus ferruginosus ferruginosus</i> Sikkim Coralbilled Scimitar Babbler		India: Arunachal Pradesh (Kore, Subansiri);	This bird as uncommon and collected specimens from Kore (5000 ft), Subansiri area.
72.	<i>Xiphirhynchus superciliaris</i>		India: Arunachal	It is imposible to ascertain the statusd

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	<i>superciliaris</i> Slenderbilled Scimitar Babbler		Pradesh (Upper Subansiri);	of the bird reported by Choudhury and Singh. Birds as noted above may belong either to this race or the next race, i.e., ssp. <i>Intextus</i> .
73.	<i>Xiphirhynchus superciliaris intextus</i> Slenderbilled Scimitar Babbler	TIMALIIDAE	India: Arunachal Pradesh (Subansiri);	
74.	<i>Stachyris chrysaea chrysaea</i> Nepal Goldenheaded Babbler		India: Arunachal Pradesh (Apa Tani Valley);	
75.	<i>Paradoxornis nipalensis poliotis</i> Assam Orange Parrotbill	PARADOXORNITHIDAE	India: Arunachal Pradesh (Apa Tani Valley);	Obtained one specimen and noted uncommon in flocks in Apa Tani Valley wood reserves (c. 6000 ft.).
76.	<i>Paradoxornis atrosuperciliaris atrosuperciliaris</i> Blackbrowed Parrotbill		India: Arunachal Pradesh (Subansiri);	This species reported from Abor-Miri Hills on the right bank of the Subansiri (4000 ft).
77.	<i>Garrulax monileger badius Mishmi</i> Necklaced Laughing Thrush	TIMALIIDAE	India: Arunachal Pradesh (Lower Subansiri);	
78.	<i>Garrulax striatus cranbrooki</i> Assam Striated Laughing Thrush		India: Arunachal Pradesh (Subansiri);	
79.	<i>Garrulax leucolophus leucolophus</i> Himalayan Whitecrested		India: Arunachal Pradesh (Lower Subansiri, Yazali and	Reported as common in river valleys.

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80.	<i>Garrulax cineraceus cineraceus</i> Ashy Laughing Thrush		Pita Pool); India: Arunachal Pradesh (Abor-Miri Hills, Kore);	
81.	<i>Garrulax ruficollis Rufousnecked</i> Laughing Thrush		India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo);	This species reported to occur in the plains also common in the Pein valley (4000 ft), also seen at Hapulia (5000 ft) bardens of Apa Tani Valley.
82.	<i>Garrulax erythrocephalus nigrimentum</i> Sikkim Redheaded Laughing Thrush		India: Arunachal Pradesh (Pein river, Subansiri);	This species in a flock in the valleys of Pein river in Subansiri area.
83.	<i>Garrulax phoeniceus phoeniceus</i> Himalayan Crimsonwinged Laughing Thrush		India: Arunachal Pradesh (Kore hills, Apa Tani Valley);	This species as uncommon.
84.	<i>Leiothrix argentauris argentauris</i> Himalayan Silvereared Mesia		India: Arunachal Pradesh (Kore, Subansiri);	This is as very common in Pein and Apa Tani Valleys.
85.	<i>Leiothrix argentauris vernayi</i> Burmese Silvereared Mesia		India: Arunachal Pradesh (Abor-Miri hills);	
86.	<i>Leiothrix lutea calipyga</i> Eastern Redbilled Leiothrix		India: Arunachal Pradesh (Kore, Apa Tani Valley & Subansiri);	This species is as common in Kore and Apa Tani Valley, in Subansiri area.
87.	<i>Cutia nipalensis</i>		India:	Betts (1956)

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	<i>nipalensis</i> Nepal Cutia		Arunachal Pradesh (Subansiri);	encountered this bird only once on Tasser Puttu (4500 ft) in Subansiri area.
88.	<i>Pteruthius flaviscapis validirostris</i> Redwinged Shrike Babbler		India: Arunachal Pradesh (Subansiri);	
89.	<i>Pteruthius melanotis melanotis</i> Chestnut-throated Shrike-Babbler		India: Arunachal Pradesh (Abor Miri Hills);	
90.	<i>Actinodura egertoni egertoni</i> Himalayan Barwing		India: Arunachal Pradesh (Abor Miri Hills);	
91.	<i>Minla ignotincta ignotincta</i> Red tailed Minla		India: Arunachal Pradesh (Beni, Subansiri Gorge, Abor Miri Hills);	This bird as common in the hills from 3000-5000 ft. in Subansiri area.
92.	<i>Minla cyanouroptera cyanouroptera</i> Bluewinged Siva		India: Arunachal Pradesh (Upper Subansiri, Daporijo, Abor Miri hills, Kore and Apa Tani Valley);	This species as common.
93.	<i>Yuhina castaniceps rufigenis</i> Sikkim Whitebrowed Yuhina		India: Arunachal Pradesh (Abor Miri Hills, Subansiri);	
94.	<i>Yuhina bakeri</i> Whitenaped Yuhina		India: Arunachal Pradesh (Upper	



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95.	<i>Yuhina flavicollis flavicollis</i> Eastern Yellonaped Yuhina		Subansiri, Daporijo; India: Arunachal Pradesh (Upper Subansiri, Daporijo, Abor Miri hills, Kore and Apa Tani Valley);	This species as common.
96.	<i>Yuhina gularis gularis</i> Eastern Stripethroated Yuhina		India: Arunachal Pradesh (Apa Tani Valley);	
97.	<i>Yuhina nigrimenta nigrimenta</i> Blackchinned Yuhina		India: Arunachal Pradesh (Subansiri, Abor Miri hills, and Apa Tani Valley);	This species as not uncommon in flocks in the Apa Tani (6000 ft) in Subansiri area.
98.	<i>Alcippe cinerea</i> Dusky Green or Yellowthroated Tit-Babbler		India: Arunachal Pradesh (Abor Miri hills, Pita Pool Yazali, Lower Subansiri);	Found fairly good numbers in the dense forest.
99.	<i>Alcippe castaneiceps castaneiceps</i> Chestnut-headed Tit-Babbler		India: Arunachal Pradesh (Abor Miri hills, Yazali, Lower Subansiri);	Fairly common in dense forest.
100.	<i>Alcippe rufogularis rufogularis</i> Himalayan Redthroated Tit-Babbler		India: Arunachal Pradesh Tzari Valley (Upper Subansiri);	
101.	<i>Alcippe nipalensis</i>		India:	

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	<i>nipalensis</i> Nepal Quaker Babbler		Arunachal Pradesh (Pein Valley in Subansiri);	
102.	<i>Heterophasia annectens annectens</i> Chestnut backed Sibia		India: Arunachal Pradesh (Kore, Subansiri);	
103.	<i>Heterophasia capistrata bayleyi</i> Eastern Blackcapped Sibia		India: Arunachal Pradesh (Pita Pool Yazali, Lower Subansiri);	Population is very thin, one bird was seen in the dense forest.
104.	<i>Heterophasia gracilis</i> Grey Sibia		India: Arunachal Pradesh (Donko Puttu, Apa Tani Valley);	
105.	<i>Heterophasia pulchella</i> Beautiful Sibia		India: Arunachal Pradesh (Pad Puttu, Kore and Apa Tani Valley);	
106.	<i>Heterophasia picaoides, picaoides</i> Longtailed Sibia		India: Arunachal Pradesh (Panior river in Subansiri area);	
107.	<i>Muscicapa ferruginea</i> Ferruginous Flycatcher	MUSCIAPIDAE	India: Arunachal Pradesh (Upper Subansiri);	
108.	<i>Muscicapa strophinata strophinata</i> Orange gorgeted Flycatcher		India: Arunachal Pradesh (Kore, Subansiri);	This bird as a winter visitor and obtained one specimen from Kore, Subansiri area.
109.	<i>Muscicapa</i>		India:	

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	<i>monileger monileger</i> Himalayan White gorgeted Flycatcher		Arunachal Pradesh (Kore, Subansiri);	
110.	<i>Muscicapa westermanni australorientis</i> Eastern Little Pied Flycatcher		India: Arunachal Pradesh (Kore, Pein Valley);	
111.	<i>Muscicapa grandis grandis</i> Large Niltava		India: Arunachal Pradesh (Apa Tani Valley);	
112.	<i>Muscicapa macgrigoriae signata</i> Eastern Small Niltava		India: Arunachal Pradesh (Upper Subansiri, Daporijo, Apa Tani Valley);	
113.	<i>Muscicapa sundara sundara</i> Eastern Rufousbelied Niltava		India: Arunachal Pradesh (Lower Subansiri, Yachuli);	
114.	<i>Muscicapa banyumas magnirostris</i> Large-billed Blue Flycatcher		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
115.	<i>Muscicapa thalassina thalassina</i> Verditer Flycatcher		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	This species in fair numbers all over the Subansiri hills upto 7000 ft.
116.	<i>Culicicapa ceylonensis calochrysea</i> Northern Greyheaded	STENOSTIRIDAE	India: Arunachal Pradesh (Subansiri);	

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Flycatcher			
117.	<i>Rhipidura albicollis stanleyi</i> NEFA White throated Fantail Flycatcher	RHIPIDURIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazali);	
118.	<i>Terpsiphone paradise saturator</i> East Himalayan Paradise Flycatcher	MONARCHIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
119.	<i>Tesia castaneocoronata castaneocoronata</i> Chestnut headed Ground Warbler	SYLVIIDAE	India: Arunachal Pradesh (Apa Tani Valley);	This bird as not uncommon in the hillsides bordering Apa Tani Valley (5000-6000 ft.)
120.	<i>Cettia pallidipes pallidipes</i> Indian Palefooted Bush Warbler		India: Arunachal Pradesh (Likhia, Subansiri);	Found a nest of this species at Likhia (4000 ft) in Subansiri district.
121.	<i>Prinia hodgsonii fufula</i> Northern Ashy-grey Wren-Warbler	CISTICOLIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazali);	
122.	<i>Prinia gracilis stevensi</i> Eastern Streaked Wren – Warbler		India: Arunachal Pradesh (Kore, Subansiri);	
123.	<i>Prinia Haviventris flaviventris</i> Assam Yellowbellied Wren-Warbler		India: Arunachal Pradesh (Lower Subansiri & Pein river);	This species is common around Kore (5000 ft) in Subansiri area.
124.	<i>Orthotomus sutorius patia</i> Bengal Tailor Bird	SYLVIIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
125.	<i>Phylloscopus</i>		India:	

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	<i>proregulus newtoni</i> Eastern Pallas's Leaf Warbler		Arunachal Pradesh (Lower Subansiri, Yazali);	
126.	<i>Seicercus xanthoschistos flavogularis</i> Mishmi Geyheaded Flycatcher-Warbler		India: Arunachal Pradesh (Lower Subansiri, Yazali);	
127.	<i>Seicercus poliogenys Greychecked</i> Flycatcher-Warbler		India: Arunachal Pradesh (Apa Tani Valley, Subansiri);	
128.	<i>Abroscopus schisticeps flavimentalis</i> Assam Blackfaced Flycatcher-Warbler		India: Arunachal Pradesh (Apa Tani Valley, Subansiri);	
129.	<i>Abroscopus albogularis albogularis</i> Whitethroated Flycatcher-Warbler		India: Arunachal Pradesh (Pein, Subansiri);	
130.	<i>Abroscopus hodgsoni hodgsoni</i> Broadbilled Flycatcher-Warbler		India: Arunachal Pradesh (Lower Subansiri);	
131.	<i>Brachypterux stellatus stellatus</i> Shortwing		India: Arunachal Pradesh (Upper Subansiri);	
132.	<i>Erithacus calliope</i>	MUSCIAPIDAE	India: Arunachal	

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Rubythroat		Pradesh (Lower Subansiri, Yachuli);	
133.	<i>Copsychus saularis erimelas</i> Assam Magpie-Robin		India: Arunachal Pradesh (Upper Subansiri, Dimpurijo, Pein Valley);	
134.	<i>Phoenicurus hodgsoni</i> Hodgson's Redstart		India: Arunachal Pradesh (Kore, Subansiri);	
135.	<i>Phoenicurus frontalis</i> Bluefronted Redstart		India: Arunachal Pradesh (Lower Subansiri, Yachuli);	
136.	<i>Phoenicurus aureus leucopterus</i> Daurian Redstart		India: Arunachal Pradesh (Lower Subansiri, Yazali);	
137.	<i>Rhyacornis fuliginosus fuliginosus</i> Plumbeous Redstart		India: Arunachal Pradesh (Subansiri);	
138.	<i>Enicurus scouleri scouleri</i> Little Forktail		India: Arunachal Pradesh (Kale river, Subansiri);	
139.	<i>Enicurus schistaceus</i> Saltybacked forktail		India: Arunachal Pradesh (Panior valley, Subansiri);	Commonest Fork tail of Subansiri area and found a nest in Panior valley (2000 ft.).
140.	<i>Enicurus leschenaulti indicus</i>		India: Arunachal Pradesh (Subansiri);	This species as not common along the main rivers and their tributaries in

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Leschenault's Forktail			Subansiri area.
141.	<i>Enicurus maculatus guttatus</i> Eastern Spotted Forktail		India: Arunachal Pradesh (Subansiri);	This bird occurs on smaller rapid streams at all elevations of Subansiri area but not to be numerous.
142.	<i>Cochoa purpurea</i> Purple Cochoa		India: Arunachal Pradesh (Pange, Lower Subansiri);	
143.	<i>Saxicola torquata indica</i> Indian Collared Bush Chat		India: Arunachal Pradesh (Apa Tani Valley, Subansiri);	This species as common in winter.
144.	<i>Saxicola ferrea</i> Darkgrey Bish Chat		India: Arunachal Pradesh (Lower Subansiri, Yazali);	This species as permanent resident and breeding in Apa Tani Valley, Subansiri area.
145.	<i>Chaimarrornis leucocephalus</i> Whitecapped Redstart		India: Arunachal Pradesh (Lower Subansiri, Yazali);	This bird as common winter visitor on all the larger rivers in Subansiri area.
146.	<i>Monticola rufiventris</i> Chestnut bellied Rock Thrush	TURDIDAE	India: Arunachal Pradesh (Lower Subansiri, Tita Pool, Yazali);	Population was very thin and scarce, one bird was seen at Pita Poo, Yazali, Lower Subansiri district.
147.	<i>Myophonus caeruleus temminckii</i> Himalayan Whistling Thrush		India: Arunachal Pradesh (Subansiri);	This species as not very common but saw one or two on hill streams on the slopes of Tasser Puttu (4500 ft) in Subansiri area.
148.	<i>Zoothera citrina</i>		India: Arunachal Pradesh	This species as not very common in the Subansiri area but

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Orangeheaded Ground Thrush		(Subansiri, Tasser Puttu);	located a nest on the north slopes of Tasser Puttu.
149.	<i>Zoothera mollissima mollissima</i> Eastern Plainbacked Mountain Thrush		India: Arunachal Pradesh (Apa Tani Valley, Subansiri);	
150.	<i>Zoothera dauma dauma</i> Smallbilled Mountain Thrush		India: Arunachal Pradesh (Kore, Subansiri);	
151.	<i>Zoothera monticola monticola</i> Large Brown Thrush		India: Arunachal Pradesh (Upper Subansiri);	
152.	<i>Turdus unicolor</i> Thrush		India: Arunachal Pradesh (Subansiri);	
153.	<i>Turdus albocinclus</i> Whitecollared Blackbird		India: Arunachal Pradesh (Pad Puttu, Subansiri);	
154.	<i>Turdus boulboul</i> Greywinged Blackbird		India: Arunachal Pradesh (Subansiri);	
155.	<i>Turdus obscurus</i> Dark Thrush		India: Arunachal Pradesh (Subansiri);	This bird as common winter visitor in Subansiri area.
156.	<i>Turdus ruficollis atrogularis</i> Blackthroated Thrush		India: Arunachal Pradesh (Subansiri);	This bird as common winter visitor in Subansiri area.
157.	<i>Turdus ruficollis ruficollis</i> Redthroated Thrush		India: Arunachal Pradesh (Subansiri);	



Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
158.	<i>Cinclus pallasii dorjei</i> East Himalayan Brown Dipper	CINCLIDAE	India: Arunachal Pradesh (Subansiri);	This bird as common on all large rivers and streams from 2000 ft upwards in Subansiri area.
159.	<i>Melanochlora sultanea sultanea</i> Sultan Tit	PARIDAE	India: Arunachal Pradesh (Subansiri);	This species as widely distributed and fairly common from plain upto 4000 ft. in small parties of 3-4 birds in Subansiri area.
160.	<i>Parus monticolus monticolus</i> Green Backed Tit		India: Arunachal Pradesh (Lower Subansiri, Yazali);	This species as fairly common from 5000 ft. upwards, also occurs in the Apa Tani Valley. He also collected specimen at Kore (5000 ft) in Subansiri area.
161.	<i>Paurs spilonotus subviridis</i> Burmese Blackspotted Yellow Tit		India: Arunachal Pradesh (Apa Tani Valley);	
162.	<i>Sitta castanea cinnamoventris</i> Eastern Chestnutbellied Nuthatch	SITTIDAE	India: Arunachal Pradesh (Upper Subansiri, Abor-Miri Hills, Damporijo);	
163.	<i>Sitta himalayensis australis</i> Assam Whitetailed Nuthatch		India: Arunachal Pradesh (Subansiri, Kore and Apa Tani Valley);	
164.	<i>Certhia discolor discolor</i> Sikkim Tree Creeper	CERTHIIDAE	India: Arunachal Pradesh (Subansiri);	

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
165.	<i>Anthus hodgsoni hodgsoni</i> Tree Pipit	MOTACILLIDAE	India: Arunachal Pradesh (Lower Subansiri, Yachuli);	Found in large numbers in cultivated filed around Forest Rest House, Tezu, Lohit district. A good population also recorded near the Forest Rest House, Yazali and in a large Firm House, Yachuli, Lower Subansiri district.
166.	<i>Motacilla alba alboides</i> Pied Wagtail		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	
167.	<i>Nectarinia asiatica intermedia</i> Assam Purple Sunbird	NECTARINIIDAE	India: Arunachal Pradesh (Pita Pool, Lower Subansiri);	A thin population in the dense forest.
168.	<i>Aethopyga saturate assamensis</i> Assam Blackbreasted Sunbird		India: Arunachal Pradesh (Apa Tani Valley);	
169.	<i>Zosterops palpebrosa palpebrosa</i> White-eye	ZOSTEROPIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	
170.	<i>Passer montanus hepaticus</i> Mishmi Tree sparrow	PLOCEIDAE	India: Arunachal Pradesh (Lower Subansiri, Yachuli, Yazali);	
171.	<i>Passer rutilans cinnamomeus</i> Himalayan Cinnamon Tree		India: Arunachal Pradesh (Upper Subansiri,	This species in fair numbers.

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
	Sparrow		Daporijo, Apa Tani Valley);	
172.	<i>Lonchura stricta acuticauda</i> Whitebacked Munia	ESTRILDIDAE	India: Arunachal Pradesh (Subansiri);	This species common all over the hills in Subansiri area.
173.	<i>Lonchura Malacca atricapilla</i> Eastern Blackheaded Munia		India: Arunachal Pradesh (Subansiri);	This species in the swamps at the hills in Subansiri area.
174.	<i>Emberiza pusilla</i> Little Bunting	EMBERIZIDAE	India: Arunachal Pradesh (Subansiri, Yachuli);	This bird as a fairly common winter migrant at Apa Tani Valley in Subansiri area.
175.	<i>Melophus lathami</i> Crested Bunting		India: Arunachal Pradesh (Subansiri, Apa Tani Valley);	This bird in flocks in Winter at Apa Tani Valley in Subansiri area.

#### REPTILIA

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
1.	<i>Sphenomorphus maculatus</i> Slender Skink	SCINCIDAE	India: Arunachal Pradesh (Lower Subansiri);	
2.	<i>Scincella skkimensis</i> Sikkim Ground Skink		India: Arunachal Pradesh (Lower Subansiri);	
3.	<i>Elaphe radiata</i> Copperhead Snake		India: Arunachal Pradesh (Lower Subansiri);	This snake is usually found in the field and gardens in the vicinity of village.
4.	<i>Elaphe cantoris</i> Darjeeling Trinket Snake		India: Arunachal Pradesh (Lower Subansiri);	Generally present in forests and foot-hills but are also found in the agricultural areas and fields.

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
5.	<i>Elaphe prasina</i> Green Tree Racer		India: Arunachal Pradesh (Lower Subansiri);	Arboreal in its habits.
6.	<i>Ptyas korros</i> Indo-Chinese Rat Snake	COLUBRIDAE	India: Arunachal Pradesh (Lower Subansiri);	It prefers to live away from habitations and has strong arboreal tendencies, seeming to prefer live in bushes or on low trees rather than on ground.
7.	<i>Ptyas nigromarginatus</i> Green Rat Snake		India: Arunachal Pradesh (Lower Subansiri);	It is found in the hills often at considerable altitude, upto 7,000 ft.
8.	<i>Dendrelaphis ahaetula</i>		India: Arunachal Pradesh (Lower Subansiri);	Common in many places, both in the hills and in plains.
9.	<i>Ahaetulla prasina</i> Short-nose Whipe Snake		India: Arunachal Pradesh (Lower Subansiri);	A very gentle snake, quite unafraid and easily handled.
10.	<i>Ophites jara</i> Yellow-speckled Wolf Snake		India: Arunachal Pradesh (Lower Subansiri);	
11.	<i>Xenochrophis piscator</i> Checkered Keelback		India: Arunachal Pradesh (Lower Subansiri);	Frequents water and is very common in tanks, paddy fields, pools and rivers; may be seen away from water.
12.	<i>Amphiesma stolatum</i> Striped Keelback		India: Arunachal Pradesh (Lower Subansiri);	It inhabits banks of rivers etc. and marshy areas.
13.	<i>Rhabdophis himalayanus</i> Himalayan Keelback		India: Arunachal Pradesh (Lower Subansiri);	
14.	<i>Boiga quincunciata</i> Assam Cat Snake		India: Arunachal Pradesh (Lower Subansiri);	Known from four specimens and the type.
15.	<i>Boiga cynodon</i> Bengal Cat Snake		India: Arunachal Pradesh (Lower Subansiri);	It is found in plains and hills at low altitudes.
16.	<i>Psammodynastes pulverulentus</i> Mock viper	India: Arunachal Pradesh (Lower Subansiri);	It feeds largely on frogs and lizards.	

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
17.	<i>Calliophis macclellandi</i> Maclelland's Coral Snake		India: Arunachal Pradesh (Lower Subansiri);	Prefers thick forests between 1200-1800 mt., but may occur at lower elevation.
18.	<i>Naja naja kaouthia</i> Bengal Cobra		India: Arunachal Pradesh (Lower Subansiri);	
19.	<i>Trimeresurus stejnegeri</i> Stejneger's Pit Viper		India: Arunachal Pradesh (Lower Subansiri);	Found in hills.

#### AMPHIBIA

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
1.	<i>Rana nicobariensis</i> Nicobar Island Frog, Nicobarese Frog, Nicobar Cricket Frog, Nicobar Frog, Cricket Frog	RANIDAE	India: Arunachal Pradesh (Lower Subansiri);	Medium sized frog with dorsum dark reddish, granular; venter spotted with darker. Dorsolateral fold brownish.
2.	<i>Rana cyanophlyctis</i> Skipping Frog		India: Arunachal Pradesh (Lower Subansiri);	1 ex., of frog collected from Seppa, East Kameng dist. And another ex. Of frog from Yembung, East Siang dist. Possess darker, thickly warty skin on dorsum and smooth and spotted skin on ventrum. Adults used in college laboratories for disceting purpose.

Sr. No.	Species Scientific name (in italics) and common name	Family	Distribution	Remarks
3.	<i>Rana tigrina</i> Indian Bull Frog		India: Arunachal Pradesh (Lower Subansiri);	Commonest species of edible frogs found throughout the plains of India. The example collected from Pasighat, possesses darker dorsum, lips dotted with black and dull whitish venter.
4.	<i>Rana limnocharis</i> Cricket Frog		India: Arunachal Pradesh (Lower Subansiri);	Frogs are generally found inside the bush grown by the sides of cultivated land and streams.
5.	<i>Polypedates leucomystax</i> Tree Frog	RHACOPHORIDAE	India: Arunachal Pradesh (Lower Subansiri);	Specimen from Itanagar possesses long darker spots on dorsum, gular region smooth and white.
6.	<i>Rhacophorus maximus</i>		India: Arunachal Pradesh (Lower Subansiri);	The specimen collected from Raga on 15.x.1989 possesses snout a little longer than the diameter of the eye and fingers more or less entirely webbed.

**PISCES**

	Species Name (in italics) with family
<b>I. FAMILY : NOTOPTERIDAE</b>	
1.	<i>Chitala chitala</i> (Hamilton, 1822)
2.	<i>Notopterus notopterus</i> (Pallas, 1769)
<b>II. FAMILY : ANGUILLIDAE</b>	
3.	<i>Anguilla bengalensis</i> (Gray, 1831)
<b>III. FAMILY : CLUPIDAE</b>	
4.	<i>Gudusia chapra</i> (Hamilton, 1822)
5.	<i>Tenualosa ilisha</i> (Hamilton, 1822)
6.	<i>Gonialosa manmina</i> (Hamilton, 1822)
<b>IV. FAMILY : ENGRAULIDAE</b>	
7.	<i>Setipinna phasa</i> (Hamilton, 1822)
<b>V. FAMILY : CYPRINIDAE</b>	
8.	<i>Hypophthalmichthys molitrix</i> (Valenciennes, 1844)
9.	<i>Aspidoparia jaya</i> (Hamilton, 1822)
10.	<i>Cabdio morar</i> (Hamilton, 1822)
11.	<i>Amblypharyngodon mola</i> (Hamilton, 1822)
12.	<i>Barilius barila</i> (Hamilton, 1822)
13.	<i>Opsarius barna</i> (Hamilton, 1822)
14.	<i>Barilius bendelisis</i> (Hamilton, 1807)
15.	<i>Barilius shacra</i> (Hamilton, 1822)
16.	<i>Barilius tileo</i> (Hamilton, 1822)
17.	<i>Barilius vagra</i> (Hamilton, 1822)
18.	<i>Bengala elanga</i> (Hamilton, 1822)
19.	<i>Chela cachius</i> (Hamilton, 1822)
20.	<i>Laubuca laubuca</i> (Hamilton, 1822)
21.	<i>Danio dangila</i> (Hamilton, 1822)
22.	<i>Danio rerio</i> (Hamilton, 1822)
23.	<i>Danionella priapus</i> Britz, 2009
24.	<i>Devario aequipinnatus</i> (McClelland, 1839)
25.	<i>Devario assamensis</i> (Barman, 1984)
26.	<i>Devario devario</i> (Hamilton, 1822)
27.	<i>Esomus danricus</i> (Hamilton, 1822)
28.	<i>Raiamas bola</i> (Hamilton, 1822)
29.	<i>Rasbora daniconius</i> (Hamilton, 1822)
30.	<i>Rasbora rasbora</i> (Hamilton, 1822)
31.	<i>Salmophasia bacaila</i> (Hamilton, 1822)
32.	<i>Salmophasia phulo</i> (Hamilton, 1822)
33.	<i>Securicula gora</i> (Hamilton, 1822)
34.	<i>Bangana dero</i> (Hamilton, 1822)
35.	<i>Catla catla</i> (Hamilton, 1822)
36.	<i>Chagunius chagunio</i> (Hamilton, 1822)
37.	<i>Cirrhinus mrigala</i> (Hamilton, 1822)
38.	<i>Cirrhinus reba</i> (Hamilton, 1822)
39.	<i>Ctenopharyngodon idella</i> (Valenciennes, 1844)
40.	<i>Cyprinus carpio</i> Linnaeus, 1758
41.	<i>Crossocheilus latius</i> (Hamilton, 1822)
42.	<i>Crossocheilus</i> sp
43.	<i>Labeo angra</i> (Hamilton, 1822)
44.	<i>Labeo bata</i> (Hamilton, 1822)

	Species Name (in italics) with family
45.	<i>Labeo boga</i> (Hamilton, 1822)
46.	<i>Labeo calbasu</i> (Hamilton, 1822)
47.	<i>Labeo fimbriatus</i> (Bloch, 1795)
48.	<i>Labeo dyocheilus</i> (McClelland, 1839)
49.	<i>Labeo goni</i> (Hamilton, 1822)
50.	<i>Labeo nandina</i> (Hamilton, 1822)
51.	<i>Labeo pangusia</i> (Hamilton, 1822)
52.	<i>Labeo rohita</i> (Hamilton, 1822)
53.	<i>Neolissochilus hexagonolepis</i> (McClelland, 1839)
54.	<i>Neolissochilus hexastichus</i> (McClelland, 1839)
55.	<i>Oreochthys casuatis</i> (Hamilton, 1822)
56.	<i>Osteobrama cotio</i> (Hamilton, 1822)
57.	<i>Pethia conchoni</i> (Hamilton, 1822)
58.	<i>Pethia gelius</i> (Hamilton, 1822)
59.	<i>Pethia phutunio</i> (Hamilton, 1822)
60.	<i>Pethia guganio</i> (Hamilton, 1822)
61.	<i>Puntius chola</i> (Hamilton, 1822)
62.	<i>Puntius sophore</i> (Hamilton, 1822)
63.	<i>Puntius terio</i> (Hamilton, 1822)
64.	<i>Puntius ticto</i> (Hamilton, 1822)
65.	<i>Puntius</i> sp.
66.	<i>Systemus clavatus</i> (McClelland, 1845)
67.	<i>Systemus sarana</i> (Hamilton, 1822)
68.	<i>Cyprinion semiplotum</i> (McClelland, 1839)
69.	<i>Tor progeneius</i> (McClelland, 1839)
70.	<i>Tor putitora</i> (Hamilton, 1822)
71.	<i>Tor tor</i> (Hamilton, 1822)
72.	<i>Schizothorax richardsonii</i> (Gray, 1832)
73.	<i>Garra annandalei</i> Hora, 1921
74.	<i>Garra arupi</i> Nebeshwar, Vishwanath & Das 2009
75.	<i>Garra gotyla</i> (Gray, 1830)
76.	<i>Garra lamta</i> (Hamilton, 1822)
77.	<i>Garra lissorhynchus</i> (McClelland, 1842)
78.	<i>Garra nasuta</i> (McClelland, 1838)
79.	<i>Garra</i> sp.
<b>VI. FAMILY : PSILORHYNCHIDAE</b>	
80.	<i>Psilorhynchus arunachalensis</i> (Nebeshwar, Bagra & Das, 2007)
81.	<i>Psilorhynchus balitora</i> (Hamilton, 1822)
82.	<i>Psilorhynchus gracilis</i> Rainboth, 1983
83.	<i>Psilorhynchus sucatio</i> (Hamilton, 1822)
<b>VII. FAMILY : BALITORIDAE</b>	
84.	<i>Balitora brucei</i> Gray, 1830
<b>VIII. FAMILY: NEMACHEILIDAE</b>	
85.	<i>Aborichthys elongatus</i> Hora, 1921
86.	<i>Aborichthys kemp</i> Chaudhuri, 1913
87.	<i>Acanthocobitis botia</i> (Hamilton, 1822)
88.	<i>Neonoemacheilus assamensis</i> (Menon, 1987)
89.	<i>Schistura beavani</i> (Günther, 1868)
90.	<i>Schistura multifasciata</i> (Day, 1878)
91.	<i>Schistura savona</i> (Hamilton, 1822)



	Species Name (in italics) with family
92.	<i>Schistura scaturigina</i> McClelland, 1839
93.	<i>Schistura</i> sp1
94.	<i>Schistura</i> sp2
95.	<i>Nemacheilus corica</i> (Hamilton, 1822)
<b>IX. FAMILY: COBITIDAE</b>	
96.	<i>Botia dario</i> (Hamilton, 1822)
97.	<i>Botia rostrata</i> Günther, 1868
98.	<i>Lepidocephalichthys annandalei</i> Chaudhuri, 1912
99.	<i>Lepidocephalichthys goalparensis</i> Pillai & Yazdani 1976
100.	<i>Lepidocephalichthys guntea</i> (Hamilton, 1822)
101.	<i>Lepidocephalichthys irrorata</i> (Hora, 1921)
102.	<i>Lepidocephalichthys menoni</i> (Tilak and Yazdani 1976)
103.	<i>Pangio pangia</i> (Hamilton, 1822)
104.	<i>Canthophrys gongota</i> (Hamilton, 1822)
<b>X. FAMILY : BAGRIDAE</b>	
105.	<i>Batasio batasio</i> (Hamilton, 1822)
106.	<i>Batasio merianiensis</i> (Chaudhuri, 1913)
107.	<i>Batasio spilurus</i> Ng, 2006
108.	<i>Batasio tengana</i> (Hamilton, 1822)
109.	<i>Chandramara chandramara</i> (Hamilton, 1822)
110.	<i>Hemibagrus menoda</i> (Hamilton, 1822)
111.	<i>Mystus bleekeri</i> (Day, 1877)
112.	<i>Mystus carcio</i> (Hamilton, 1822)
113.	<i>Mystus cavasius</i> (Hamilton, 1822)
114.	<i>Mystus dibrugarensis</i> (Chaudhuri, 1913)
115.	<i>Mystus tengara</i> (Hamilton, 1822)
116.	<i>Mystus vittatus</i> (Bloch, 1794)
117.	<i>Mystus</i> sp.
118.	<i>Rita rita</i> (Hamilton, 1822)
119.	<i>Sperata aor</i> (Hamilton, 1822)
120.	<i>Sperata seenghala</i> (Sykes, 1839)
<b>XI. FAMILY : SILURIDAE</b>	
121.	<i>Ompok bimaculatus</i> (Bloch, 1794)
122.	<i>Ompok pabda</i> (Hamilton, 1822)
123.	<i>Ompok pabo</i> (Hamilton, 1822)
124.	<i>Pterocryptis berdmorei</i> (Blyth, 1860)
125.	<i>Wallago attu</i> (Bloch & Schneider, 1801)
<b>XII. FAMILY : SCHILBEIDAE</b>	
126.	<i>Ailia coila</i> (Hamilton, 1822)
127.	<i>Clupisoma garua</i> (Hamilton, 1822)
128.	<i>Clupisoma montana</i> Hora, 1937
129.	<i>Eutropiichthys murius</i> (Hamilton, 1822)
130.	<i>Eutropiichthys vacha</i> (Hamilton, 1822)
131.	<i>Neotropius atherinoides</i> (Bloch, 1794)
132.	<i>Silonia silondia</i> (Hamilton, 1822)
<b>XIII. FAMILY : PANGASIDAE</b>	
133.	<i>Pangasius pangasius</i> (Hamilton, 1822)
<b>XIV. FAMILY : AMBLYCIPITIDAE</b>	
134.	<i>Amblyceps apangi</i> Nath & Dey, 1989
135.	<i>Amblyceps arunachalensis</i> Nath & Dey, 1989

	Species Name (in italics) with family
136.	<i>Amblyceps mangois</i> (Hamilton, 1822)
137.	<i>Amblyceps</i> sp.
<b>XV. FAMILY : ERETHISTIDAE</b>	
138.	<i>Hara hara</i> (Hamilton, 1822)
139.	<i>Hara horai</i> Misra, 1976
140.	<i>Hara jerdoni</i> Day, 1870
141.	<i>Erethistes pusillus</i> Müller & Troschel, 1849
142.	<i>Erethistoides infuscatus</i> Ng, 2006
143.	<i>Erethistoides montana</i> Hora, 1950
144.	<i>Pseudolaguvia ferruginea</i> Ng, 2009
145.	<i>Pseudolaguvia flavida</i> Ng, 2009
146.	<i>Pseudolaguvia foveolata</i> Ng, 2005
147.	<i>Pseudolaguvia ribeiroi</i> (Hora, 1921)
148.	<i>Pseudolaguvia</i> sp1
149.	<i>Pseudolaguvia</i> sp2
150.	<i>Conta conta</i> (Hamilton, 1822)
<b>XVI. FAMILY : SISORIDAE</b>	
151.	<i>Bagarius bagarius</i> (Hamilton, 1822)
152.	<i>Bagarius yarrellii</i> (Sykes, 1839)
153.	<i>Gagata cenia</i> (Hamilton, 1822)
154.	<i>Gagata sexualis</i> Tilak, 1970
155.	<i>Glyptothorax cavia</i> (Hamilton, 1822)
156.	<i>Glyptothorax dikrongensis</i> Tamang & Chaudhry, 2011
157.	<i>Glyptothorax gracile</i> (Günther, 1864)
158.	<i>Glyptothorax indicus</i> Talwar, 1991
159.	<i>Glyptothorax striatus</i> (McClelland, 1842)
160.	<i>Glyptothorax telchita</i> (Hamilton, 1822)
161.	<i>Glyptothorax</i> sp.
162.	<i>Gogangra viridescens</i> (Hamilton, 1822)
163.	<i>Nangra assamensis</i> Sen & Biswas, 1994
164.	<i>Nangra nangra</i> (Hamilton, 1822)
165.	<i>Sisor rabdophorus</i> Hamilton, 1822
<b>XVII. FAMILY : CLARIDAE</b>	
166.	<i>Clarias gariepinus</i> (Burchell, 1822)
167.	<i>Clarias magur</i> (Hamilton, 1822)
<b>XVIII. FAMILY : HETEROPNEUSTIDAE</b>	
168.	<i>Heteropneustes fossilis</i> (Bloch, 1794)
<b>XIX. FAMILY : CHACIDAE</b>	
169.	<i>Chaca chaca</i> (Hamilton, 1822)
<b>XX. FAMILY : OLYRIDAE</b>	
170.	<i>Olyra longicaudata</i> McClelland, 1842
<b>XXI. FAMILY : MUGILIDAE</b>	
171.	<i>Rhinomugil corsula</i> (Hamilton, 1822)
<b>XXII. FAMILY : BELONIDAE</b>	
172.	<i>Xenentodon cancila</i> (Hamilton, 1822)
<b>XXIII. FAMILY : SYNBRANCHIDAE</b>	
173.	<i>Monopterus albus</i> (Zuiew, 1793)
174.	<i>Monopterus cuchia</i> (Hamilton, 1822)
<b>XXIV. FAMILY : MASTACEMBELLIDAE</b>	
175.	<i>Macrognathus aral</i> (Bloch & Schneider, 1801)

	<b>Species Name (in italics) with family</b>
176.	<i>Macrogathus pancalus</i> Hamilton, 1822
177.	<i>Mastacembelus armatus</i> (Lacepède, 1800)
<b>XXV. FAMILY : CHAUDHURIIDAE</b>	
178.	<i>Pillaia indica</i> Yazdani, 1972
<b>XXVI. FAMILY : AMBASIDAE</b>	
179.	<i>Chanda nama</i> Hamilton, 1822
180.	<i>Parambassis lala</i> (Hamilton, 1822)
181.	<i>Parambassis baculis</i> (Hamilton, 1822)
182.	<i>Pseudambassis ranga</i> (Hamilton, 1822)
<b>XXVII. FAMILY : BADIDAE</b>	
183.	<i>Badis assamensis</i> (Ahl, 1937)
184.	<i>Badis badis</i> (Hamilton, 1822)
185.	<i>Badis singenensis</i> Geetakumari & Kandu, 2011
<b>XXVIII. FAMILY : NANDIDAE</b>	
186.	<i>Nandus nandus</i> (Hamilton, 1822)
<b>XXIX. FAMILY : CHICHLIDAE</b>	
187.	<i>Oreochromis mossambicus</i> (Peters, 1852)
<b>XXX. FAMILY : GOBIIDAE</b>	
188.	<i>Glossogobius giuris</i> (Hamilton, 1822)
<b>XXXI. FAMILY : ANABANTIDAE</b>	
189.	<i>Anabas cotojus</i> (Hamilton, 1822)
190.	<i>Anabas testudineus</i> (Bloch, 1792)
<b>XXXII. FAMILY : OSPHRONEMIDAE</b>	
191.	<i>Trichogaster fasciata</i> Bloch & Schneider, 1801
192.	<i>Trichogaster labiosa</i> Day, 1877
193.	<i>Trichogaster lalius</i> (Hamilton, 1822)
194.	<i>Trichogaster chuna</i> (Hamilton, 1822)
195.	<i>Trichogaster</i> sp
<b>XXXIII. FAMILY : CHANNIDAE</b>	
196.	<i>Channa aurantimaculata</i> Musikasinthorn, 2000
197.	<i>Channa bleheri</i> Vierke, 1991
198.	<i>Channa gachua</i> (Hamilton, 1822)
199.	<i>Channa marulius</i> (Hamilton, 1822)
200.	<i>Channa punctata</i> (Bloch, 1793)
201.	<i>Channa stewartii</i> (Playfair, 1867)
202.	<i>Channa striata</i> (Bloch, 1793)
203.	<i>Channa</i> sp.
<b>XXXIV. FAMILY : TETRAODONTIDAE</b>	
204.	<i>Tetraodon cutcutia</i> Hamilton, 1822

**List of Protozoa, Tramatodes of Amphibian and Insect Fauna in Project Area  
(Arunachal Pradesh)**

**Protozoa**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Arcella discoides</i>	ARCELIDAE	India: Arunachal Pradesh (Lower Subansiri);	This species has been collected from the bottom ooze of freshwater ponds as well as rock mosses of Arunachal Pradesh and is reported for the first time from the state.
2.	<i>Arcella vulgaris</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is reported for the first time from Arunachal Pradesh. The present specimens have been collected from the bottom ooze of some freshwater ponds of the state.
3.	<i>Centropyxis aculeata</i>	CENTROPYXIDAE	India: Arunachal Pradesh (Lower Subansiri);	This species is usually distributed in freshwater tanks amongst vegetation. Penard (1907) recorded this species from rock mosses of the Sikkim Himalaya and, Guru and Das (1983) from soils of Orissa. <i>C. aculeata</i> has been collected from freshwater tanks and rock mosses of Arunachal Pradesh and constitutes first record for this state.
4.	<i>Centropyxis aerophila</i>		India: Arunachal Pradesh (Lower Subansiri);	This is usually a moss dwelling species and recorded for the first time from Arunachal Pradesh.

Sr. No.	Name of Species	Family	Distribution	Remarks
5.	<i>Centropyxis ecornis</i>		India: Arunachal Pradesh (Lower Subansiri);	This species has been collected from freshwater tanks as well as moss bootopes of Arunachal Pradesh and reported for the first time from the state.
6.	<i>Centropyxis platystoma</i>		India: Arunachal Pradesh (Lower Subansiri);	This species has been collected from rock mosses and reported for the first time from Arunachal Pradesh.
7.	<i>Plagiopyxis callida</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is reported for the first time from Arunachal Pradesh.
8.	<i>Diffugia lithophila</i>	DIFFLUGIIDAE	India: Arunachal Pradesh (Lower Subansiri);	This species is reported for the first time from Arunachal Pradesh.
9.	<i>Diffugia lobostoma</i>		India: Arunachal Pradesh (Lower Subansiri);	<i>D. lobostoma</i> constitutes first record for this state.
10.	<i>Assulina muscorum</i>	EUGLYPHIDAE	India: Arunachal Pradesh (Lower Subansiri);	This species is recorded for the first time from Arunachal Pradesh.
11.	<i>Euglypha ciliata</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is very common in moss biotope and recorded for the first time from Arunachal Pradesh.
12.	<i>Euglypha scutigera</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is reported for the first time from Arunachal Pradesh.
13.	<i>Trinema enchelys</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is reported for the first time from Arunachal Pradesh.
14.	<i>Spathidium muscicola</i>	SPATHIDIIDAE	India: Arunachal Pradesh (Lower Subansiri);	This species is found only in moss biotopes and recorded for the first

Sr. No.	Name of Species	Family	Distribution	Remarks
				time from Arunachal Pradesh.
15.	<i>Loxophyllum niemeccense</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is recorded for the first time from Arunachal Pradesh.
16.	<i>Colopoda cucullus</i>		India: Arunachal Pradesh (Lower Subansiri);	This species commonly occurs in freshwater, soil and ground mosses in India. It has been recorded from the ground mosses of Arunachal Pradesh and it constitutes first report for this state.
17.	<i>Euplotes muscicola</i>	EUPLOTIDAE	India: Arunachal Pradesh (Lower Subansiri);	This is a moss inhabiting ciliate and reported for the first time from Arunachal Pradesh.
18.	<i>Eimeria brunette</i>	EIMERIIDAE	India: Arunachal Pradesh (Subansiri);	This species is pathogenic for domestic fowl and causes heavy mortality. Disease Investigation Laboratory at Itanagar recorded this species from above localities.
19.	<i>Eimeria necatrix</i>		India: Arunachal Pradesh (Lower Subansiri);	Oocysts of <i>E. necatrix</i> bear a close resemblance to those of <i>E. tenella</i> but they are more stocky with one end less pointed. <i>E. necatrix</i> coccidiosis is frequently associated with <i>tenella</i> – coccidiosis, Disease Investigation Laboratory at Itanagar has

Sr. No.	Name of Species	Family	Distribution	Remarks
				recorded this species from above localities.
20.	<i>Eimeria tenella</i>		India: Arunachal Pradesh (Lower Subansiri); in ground moss	E. tenella coccidiosis affects the caeca, causing high mortality due to diarrhoea and extensive capillary bleeding in the caecal wall. Disease Investigation Laboratory at Itanagar has recorded this species from above localities.
21.	<i>Eimeria deblickei</i>		India: Arunachal Pradesh (Lower Subansiri);	E. deblickei commonly occurs in domestic pigs and usually causes severe diarrhoea preceded by mass-shedding of oocysts. In addition to E. deblickei Disease Investigation Laboratory, at Itanagar has also recorded E. suis and E. scrofa from domestic pigs of this state from above localities. These two species are now considered synonyms of E. deblickei (Mandal, 1987).
22.	<i>Eimeria ellipsoidalis</i>		India: Arunachal Pradesh (Lower Subansiri); in ground moss	E. ellipsoidalis causes diarrhoea in calves. Disease Investigation Laboratory recorded this species from above localities.
23.	<i>Eimeria scabra</i>		India: Arunachal	E. scabra

Sr. No.	Name of Species	Family	Distribution	Remarks
			Pradesh (Lower Subansiri);	coccidiosis may cause death due to massive infestation as well as reduction in the host's natural resistance. Disease Investigation Laboratory at Itanagar has recorded this species from above localities.
24.	<i>Eimeria stiedai</i>		India: Arunachal Pradesh (Lower Subansiri);	<i>E. stiedai</i> , in general, causes hypertrophy of liver.
25.	<i>Isospora suis</i>		India: Arunachal Pradesh (Lower Subansiri);	<i>I. suis</i> does not cause any severe disease but it retards the animal's development to some extent. This species is also recorded by the Disease Investigation Laboratory at Itanagar from the above localities.
26.	<i>Plasmodium falciparum</i>		India: Arunachal Pradesh (in all districts); and in almost all parts in India as well as in tropics and subtropics	This species is highly pathogenic, causing malignant tertian malaria in man.
27.	<i>Plasmodium vivax</i>	PLASMODIIDAE	India: Arunachal Pradesh (all districts); all over India as well as in tropics, subtropics and warm temperate regions (Garnham, 1966).	This species is common in India, causing benign tertian malaria in man.



### Trematodes of Amphibian

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Pleurogenoides gastroporus</i>	LECITHODENDRIIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri);	P. Gastroporus is reported for the first time from Arunachal Pradesh and is found to be not a common trematode of frogs. Sinha (1958) however, reported this species from reptilian host <i>Chamaelion zeylanicus</i> from Hyderabad.
2.	<i>Mehraorchis ranarum</i>		India: Arunachal Pradesh (Lower Subansiri);	Sinha, Sahay and Prasad (1974) reported this species from bile duct of <i>Rana tigrina</i> from Patna. The vitellaria in the present specimen are very prominent and few in numbers this trematode was not frequently encountered.
3.	<i>Ganeo tigrinum</i>		India: Arunachal Pradesh (Lower Subansiri);	Specimens examined by the present authors also exhibit variable shape of excretory bladder i.e. U.V. and Y as described by Gupta (1977).
4.	<i>Displodiscus amphichrus</i>	PARAMPHISTOMIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri);	Some of the present specimen shows variation in the shape of ovary and length of intestine.

**Insecta : Collembola**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Xenylla obscura</i>	HYPOGASTRURIDAE	India: Arunachal Pradesh (Upper Subansiri);	
2.	<i>Lepidocyrtus caudatus</i>	ENTOMOBRYIDAE	India: Arunachal Pradesh (Upper Subansiri);	
3.	<i>Lepidocyrtus cyaneus</i>		India: Arunachal Pradesh (Upper Subansiri);	The genus is represented only by single species from Arunachal Pradesh.
4.	<i>Lepidosira unguiserrata</i>		India: Arunachal Pradesh (Lower Subansiri);	The genus is represented by two species from Arunachal Pradesh.
5.	<i>Siera indica</i>		India: Arunachal Pradesh (Upper Subansiri);	
6.	<i>Homidia cingula</i>		India: Arunachal Pradesh (Upper Subansiri);	
7.	<i>Salina montana</i>		India: Arunachal Pradesh (Upper Subansiri);	
8.	<i>Salina tricolor</i>		India: Arunachal Pradesh (Upper Subansiri);	
9.	<i>Isotomurus balteatus</i>		ISOTOMIDAE	India: Arunachal Pradesh (Upper Subansiri);

**Insecta : Odonata**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Libellago lineata</i>	CHLOROCYPHIDAE	India: Arunachal Pradesh (Subansiri);	
2.	<i>Rhinocypha ignipennis</i>		India: Arunachal Pradesh (Subansiri);	
3.	<i>Rhinocypha fenestrella fenestrella</i>		India: Arunachal Pradesh (Subansiri);	
4.	<i>Rhinocypha quadrimaculata</i>		India: Arunachal Pradesh (Subansiri);	
5.	<i>Lestes praemorsus decipiens</i>	LESTIDAE	India: Arunachal Pradesh (Subansiri);	
6.	<i>Coeliccia renifera</i>	PLATYCNEMIDIDAE	India: Arunachal Pradesh (Upper Subansiri);	
7.	<i>Ceriagrion fallax cerinomelas</i>	COENAGRIONIDAE	India: Arunachal Pradesh (Upper Subansiri);	
8.	<i>Ceriagrion</i>		India: Arunachal Pradesh (Upper Subansiri);	

Sr. No.	Name of Species	Family	Distribution	Remarks
	<i>olivaceum</i>		Pradesh (Subansiri);	
9.	<i>Pseudagrion australasiae</i>		India: Arunachal Pradesh (Subansiri); in ground moss	
10.	<i>Aciagrion olympicum</i>		India: Arunachal Pradesh (Lower & Upper Subansiri); in ground moss	
11.	<i>Agriocnemis clauseni</i>		India: Arunachal Pradesh (Subansiri);	
12.	<i>Onychogomphus biforceps</i>	GOMOPHIDAE	India: Arunachal Pradesh (Subansiri);	Endemic to North-East India.
13.	<i>Anax guttatus</i>	ASEHNIDAE	India: Arunachal Pradesh (Subansiri);	
14.	<i>Tetrathemis platyptera</i>	LIBELLULIDAE	India: Arunachal Pradesh (Subansiri);	
15.	<i>Orthetrum brunneum brunneum</i>		India: Arunachal Pradesh (Subansiri);	
16.	<i>Orthetrum luzonicum</i>		India: Arunachal Pradesh (Subansiri);	
17.	<i>Orthetrum Sabina Sabina</i>		India: Arunachal Pradesh (Subansiri);	
18.	<i>Orthetrum glaucum</i>		India: Arunachal Pradesh (Subansiri);	
19.	<i>Orthetrum testaceum testaceum</i>		India: Arunachal Pradesh (Ziro);	
20.	<i>Orthetrum triangulare triangulare</i>		India: Arunachal Pradesh (Subansiri);	
21.	<i>Orthetrum pruinatum neglectum</i>		India: Arunachal Pradesh (Subansiri);	
22.	<i>Potomarcha congener</i>		India: Arunachal Pradesh (Ziro);	
23.	<i>Palpopleura sexmaculata sexmaculata</i>		India: Arunachal Pradesh (Subansiri);	
24.	<i>Acisoma panorpoides panorpoides</i>		India: Arunachal Pradesh (Subansiri);	
25.	<i>Crocothemis servilia servilia</i>		India: Arunachal Pradesh (Daporizo, Kameng & Subansiri);	
26.	<i>Sympetrum commixtum</i>		India: Arunachal Pradesh (Kameng, Subansiri);	
27.	<i>Trithemis festiva</i>		India: Arunachal Pradesh (Subansiri);	

Sr. No.	Name of Species	Family	Distribution	Remarks
28.	<i>Rhyothemis variegata variegata</i>		India: Arunachal Pradesh (Subansiri);	

**Insecta: Orthoptera: Acridoidea**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Atractomorpha burri</i>	PYRGOMOPRHIDAE	India: Arunachal Pradesh (Upper Subansiri);	In general it is widely distributed in northern part of India. This species is also reported in the Acridoidea fauna of West Bengal Hazra et al. (1993).
2.	<i>Atractomorpha angusta</i>		India: Arunachal Pradesh (Upper Subansiri);	Membranous area in metazoan of lateral pronotal lobe usually faintly distinct
3.	<i>Atractomorpha psittacina affinis</i>		India: Arunachal Pradesh (Upper Subansiri);	This species is recorded only from Arunachal Pradesh in India.
4.	<i>Tagasta indica</i>		India: Arunachal Pradesh (Upper Subansiri);	This species is reported in Acridoidea fauna of West Bengal Hazra et al. (1993).
5.	<i>Mekongiella wardi</i>		India: Arunachal Pradesh (Upper Subansiri);	No specimen of this species has been found during present study. We have studied specimens present in the National Zoological Collections. It is found only from a single locality.
6.	<i>Acrida exaltata</i>	ACRIDIDAE	India: Arunachal Pradesh (Lower & Upper Subansiri);	This species will be present in many areas from which it has not yet been recorded.
7.	<i>Acrida indica Dirsh</i>		India: Arunachal Pradesh (Lower Subansiri);	The present records from Arunachal Pradesh extend the distribution range of this species in North eastern region. This species is first time recorded from Arunachal Pradesh.
8.	<i>Ceracris nigricornis nigricornis</i>		India: Arunachal Pradesh (Upper Subansiri);	This species occurs mostly in thick forest regions.
9.	<i>Ceracris striata</i>		India: Arunachal Pradesh	This species is rather

Sr. No.	Name of Species	Family	Distribution	Remarks
	<i>Uvarov</i>		Pradesh (Lower Subansiri);	limited in distribution and we have found only in Lower Subansiri district. This species is newly recoded from Arunachal Pradesh.
10.	<i>Holopercna darjeelingensis</i>		India: Arunachal Pradesh (Upper Subansiri);	This species is fairly distributed in Arunachal Pradesh and at is generally found in grassy areas.
11.	<i>Phlaeoba infumata</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	Phlaeoba infumata is well distributed in Arunachal Pradesh. This species is widely distributed throughout plains and hilly region of cultivated fields. It is reported in fauna of West Bengal (1993), Meghalaya (1995).
12.	<i>Phlaeoba antennata</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	This species is found mainly in the forest regions of North East India.
13.	<i>Phlaeoba sikkimensis</i>		India: Arunachal Pradesh (Lower Subansiri);	It is newly recorded from Arunachal Pradesh.
14.	<i>Trilophidia annulata</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is a bare ground species. It is distributed almost all over the country.
15.	<i>Oxya hyla hyla</i>		India: Arunachal Pradesh (Upper Subansiri);	This species is associated with crops, vegetables, grasses, etc. especially in moist areas.
16.	<i>Oxya fuscovittata</i>		India: Arunachal Pradesh (Subansiri);	This species is reported in Fauna of West Bengal (1993), and Meghalaya, (1995)
17.	<i>Coptacra foedata</i>		India: Arunachal Pradesh (Upper Subansiri);	It is a very common species generally found in fallen leaves.
18.	<i>Spathosternum prasiniferum prasiniferum</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	This species occurs almost through India and is associated with most grass habitation. It is also reported in the Acridoidea fauna

Sr. No.	Name of Species	Family	Distribution	Remarks
				of West Bengal Hazra et al. (1993) and Meghalaya Hazra et. At. (1995).
19.	<i>Eucnemidia charlottae</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is newly recorded from Arunachal Pradesh. We have found a single specimen from Lower Subansiri district.
20.	<i>Choroedocus robustus</i>		India: Arunachal Pradesh (Upper Subansiri);	This large brightly colored species is specialized for live on leaves of tropical forest vegetation.
21.	<i>Chondroacris rosea</i>		India: Arunachal Pradesh (Upper Subansiri);	This species occurs mostly in thick forest regions.
22.	<i>Patanga succincta</i>		India: Arunachal Pradesh (Lower Subansiri);	In the past, this species was a major pest of many crops in swarming phase but in Arunachal Pradesh, it is found in solitary phase or non-swarming phase and it is less harmful.
23.	<i>Catantops erubescens</i>		India: Arunachal Pradesh (Upper Subansiri);	This species is newly recorded from Arunachal Pradesh. It is previously recorded from West Bengal (North).
24.	<i>Xenocatantops humilis humilis</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	It is generally found in large numbers in the bushy areas and in the fields of maize and paddy near the forest zone especially when crops are mature.

#### Blattaria (Dctyoptera)

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Periplaneta australasiae</i>	BLATTIDAE	India: Arunachal Pradesh (Lower Subansiri);	This species differs superficially from <i>P. Americana</i> by the presence of yellowish humeral stripe on the tegmen.

Sr. No.	Name of Species	Family	Distribution	Remarks
2.	<i>Periplaneta Americana</i>		India: Arunachal Pradesh (Lower Subansiri);	This species thrives in tropical and subtropical climates.
3.	<i>Hebardina concina</i>		India: Arunachal Pradesh (Lower Subansiri);	This is widely distributed species and easily recognized by its squami from tegmina.
4.	<i>Morphona amplipennis</i>	EPILAMPRIDAE	India: Arunachal Pradesh (Upper Subansiri);	This species is endemic to India. The author have studied only female specimens of this species collected from West Siang district, Upper Siang district and Papumpare district.
5.	<i>Blattella germanica</i>	BLATTELLIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri);	<i>Blattella germanica</i> is a widely distributed cosmopolitan species.
6.	<i>Blattella humbertiana</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is reported for the first time from Arunachal Pradesh.
7.	<i>Hemithyrsochera palliate</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is first time recorded from this state.
8.	<i>Panesthia flavipennis</i>	PANESTHIDAE	India: Arunachal Pradesh (Upper Subansiri);	This is a interesting species and differs from the other known species of this genus in respect of small non setose holes present in anterolateral corners of abdominal tergites 6 and 7.

**Insecta : Coleoptera : Scarabaeidae : Coprinae (Dung Beetles)**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Copris siangensis</i>	SCARABAEIDAE	India: Arunachal Pradesh (Lower Subansiri);	
2.	<i>Onthophagus crassicollis</i>		India: Arunachal Pradesh (Lower Subansiri & Ziro);	
3.	<i>Onthophagus ramosellus</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
4.	<i>Onthophagus rugulosus</i>		India: Arunachal Pradesh (Upper &	

Sr. No.	Name of Species	Family	Distribution	Remarks
			Lower Subansiri);	
5.	<i>Onthophagus rectecornutus</i>		India: Arunachal Pradesh (Lower Subansiri);	
6.	<i>Onthophagus furcicollis</i>		India: Arunachal Pradesh (Lower Subansiri);	
7.	<i>Onthophagus triceratops</i>		India: Arunachal Pradesh (Lower Subansiri);	
8.	<i>Onthophagus duporti</i>		India: Arunachal Pradesh (Ziro);	
9.	<i>Onthophagus songsokensis</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
10.	<i>Onitis excavatus</i>		India: Arunachal Pradesh (Lower Subansiri);	

#### Insecta: Diptera: Nematocera

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Nephrotoma concolorithorax</i>		India: Arunachal Pradesh (Lower Subansiri);	
2.	<i>Nephrotoma consimilis</i>		India: Arunachal Pradesh (Lower Subansiri);	
3.	<i>Tipula singhalica</i>		India: Arunachal Pradesh (Lower Subansiri);	
4.	<i>Tipula subtinctoria</i>	TIPULIDAE	India: Arunachal Pradesh (Upper Subansiri);	
5.	<i>Hexatoma nepalensis</i>		India: Arunachal Pradesh (Lower Subansiri);	
6.	<i>Teucholabis fenestrata</i>		India: Arunachal Pradesh (Upper Subansiri);	
7.	<i>Anopheles barbirostris van der Wulp</i>	CULICIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri);	
8.	<i>Anopheles nigerrimus</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
9.	<i>Anopheles aconitus</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
10.	<i>Anopheles annularis van der</i>		India: Arunachal Pradesh (Upper &	



Sr. No.	Name of Species	Family	Distribution	Remarks
	<i>Wulp</i>		Lower Subansiri);	
11.	<i>Anopheles balabacensis Baisas</i>		India: Arunachal Pradesh (Lower Subansiri);	
12.	<i>Anopheles Culicifacies</i>		India: Arunachal Pradesh (Lower Subansiri);	
13.	<i>Anopheles jamesii</i>		India: Arunachal Pradesh (Lower Subansiri);	
14.	<i>Anopheles jeyporensis</i>		India: Arunachal Pradesh (Lower Subansiri);	
15.	<i>Anopheles karwari</i>		India: Arunachal Pradesh (Lower Subansiri);	
16.	<i>Anopheles kochi</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
17.	<i>Anopheles maculates</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
18.	<i>Anopheles philippinensis</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
19.	<i>Anopheles splendidus</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
20.	<i>Anopheles subpictus</i>		India: Arunachal Pradesh (Lower Subansiri);	
21.	<i>Anopheles vagus</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	

**Insecta: Diptera: Brachycera**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Ptecticus aurifer</i>	STRATIOMYIDAE	India: Arunachal Pradesh (Lower Subansiri);	
2.	<i>Nigritomyia maculipennis</i>		India: Arunachal Pradesh (Lower Subansiri);	This species is reported by Joseph & Parui (1972) as <i>Negritomyia maculipennis</i> (Macquart).
3.	<i>Cibotogaster azurea</i>		India: Arunachal Pradesh (Lower Subansiri);	
4.	<i>Ptilocera fastuosa</i>		India: Arunachal	

Sr. No.	Name of Species	Family	Distribution	Remarks
			Pradesh (Lower Subansiri);	
5.	<i>Rosapha bicolor</i>		India: Arunachal Pradesh (Lower Subansiri);	
6.	<i>Chrysops designatus</i>	TABANIDAE	India: Arunachal Pradesh (Lower Subansiri);	
7.	<i>Chrysops dispar</i>		India: Arunachal Pradesh (Lower Subansiri & Kurungkumey);	
8.	<i>Tabanus auriflamma</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
9.	<i>Tabanus monotaeniatus</i>		India: Arunachal Pradesh (Lower Subansiri);	
10.	<i>Haematopota assamensis</i>		India: Arunachal Pradesh (Lower Subansiri);	
11.	<i>Laphria alternans</i>		India: Arunachal Pradesh (Lower Subansiri);	Reported earlier as <i>L. (Pagidolaphria) alternans</i> Wiedemann by Joseph & Parui (1973).
12.	<i>Trigonimima fuscopoda</i>		India: Arunachal Pradesh (Lower Subansiri);	
13.	<i>Merodontina robusta</i>		India: Arunachal Pradesh (Lower Subansiri);	
14.	<i>Michotamia aurata</i>		India: Arunachal Pradesh (Lower Subansiri);	
15.	<i>Clephydroneura bengalensis</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	

**Insecta: Diptera: Bombyliidae**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Anthrax distigma</i>	ANTHRACINAE	India: Arunachal Pradesh (Subansiri);	

**Insecta: Diptera: Cyclorrhapha**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Pipunculus biroii</i> <i>Kertész</i>	PIPUNCULIDAE	India: Arunachal Pradesh (Kurungkumey);	
2.	<i>Physocephala</i>		India: Arunachal Pradesh	

Sr. No.	Name of Species	Family	Distribution	Remarks
	<i>bicolorata</i>		Pradesh (Lower Subansiri);	
3.	<i>Physocephala calopa</i>		India: Arunachal Pradesh (Lower Subansiri);	
4.	<i>Xanthorrhachis annandalei</i>	TEPHRITIDAE	India: Arunachal Pradesh (Kurungkumey);	
5.	<i>Myoleja fossata</i>		India: Arunachal Pradesh (Upper Subansiri);	
6.	<i>Sepsis indica</i>	SEPSIDAE	India: Arunachal Pradesh (Upper Subansiri);	
7.	<i>Lucilia papuensis</i>	CALLIPHORIDAE	India: Arunachal Pradesh (Upper Subansiri);	
8.	<i>Chlororhinia exempta</i>		India: Arunachal Pradesh (Upper Subansiri);	
9.	<i>Cosmina simplex</i>		India: Arunachal Pradesh (Lower Subansiri);	
10.	<i>Strongyloneura delectans</i>		India: Arunachal Pradesh (Lower Subansiri);	
11.	<i>Stomorhina discolor</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
12.	<i>Bercaea cruentata</i>	SARCOPHAGIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri);	
13.	<i>Parasarcophaga brevicornis</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
14.	<i>Parasarcophaga scopariiformis</i>		India: Arunachal Pradesh (Upper Subansiri);	
15.	<i>Parasarcophaga albiceps</i>		India: Arunachal Pradesh (Lower Subansiri);	
16.	<i>Parasarcophaga sericea</i>		India: Arunachal Pradesh (Lower Subansiri);	
17.	<i>Iranihindia futilis</i>		India: Arunachal Pradesh (Lower Subansiri);	
18.	<i>Seniorwhitea reciproca</i>		India: Arunachal Pradesh (Lower Subansiri);	

**Insecta : Diptera : Syrphidae**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Episyrphus balteatus</i>	SYRPHIDAE	India: Arunachal Pradesh (Lower Subansiri & Ziro);	
2.	<i>Phytomia errans</i>		India: Arunachal Pradesh (Upper Subansiri);	

**Insecta : Hymenoptera : Formicidae**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Gnamptogenys bicolor</i>	FORMICIDAE	India: Arunachal Pradesh (Lower Subansiri);	
2.	<i>Hypoponera truncate</i>		India: Arunachal Pradesh (Lower Subansiri & Ziro);	
3.	<i>Myopopone castanea</i>		India: Arunachal Pradesh (Subansiri);	
4.	<i>Odontomachus monticola</i>		India: Arunachal Pradesh (Lower Subansiri);	
5.	<i>Odontoponera transversa</i>		India: Arunachal Pradesh (Subansiri);	
6.	<i>Pachycondyla leeuwenhoekii</i>		India: Arunachal Pradesh (Upper Subansiri & Ziro);	
7.	<i>Panchycondyla rufipes</i>		India: Arunachal Pradesh (Lower Subansiri);	
8.	<i>Cerapachys sulcinodis</i>		India: Arunachal Pradesh (Lower Subansiri);	
9.	<i>Cataglyphis setipes</i>		India: Arunachal Pradesh (Subansiri);	
10.	<i>Paratrechina bourbonica</i>		India: Arunachal Pradesh (Lower Subansiri);	
11.	<i>Paratrechina indica</i>		India: Arunachal Pradesh (Upper & Lower Subansiri);	
12.	<i>Polyrhachis bicolor</i>		India: Arunachal Pradesh (Lower Subansiri);	
13.	<i>Polyrhachis illaudata</i>		India: Arunachal Pradesh (Subansiri);	
14.	<i>Polyrhachis laevissima</i>		India: Arunachal Pradesh (Lower Subansiri);	
15.	<i>Polyrhachis tibialis</i>		India: Arunachal Pradesh (Lower Subansiri);	

Sr. No.	Name of Species	Family	Distribution	Remarks
16.	<i>Pseudolasius familiaris</i>		India: Arunachal Pradesh (Lower Subansiri);	
17.	<i>Tapinoma melanocephalum</i>		India: Arunachal Pradesh (Lower Subansiri);	
18.	<i>Tetraoponera rufonigra</i>		India: Arunachal Pradesh (Lower Subansiri);	
19.	<i>Aphaenogaster smythiesii</i>		India: Arunachal Pradesh (Lower Subansiri);	
20.	<i>Tetramorium lanuginosum</i>		India: Arunachal Pradesh (Lower Subansiri);	
21.	<i>Pheidologeton sp.</i>		India: Arunachal Pradesh (Upper Subansiri);	
22.	<i>Pheidole watsoni</i>		India: Arunachal Pradesh (Lower Subansiri);	

Insecta : Hymenoptera : Aculeata : Sphecidae

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Sceliphron madraspatanum</i>	SPHECIDAE	India: Arunachal Pradesh (Subansiri);	This is one of the common and widely distributed species in India and adjoining countries. This species is readily distinguished by having yellow bands on legs.
2.	<i>Sphex praedator luteipennis</i>		India: Arunachal Pradesh (Subansiri);	This subspecies is recorded here for the first time from Arunachal Pradesh.
3.	<i>Ammophila atripes</i>		India: Arunachal Pradesh (Subansiri);	This is the first record of this species from the state of Arunachal Pradesh.
4.	<i>Ammophila basalis</i>		India: Arunachal Pradesh (Subansiri);	This species is recorded here for the first time from the state of Arunachal Pradesh.
5.	<i>Liris ducalis</i>		India: Arunachal Pradesh (Subansiri);	This species is recorded here for the first time from the state of Arunachal Pradesh.
6.	<i>Liris jaculator</i>		India: Arunachal Pradesh (Subansiri);	
7.	<i>Tachytes sinensis</i>		India: Arunachal Pradesh (Subansiri);	This is the first report of this species from the state of Arunachal Pradesh.
8.	<i>Lyroda formosa</i>		India: Arunachal Pradesh (Subansiri);	This is the first record of this species from the state of Arunachal Pradesh.
9.	<i>Cerceris instabilis</i>		India: Arunachal Pradesh (Subansiri);	This species is recorded here for the first time from Arunachal Pradesh.

**Insecta : Hymenoptera : Aculeata : Vespidae and Apidae**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Polistes olivaceus</i>	VESPIDAE	India: Arunachal Pradesh (Subansiri);	
2.	<i>Vespa bicolor</i>		India: Arunachal Pradesh (Subansiri);	This is the first record of this species from the state of Arunachal Pradesh.
3.	<i>Vespa tropica ducalis</i>		India: Arunachal Pradesh (Subansiri);	This subspecies is recorded here for the first time from the state of Arunachal Pradesh.
4.	<i>Apis florea Fabricius</i>		India: Arunachal Pradesh (Lower Subansiri);	
5.	<i>Bombus orientalis</i>		India: Arunachal Pradesh and almost throughout the country except in the hot dry area.	

**Oribatid Mites (Acari: Oribatei)**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Epilohmannia cylindrica</i>	EPILOHMANNIIDAE	India: Arunachal Pradesh (Lower Subansiri);	
2.	<i>Zetorchestes saltator</i>	ZETORCHESTIDAE	India: Arunachal Pradesh (Lower Subansiri);	
3.	<i>Tectocepheus velatus</i>	TECTOCEPHEIDAE	India: Arunachal Pradesh (Lower Subansiri);	
4.	<i>Arcoppia bidentata</i>	OPPIIDAE	India: Arunachal Pradesh (Subansiri);	
5.	<i>Rhabdoribates siamensis</i>	SCHELORIBATIDAE	India: Arunachal Pradesh (Subansiri);	
6.	<i>Scheloribates natalensis</i>		India: Arunachal Pradesh (Lower Subansiri & Ziro);	
7.	<i>Scheloribates thermophilus</i>		India: Arunachal Pradesh (Lower Subansiri);	
8.	<i>Galumna crenata</i>	GALUMNIDAE	India: Arunachal Pradesh (Lower Subansiri);	

**Ixodid Ticks (Acari: Ixoidae)**

Sr. No.	Name of Species	Family	Distribution	Remarks
1.	<i>Amblyomma testudinarium</i>	IXODIDAE	India: Arunachal Pradesh (Subansiri);	The species was first reported from Arunachal Pradesh by Dhanda and Rao (1964). Krijgsman and Ponto (1932) stated that <i>A. testudinarium</i> transmits piroplasmosis and anaplasmosis. Sharif (1938) also considered this species as a vector of diseases.
2.	<i>Boophilus microplus</i>		India: Arunachal Pradesh (Subansiri);	The species is a common cattle infesting tick.
3.	<i>Haemaphysalis birmaniae</i>		India: Arunachal Pradesh (Subansiri);	The species was first recorded from Arunachal Pradesh by Dhanda and Rao (1964), which was also the first record of the species from India.
4.	<i>Haemaphysalis bispinosa</i>		India: Arunachal Pradesh (Subansiri);	Dhanda and Rao (1964) reported the species for the first time from kameng, Lohit and Subansiri districts and De and Sanyal (1985) from Tirap district of Arunachal Pradesh. This is a common species and important pest of domestic animals.
5.	<i>Haemaphysalis davisii</i>		India: Arunachal Pradesh (Subansiri);	Hoogstraal et al. (1970) first described the species from Arunachal Pradesh. Economically the species is not much important.
6.	<i>Ixodes acutitarsus</i>		India: Arunachal Pradesh (Subansiri);	This is the first record of the species from Arunachal Pradesh.
7.	<i>Ixodes ovatus</i>		India: Arunachal Pradesh (Subansiri);	The species was first recorded from the state by Dhanda and Rao (1964).
8.	<i>Rhipicephalus haemaphysaloides</i>		India: Arunachal Pradesh (Subansiri);	Dhanda and Rao (1964) first reported the



Sr. No.	Name of Species	Family	Distribution	Remarks
				species from Arunachal Pradesh.

### Araneae : Spiders

Sr. No.	Name of Species	Family	Distribution	Remarks	
1.	<i>Ischnocolus khasiensis</i>	THERAPHOSIDAE	India: Arunachal Pradesh (Upper Subansiri);		
2.	<i>Salticus ranjitus</i>	SALTICIDAE	India: Arunachal Pradesh (Lower Subansiri);		
3.	<i>Heteropoda venatoria</i>	HETEROPODIDAE	India: Arunachal Pradesh (Lower Subansiri);		
4.	<i>Drassodes himalayaensis</i>	GNAPHOSIDAE	India: Arunachal Pradesh (Upper Subansiri);		
5.	<i>Zelotes mandlaensis</i>		India: Arunachal Pradesh (Lower Subansiri);		
6.	<i>Hippasa agelenoides</i>	LYCOSIDAE	India: Arunachal Pradesh (Lower Subansiri);		
7.	<i>Hippasa holmerae</i>		India: Arunachal Pradesh (Lower Subansiri);		
8.	<i>Pardosa tatensis</i>		India: Arunachal Pradesh (Lower Subansiri);		
9.	<i>Pardosa mukundi</i>		India: Arunachal Pradesh (Lower Subansiri);		
10.	<i>Lycosa prolifica</i>		India: Arunachal Pradesh (Lower Subansiri);		
11.	<i>Lycosa tista</i>		India: Arunachal Pradesh (Lower Subansiri);		
12.	<i>Lycosa bistrata</i>		India: Arunachal Pradesh (Lower Subansiri);		
13.	<i>Lycosa carmichaeli</i>		India: Arunachal Pradesh (Lower Subansiri);		
14.	<i>Lycosa indagatrix</i>		India: Arunachal Pradesh (Lower Subansiri);		
15.	<i>Lycosa fuscana</i>		India: Arunachal Pradesh (Lower Subansiri);		
16.	<i>Argiope pulchella</i>		ARANEIDAE	India: Arunachal	

Sr. No.	Name of Species	Family	Distribution	Remarks
			Pradesh (Lower Subansiri);	
17.	<i>Neoscona</i>		India: Arunachal Pradesh (Lower Subansiri);	
18.	<i>Leucauge celebesiana</i>		India: Arunachal Pradesh (Lower Subansiri);	
19.	<i>Herennia ornatissima</i>		India: Arunachal Pradesh (Lower Subansiri);	

Sources:

Fauna of Arunachal Pradesh, Zoological Survey of India (ZSI), 2006 (No. 13 Part 1&2) and primary surveys.

Wakid, A. (2009): Status and distribution of the endangered Gangetic dolphin (*Platanista gangetica gangetica*) in Brahmaputra River within India in 2005. Current Science, Vol. 97, No. 8. Pp 1143-1151.

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Bakalial et al. (2014): Checklist of fishes of Lower Subansiri river drainage, Northeast India, Annals of Biological Research, 2014, 5 (2):55-67.

## **Annexure – 6.13**

### **List of Butterflies recorded in the Mishmi Hills, Arunachal Pradesh**



Sr. No.	Scientific Name	Common Name
<b>Papilionidae</b>		
1.	<i>Pachliopta aristolochiae aristolochiae</i>	Common Rose
2.	<i>Troides helena cerberus</i>	Common Birdwing
3.	<i>Troides aeacus aeacus</i>	Golden Birdwing
4.	<i>Atrophaneura varuna astorion</i>	Common Batwing
5.	<i>Atrophaneura aidoneus</i>	Lesser Batwing
6.	<i>Byasa polla</i>	De Nicéville's Windmill
7.	<i>Byasa polyeuctes polyeuctes</i>	Common Windmill
8.	<i>Byasa dasarada dasarada</i>	Great Windmill
9.	<i>Papilio agestor agestor</i>	Tawny Mime
10.	<i>Papilio epycides epycides</i>	Lesser Mime
11.	<i>Papilio clytia clytia</i>	Common Mime
12.	<i>Papilio polytes romulus</i>	Common Mormon
13.	<i>Papilio demoleus demoleus</i>	Lime Butterfly
14.	<i>Papilio castor castor</i>	Common Raven
15.	<i>Papilio helenus helenus</i>	Red Helen
16.	<i>Papilio nephelus chaon</i>	Yellow Helen
17.	<i>Papilio memnon agenor</i>	Great Mormon
18.	<i>Papilio protenor euprotenor</i>	Spangle
19.	<i>Papilio alcmenor alcmenor</i>	Redbreast
20.	<i>Papilio polyctor ganesa</i>	Common Peacock
21.	<i>Papilio paris paris</i>	Paris Peacock
22.	<i>Graphium antiphates pompilius</i>	Fivebar Swordtail
23.	<i>Graphium agetes agetes</i>	Fourbar Swordtail
24.	<i>Graphium doson axion</i>	Common Jay
25.	<i>Graphium chironides chironides</i>	Veined Jay
26.	<i>Graphium evemon albociliatis</i>	Lesser Jay
27.	<i>Graphium agamemnon agamemnon</i>	Tailed Jay
28.	<i>Graphium sarpedon sarpedon</i>	Common Bluebottle
29.	<i>Graphium xenocles xenocles</i>	Great Zebra
30.	<i>Lamproptera curius curius</i>	White Dragontail
31.	<i>Lamproptera meges indistincta</i>	Green Dragontail
32.	<i>Meandrusa lachinus lachinus</i>	Brown Gorgon
33.	<i>Meandrusa payeni evan</i>	Yellow Gorgon
<b>Pieridae</b>		
34.	<i>Eurema andersoni andersoni</i>	One-Spot Grass Yellow
35.	<i>Eurema blanda silhetana</i>	Three-Spot Grass Yellow
36.	<i>Eurema brigitta rubella</i>	Small Grass Yellow
37.	<i>Eurema hecabe hecabe</i>	Common Grass Yellow

Sr. No.	Scientific Name	Common Name
38.	<i>Gandaca harina</i>	Tree Yellow
39.	<i>Dercas verhuelli doubledayi</i>	Tailed Sulphur
40.	<i>Catopsilia pomona pomona</i>	Common Emigrant
41.	<i>Catopsilia pyranthe pyranthe</i>	Mottled Emigrant
42.	<i>Colias fieldii fieldii</i>	Dark Clouded Yellow
43.	<i>Ixias pyrene familiaris</i>	Yellow Orange Tip
44.	<i>Pareronia avatar avatar</i>	Pale Wanderer
45.	<i>Appias lyncida hippoides</i>	Chocolate Albatross
46.	<i>Appias nero galba</i>	Orange Albatross
47.	<i>Appias albina darada</i>	Common Albatross
48.	<i>Appias lalage lalage</i>	Spot Puffin
49.	<i>Appias indra indra</i>	Plain Puffin
50.	<i>Pieris brassicae</i>	Large Cabbage White
51.	<i>Pieris napi montana</i>	Green-veined White
52.	<i>Pieris canidia indica</i>	Indian Cabbage White
53.	<i>Cepora nadina nadina</i>	Lesser Gull
54.	<i>Prioneris thestylis thestylis</i>	Spotted Sawtooth
55.	<i>Prioneris clemanthe</i>	Redspot Sawtooth
56.	<i>Delias belladonna lugens</i>	Hill Jezebel
57.	<i>Delias berinda</i>	Dark Jezebel
58.	<i>Delias acalis pyramus</i>	Red-breast Jezebel
59.	<i>Delias agostina agostina</i>	Yellow Jezebel
<b>Lycaenidae</b>		
60.	<i>Curetis dentata dentata</i>	Angled Sunbeam
61.	<i>Taraka hamada mendesia</i>	Forest Pierrot
62.	<i>Caleta roxus roxana</i>	Straight Pierrot
63.	<i>Caleta elna noliteia</i>	Elbowed Pierrot
64.	<i>Castalius rosimon rosimon</i>	Common Pierrot
65.	<i>Tarucus indica</i>	Pointed Pierrot
66.	<i>Ancema ctesia ctesia</i>	Bi-Spot Royal
67.	<i>Remelana jangala ravata</i>	Chocolate Royal
68.	<i>Arhopala centaurus pirthous</i>	Centaur Oakblue
69.	<i>Flos adriana</i>	Variegated Plushblue
70.	<i>Flos asoka</i>	Spangled Plushblue
71.	<i>Surendra vivarna</i>	Common Acacia Blue
72.	<i>Zinaspia todara distorta</i>	Silver Streaked Acacia Blue
73.	<i>Loxura atymnus continentalis</i>	Yamfly
74.	<i>Yasoda tripunctata tripunctata</i>	Branded Yamfly
75.	<i>Cheritra freja freja</i>	Common Imperial
76.	<i>Ticherra acte</i>	Blue Imperial
77.	<i>Hypolycaena erylus himavantus</i>	Common Tit
78.	<i>Chliaria kina cachara</i>	Blue Tit
79.	<i>Zeltus amasa</i>	Fluffy Tit
80.	<i>Rapala nissa ratna</i>	Common Flash
81.	<i>Rapala manea schistacea</i>	Slate Flash
82.	<i>Catapoecilma elegans</i>	Common Tinsel
83.	<i>Spindasis nipalicus evansii</i>	Silvergrey Silverline

Sr. No.	Scientific Name	Common Name
84.	<i>Spindasis rukmini</i>	Khaki Silverline
85.	<i>Spindasis lohita himalayanus</i>	Long-banded Silverline
86.	<i>Heliophorus epicles</i>	Purple Sapphire
87.	<i>Heliophorus brahma major</i>	Golden Sapphire
88.	<i>Anthene emolus emolus</i>	Common Ciliate Blue
89.	<i>Anthene lycaenina lycaenina</i>	Pointed Cilate Blue
90.	<i>Leptotes plinius plinius</i>	Zebra Blue
91.	<i>Nacaduba kurava euplea</i>	Transparent 6-Lineblue
92.	<i>Nacaduba pactolus continentalis</i>	Large-4-Lineblue
93.	<i>Nacaduba hermus nabo</i>	Pale-4-Lineblue
94.	<i>Prosotas aluta coelestis</i>	Banded Lineblue
95.	<i>Prosotas nora nora</i>	Common Lineblue
96.	<i>Lonolyce helicon merguiana</i>	Pointed Lineblue
97.	<i>Petrelaea dana</i>	Dingy Lineblue
98.	<i>Jamides celeno celeno</i>	Common Cerulean
99.	<i>Jamides bochus bochus</i>	Dark Cerulean
100.	<i>Catochrysops strabo strabo</i>	Forget-me-not
101.	<i>Jamides elpis pseudelpis</i>	Glistening Cerulean
102.	<i>Jamides alecto euryaces</i>	Metallic Cerulean
103.	<i>Zizeeria karsandra</i>	Dark Grass Blue
104.	<i>Lampides boeticus</i>	Peablu
105.	<i>Pseudozizeeria maha maha</i>	Pale Grass Blue
106.	<i>Freyeria putli</i>	Eastern Grass Jewel
107.	<i>Zizina otis otis</i>	Lesser Grass Blue
108.	<i>Udara cardia dilecta</i>	Pale Hedge Blue
109.	<i>Megisba malaya</i>	Malayan
110.	<i>Acytolepis puspa gisca</i>	Common Hedge Blue
111.	<i>Udara albocaerulea</i>	Albocerulean
112.	<i>Celastrina lavendularis limbata</i>	Plain Hedge Blue
113.	<i>Celastrina argiolus sikkima</i>	Hill Hedge Blue
114.	<i>Celastrina huegellii oreana</i>	Large Hedge Blue
115.	<i>Chilades laius laius</i>	Lime Blue
116.	<i>Abisara fylla</i>	Dark Judy
117.	<i>Zemerus flegyas indicus</i>	Punchinello
118.	<i>Dodonia adonira naga</i>	Striped Punch
<b>Nymphalidae</b>		
119.	<i>Libythea myrrha sanguinalis</i>	Club Beak
120.	<i>Danaus genutia</i>	Striped Tiger
121.	<i>Libythea lepita lepita</i>	Common Beak
122.	<i>Tirumala limniace mutina</i>	Blue Tiger
123.	<i>Tirumala septentrionis</i>	Dark Blue Tiger
124.	<i>Parantica aglea melanoides</i>	Glassy Tiger
125.	<i>Parantica sita</i>	Chestnut Tiger
126.	<i>Parantica melaneus plateniston</i>	Chocolate Tiger

Sr. No.	Scientific Name	Common Name
127.	<i>Euploea algea deione</i>	Long-branded Blue Crow
128.	<i>Euploea mulciber mulciber</i>	Striped Blue Crow
129.	<i>Euploea midamus splendens</i>	Blue Spotted Crow
130.	<i>Euploea radamanthus radamanthus</i>	Magpie Crow
131.	<i>Charaxes eudamippus eudamippus</i>	Great Nawab
132.	<i>Charaxes athamas athamas</i>	Common Nawab
133.	<i>Charaxes arja arja</i>	Pallid Nawab
134.	<i>Thaumantis diores diores</i>	Jungle Glory
135.	<i>Charaxes bernardus hierax</i>	Tawny Rajah
136.	<i>Charaxes aristogiton</i>	Scarce Tawny Rajah
137.	<i>Charaxes kahruba</i>	Variegated Rajah
138.	<i>Charaxes marmax marmax</i>	Yellow Rajah
139.	<i>Faunis canens</i>	Common Faun
140.	<i>Melanitis leda</i>	Common Evening Brown
141.	<i>Discophora sondaica</i>	Common Duffer
142.	<i>Lethe mekara zuchara</i>	Common Red Forester
143.	<i>Lethe europa niladana</i>	Bamboo Treebrown
144.	<i>Lethe chandica flanona</i>	Angled Red Forester
145.	<i>Lethe gulnihal</i>	Dull Forester
146.	<i>Lethe sinorix</i>	Tailed Red Forester
147.	<i>Lethe sidonis sidonis</i>	Common Woodbrown
148.	<i>Ethope himachala</i>	Dusky Diadem
149.	<i>Lethe nicetella</i>	Small Woodbrown
150.	<i>Elymnias hypermenestra undularis</i>	Common Palmfly
151.	<i>Penthema lisarda lisarda</i>	Yellow Kaiser
152.	<i>Elymnias malelas malelas</i>	Spotted Palmfly
153.	<i>Mycalesis adamsoni</i>	Watson's Bushbrown
154.	<i>Mycalesis anaxias aemate</i>	Whitebar Bushbrown
155.	<i>Mycalesis perseus blasius</i>	Common Bushbrown
156.	<i>Mycalesis malsarida</i>	Plain Busbrown
157.	<i>Mycalesis visala visala</i>	Long-brand Bushbrown
158.	<i>Mycalesis mineus mineus</i>	Dark-brand Bushbrown
159.	<i>Mycalesis nicotia</i>	Bright-eye Bushbrown
160.	<i>Mycalesis misenus misenus</i>	Salmon-branded Bushbrown
161.	<i>Orsotrioena medus medus</i>	Nigger
162.	<i>Zipoetis scylax</i>	Dark Catseye
163.	<i>Ragadia crisilda crisilda</i>	Striped Ringlet
164.	<i>Hemadara narasingha</i>	Mottled Argus
165.	<i>Ypthima nareda newara</i>	Large Threering
166.	<i>Ypthima baldus baldus</i>	Common Fiverring
167.	<i>Acraea issoria issoria</i>	Yellow Coster
168.	<i>Acraea violae</i>	Tawny Coster
169.	<i>Cethosia biblis tisamena</i>	Red Lacewing
170.	<i>Cethosia cyane cyane</i>	Leopard Lacewing
171.	<i>Argynnis hyperbius hyperbius</i>	Indian Fritillary



Sr. No.	Scientific Name	Common Name
172.	<i>Vindula erota erota</i>	Cruiser
173.	<i>Cirrochroa tyche mithila</i>	Common Yeoman
174.	<i>Cirrochroa aoris aoris</i>	Large Yeoman
175.	<i>Cupha erymanthis lotis</i>	Rustic
176.	<i>Vagrans egista sinha</i>	Vagrant
177.	<i>Phalanta phalantha phalantha</i>	Common Leopard
178.	<i>Sumalia daraxa daraxa</i>	Green Commodore
179.	<i>Auzakia danava danava</i>	Commodore
180.	<i>Parasarpa dudu dudu</i>	White Commodore
181.	<i>Moduza procris procris</i>	Commander
182.	<i>Limenitis zulema</i>	Scarce White Commodore
183.	<i>Athyma asura asura</i>	Studded Sergeant
184.	<i>Athyma opalina orientalis</i>	Himalayan Sergeant
185.	<i>Athyma selenophora selenophora</i>	Staff Sergeant
186.	<i>Athyma ranga ranga</i>	Blackvein Sergeant
187.	<i>Athyma Ziroca Ziroca</i>	Small Staff Sergeant
188.	<i>Athyma cama</i>	Orange Staff Sergeant
189.	<i>Pantoporia hordonia hordonia</i>	Common Lascar
190.	<i>Pantoporia peraka</i>	Perak Lascar
191.	<i>Neptis miah miah</i>	Small Yellow Sailer
192.	<i>Neptis radha radha</i>	Great Yellow Sailer
193.	<i>Neptis ananta ochracea</i>	Yellow Sailer
194.	<i>Neptis hylas astola</i>	Common Sailer
195.	<i>Neptis manasa manasa</i>	Pale Hockeystick Sailer
196.	<i>Neptis clinia susruta</i>	Sullied Sailer
197.	<i>Neptis soma soma</i>	Creamy Sailer
198.	<i>Neptis pseudovikasi</i>	Dingy Sailer
199.	<i>Neptis sankara amba</i>	Broad-banded Sailer
200.	<i>Neptis cartica cartica</i>	Plain Sailer
201.	<i>Phaedyma columella ophiana</i>	Short-banded Sailer
202.	<i>Euthalia aconthea</i>	Common Baron
203.	<i>Lexias dirtea khasiana</i>	Dark Archduke
204.	<i>Euthalia lubentina</i>	Gaudy Baron
205.	<i>Euthalia francae</i>	French Duke
206.	<i>Cyrestis thyodamas thyodamas</i>	Common Map
207.	<i>Chersonesia risa</i>	Common Maplet
208.	<i>Pseudergolis wedah</i>	Tabby
209.	<i>Dichorrhagia nesimachus</i>	Constable
210.	<i>Stibochiona nicea</i>	Popinjay
211.	<i>Ariadne ariadne pallidior</i>	Angled Castor
212.	<i>.Ariadne merione tapestrina</i>	Common Castor
213.	<i>Mimathyma ambica</i>	Indian Purple Emperor
214.	<i>Mimathyma chevana</i>	Sergeant Emperor
215.	<i>Euripus nyctelius</i>	Courtesan
216.	<i>Hestinalis nama</i>	Circe
217.	<i>Symbrenthia lilaea khasiana</i>	Common Jester

Sr. No.	Scientific Name	Common Name
218.	<i>Sephisa chandra</i>	Eastern Courtier
219.	<i>Symbrenthia hypselis cotanda</i>	Spotted Jester
220.	<i>Vanessa indica indica</i>	Indian Red Admiral
221.	<i>Vanessa cardui</i>	Painted Lady
222.	<i>Kaniska canace canace</i>	Blue Admiral
223.	<i>Rohana parisatis</i>	Black Prince
224.	<i>Junonia iphita iphita</i>	Chocolate Pansy
225.	<i>Rohana parvata</i>	Brown Prince
226.	<i>Junonia atlites</i>	Grey Pansy
227.	<i>Junonia almana almana</i>	Peacock Pansy
228.	<i>Junonia lemonias lemonias</i>	Lemon Pansy
229.	<i>Hypolimnas bolina</i>	Great Eggfly
230.	<i>Kallima inachus inachus</i>	Orange Oakleaf
231.	<i>Neurosigma doubledayi</i>	Panther
232.	<i>Doleschallia bisaltide indica</i>	Autumn Leaf
<b>Hesperiidae</b>		
233.	<i>Burara oedipodea aegina</i>	Branded Orange Awlet
234.	<i>Burara jaina vasundhara</i>	Orange Awlet
235.	<i>Burara amara</i>	Small Green Awlet
236.	<i>Burara vasutana</i>	Green Awlet
237.	<i>Burara gomata gomata</i>	Pale Green Awlet
238.	<i>Hasora anura danda</i>	Slate Awl
239.	<i>Hasora badra badra</i>	Common Awl
240.	<i>Hasora vita indica</i>	Plain Banded Awl
241.	<i>Hasora chromus</i>	Common Banded Awl
242.	<i>Hasora taminatus bhavara</i>	White-banded Awl
243.	<i>Badamia exclamationis</i>	Brown Awl
244.	<i>Choaspes benjaminii</i>	Indian Awlking
245.	<i>Bibasis sena sena</i>	Orange-tail Awl
246.	<i>Celaenorrhinus leucocera chinensis</i>	Common Spotted Flat
247.	<i>Celaenorrhinus aurivittata aurivittata</i>	Dark Yellow-banded Flat
248.	<i>Seseria dohertyi</i>	Himalayan White Flat
249.	<i>Pseudocoladenia dan</i>	Fulvous Pied Flat
250.	<i>Darpa hanria</i>	Hairy Angle
251.	<i>Gerosis sinica indica</i>	White Yellow-breast Flat
252.	<i>Tagiades litigiosa litigiosa</i>	Water Snow Flat
253.	<i>Mooreana trichoneura pralaya</i>	Yellow Flat
254.	<i>Odontoptilum angulata</i>	Chestnut Angle
255.	<i>Ctenoptilum vasava vasava</i>	Tawny Angle
256.	<i>Suastus minuta aditia</i>	Small Indian Palm Bob
257.	<i>Oriens gola gola</i>	Common Dartlet
258.	<i>Potanthus zatilla</i>	Common Dart
259.	<i>Potanthus trachala tyleri</i>	Broad Bident Dart
260.	<i>Potanthus tropica</i>	Tropic Dart
261.	<i>Potanthus mara</i>	Sikkim Dart
262.	<i>Telicota augias</i>	Pale Palm Dart
263.	<i>Telicota ancilla horisha</i>	Dark Palm Dart
264.	<i>Pithauria stramineipennis</i>	Light Straw Ace

Sr. No.	Scientific Name	Common Name
	<i>stramineipennis</i>	
265.	<i>Pithauria murdava</i>	Dark Straw Ace
266.	<i>Thoressa hyrie</i>	Chequered Ace
267.	<i>Thoressa sp.</i>	
268.	<i>Thoressa cerata</i>	Northern Spotted Ace
269.	<i>Halpe zema zema</i>	Banded Ace
270.	<i>Halpe porus</i>	Moore's Ace
271.	<i>Halpe kumara</i>	Plain Ace
272.	<i>Halpe kusala</i>	Hill Ace
273.	<i>Sebastonyma dolopia</i>	Tufted Ace
274.	<i>Caltoris pagana</i>	Figure of 8 Swift
275.	<i>Caltoris cahira cara</i>	Colon Swift
276.	<i>Polytremis lubricans</i>	Contiguous Swift
277.	<i>Baoris farri</i>	Paintbrush Swift
278.	<i>Polytremis eltola</i>	Yellow-Spot Swift
279.	<i>Parnara sp.</i>	
280.	<i>Pseudoborbo bevani</i>	Bevan's Swift
281.	<i>Hyarotis adrastus praba</i>	Tree Flitter
282.	<i>Zographetus satwa</i>	Purple and Gold Flitter
283.	<i>Matapa sasivarna</i>	Black-veined Redeye
284.	<i>Baracus vittatus septentrionum</i>	Hedge Hopper
285.	<i>Scobura cephaloides cephaloides</i>	Large Forest Bob
286.	<i>Koruthaialos butleri butleri</i>	Dark Velvet Bob
287.	<i>Ancistroides nigrita</i>	Chocolate Demon
288.	<i>Notocrypta paralysos alysia</i>	Common Banded Demon
289.	<i>Notocrypta feisthameli alysos</i>	Spotted Demon
290.	<i>Udaspes folus</i>	Grass Demon
291.	<i>Asticopterus jama kada</i>	Forest Hopper
292.	<i>Aeromachus stigmata stigmata</i>	Veined Scrub Hopper
293.	<i>Aeromachus jhora creta</i>	Grey Scrub Hopper
294.	<i>Baracus sp.</i>	

Source:

M.J.Gogoi (2012): *Butterflies of Dibang Valley*, Journal of Threatened Taxa, October 2012, 4(12): 3137–3160



## **Annexure – 6.14**

### **List of Threatened Fauna reported in Subansiri Basin, Arunachal Pradesh as per IUCN Classification of Threatened Species**



**MAMMALS**

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
1.	<i>Suncus murinus soccatus</i> House shrew	SORICIDAE	Arunachal Pradesh	A very variable species with a number of genetically distinct population	CAMP: LRIc (Nationally); DD (Globally)
2.	<i>Suncus murinus</i> House shrew		Arunachal Pradesh	A very variable species with a number of genetically distinct opoulation which almost behave like semispecies (Hasler et al. 1977)	CAMP: LRIc (Nationally); DD (Globally)
3.	<i>Anourosorex squamipes</i> Szechuan Burrowing shrew		Arunachal Pradesh		CAMP: VU (Nationally); DD (Globally)
4.	<i>Tupaia belangeri assamensis</i> Common Tree shrew	TUPAIIDAE	Arunachal Pradesh	Ellerman and Morrision-Scott 1951 considered belangeri as a subspecies of <i>T. glis</i> (Diard). However, on the basis of incompatable keryotypes, Elliot et al. 1969 nad Arrighi et al. (1969), considered belangeri as a full species. The name was followed by corbet and Hill 1992 and Wilson (In Wilson and Reeder 1993)	CAMP : LRLC (Nationally), DD (Globally)
5.	<i>Cynopterus brachyotis</i> Lesser dog faced	PTEROPODIDAE	Arunachal Pradesh	There is difference of opinions as regard the allocation of different names	CAMP : LRLC (Nationally), DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
	fruit bat			under this species (Corbet and Hill 1992, Wilson and Reeder 1993)	
6.	<i>Cynopterus sphinx sphinx</i> Short nosed fruit bat		Arunachal Pradesh	This species is most common frugivorous bat in India	CAMP: LRIc (Nationally); DD (Globally)
7.	<i>Megaerops niphanae</i> Niphan's Tail less fruit bat		Arunachal Pradesh	Some of the earlier records of <i>megaerops ecaudatus</i> Temminck from India, Thailand and Vietnam have been referred to <i>Megaerops niphanae</i> Yenbutra & Felten by Corbet & Hill (1992)	CAMP : DD
8.	<i>Rousettus leschenaulti leschenaultia</i> Fulvous fruit bat		Arunachal Pradesh	Agrawal and Bhattacharyya (1977) recorded <i>R. amplexicaudatus</i> Geoffroy from Tripura on the basis of specimens collected by them. Rookmaaker and Bergmans (1981) considered the record to be more probably of <i>R.leschenaulti</i>	CAMP: LRIc (Nationally); DD (Globally)
9.	<i>Sphaerias blanfordi</i> Blanford's fruit bat		Arunachal Pradesh	This species has been reported from Mizoram (Mandal et al. 2000)	CAMP : DD (Nationally) & (Globally)
10.	<i>Eonycteris spelaea</i> Long tailed fruit		Arunachal Pradesh	Only recently this species was found to be widely	CAMP: VU (Nationally); DD (Globally)



Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
	bat			distributed in the greater parts of India (Bhat et al. 1980, Das et al. 1995, Mandal et al. 2000)	
11.	<i>Macroglossus sobrinus sobrinus</i> Long-tongued fruit bat		Arunachal Pradesh	Ellerman and Morrison-Scot (1951) treated <i>sobrinus</i> as a subspecies of <i>M. minimus</i> (Geoffroy). However, most of the recent authors (Lekagul and McNeely 1977, Honacki et al. 1982, Hill 1983, Corbet and Hill 1999, Koopman in Wilson and Reeder 1993) considered the two as distinct species.	CAMP : DD & (Nationally Globally)
12.	<i>Taphozous nudiventris kachhensis</i> Naked-rumped Tomb bat	EMBALLONURIDAE	Arunachal Pradesh	Ellerman and Morrison-Scot (1951) considered <i>kachhensis</i> as a distinct species. Felten (1962) revised the group and concluded that <i>kachhensis</i> should be treated as subspecies of the widely distributed species. <i>T. nudiventris</i> . This view was held by most of the recent workers (Including Corbet and Hill 1986, 1992,	CAMP: LRnt DD (Nationally); DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				Koopman; In Wilson & Reeder 1993).	
13.	<i>Megaderma lyra lyra</i> Indian false vampire	MEGADERMATIDAE	Arunachal Pradesh	Sinha (1977) after reviewing the species, concluded that the entire Indian population belonged to the nominate subspecies	CAMP: LRlc (Nationally); DD (Globally)
14.	<i>Rhinolophus ferrum-equinum tragatus</i> Greater Horseshoe bat	RHINOLOPHIDAE	Arunachal Pradesh	Nil	CAMP : VU (Nationally); DD (Globally)
15.	<i>Rhinolophus lepidus lepidus</i> Blyth's Horseshoe bat		Arunachal Pradesh	Corbet and Hill (1992) treated <i>R. monticola</i> Andersen as a synonym of <i>R. lepidus</i> Blyth	CAMP: LRnt (Nationally); DD (Globally)
16.	<i>Rhinolophus rouxi rouxi</i> Peninsular Horseshoe bat		Arunachal Pradesh	Lal (1983) reported a specimen of <i>Rhinolophus rouxi sinicus</i> Andersen from Arunachal Pradesh. The specimen is in fact, an immature one of the nominate subspecies	CAMP: LRnt (Nationally); DD (Globally)
17.	<i>Hipposideros cineraceus</i> Least leaf nosed bat		Arunachal Pradesh	Nil	CAMP : DD (Nationally & Globally)
18.	<i>Hipposideros lankadiva</i> Indian Leaf-nosed Bat, Indian Roundleaf Bat		Arunachal Pradesh	Nil	CAMP : VU (Nationally); DD (Globally)
19.	<i>Hipposideros larvatus</i>		Arunachal Pradesh	Sinha 1999 synonymised	CAMP : DD (Nationally &

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
	<i>leptophyllus</i> Leaf-nosed Bat			subspecies grandis with leptophyllus	Globally)
20.	<i>Hipposideros pomona gentilis</i>		Arunachal Pradesh	Hill et al. 1986 revived the specific status of Pomona	CAMP : DD & (Nationally Globally)
21.	<i>Pipistrellus coromandra</i> Indian pipistrelle	VESPERTILIONIDIAE	Arunachal Pradesh	Nil	CAMP: LRnt (Nationally); DD (Globally)
22.	<i>Scotomanes ornatus</i> Harlaquin bat		Arunachal Pradesh	Thomas (1921) described the population from Meghelaya as distinct subspecies viz. S. O. imbrencis but Das et al. 1995 synonymised imbrencis with the nominate subspecies	CAMP : DD & (Nationally Globally)
23.	<i>Scotophilus heathi heathi</i> Greater yellow bat		Arunachal Pradesh	Ellereman and Morrison-Scott (1951) recognized two subspecies viz. S. H. Heathi and S. H. Belangeri from Indian range. Siddiqui (1961), however, synonymised belangeri with nominate subspecies	CAMP: LRlc (Nationally); DD (Globally)
24.	<i>Tylonycteris pachypus fulvida</i> Club footed bat		Arunachal Pradesh	Its size is very near to pipistrellus mimus but skull is much flat so that it can be easily identified from P. mimus	CAMP: LRnt (Nationally); DD (Globally)
25.	<i>Murina cyclotis</i> Round-eared tube-nosed bat		Arunachal Pradesh	Within the Indian Union, Murina cyclotis was known only from	CAMP : DD & (Nationally Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				northeastern India. But Ghosh 1989 has recorded it from the Eastern Ghats of Andhra Pradesh, a substantial extension of range of distribution further south	
26.	<i>Murina tubinaris</i> Scully's tube-nosed bat		Arunachal Pradesh	Ellerman and Morrison-Scott 1950 listed <i>tubinaris</i> as a tentative subspecies of <i>M. huttoni</i> but Hill 1962, 1964 has shown that <i>tubinaris</i> should be treated as a species distinct from	CAMP : VU (Nationally); DD (Globally)
27.	<i>Nycticebus coucang bengalensis</i> Slow loris	LORIDAE	Arunachal Pradesh	Nil	RDB : IK; CAMP : LRnt; CITES : Appendix II
28.	<i>Macaca assamensis assamensis</i> Assamese Macaque	CERCOPITHECIDAE	Arunachal Pradesh	Nil	CAMP : LRnt; (Nationally); DD (Globally); CITES : Appendix II
29.	<i>Macaca arctoides</i> Stump tailed Macaque		Arunachal Pradesh	The species <i>arctoides</i> was considered as a subspecies of <i>M. speciosa</i> (Cuvier) by Ellerman and Morrison-Scott (1951). However, Fooden 1969, 1976 considered as a junior synonym	RDB : VU; CAMP : LRnt; (Nationally); DD (Globally); CITES : Appendix II

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
30.	<i>Macaca mulatta</i> Rhesus macaque		Arunachal Pradesh	Nil	CAMP : LRlc; (Nationally); DD (Globally); CITES : Appendix II
31.	<i>Macaca nemestrina</i> Pig tailed macaque		Arunachal Pradesh	India was not included within the range of this species by Groves (In Wilson and Reeder 1993) and Corbet and Hill 1992. But Agrwal and Alfred (in DZSI, 1994) and Das et al. 1995 have recorded it from northeast India	RDB : VU; CAMP : LRnt; (Nationally); DD (Globally); CITES : Appendix II
32.	<i>Trachypithecus pileatus pileatus</i> Capped langur		Arunachal Pradesh	Nil	RDB : VU; CAMP : LRnt; (Nationally); DD (Globally); CITES : Appendix I
33.	<i>Hylobates hoolock</i> Hoolock gibbon	HYLOBATIDAE	Arunachal Pradesh	Nil	RDB : EN, CAMP : EN, CITES : Appendix I
34.	<i>Canis aureus</i> Asiatic Jackal	CANIDAE	Arunachal Pradesh	Nil	CAMP : LRlc (Nationally), CITES : Appendix III
35.	<i>Canis lupus</i> Wolf		Arunachal Pradesh	Nil	RDB : VU, CITES : Appendix I CAMP : LRnt (Nationally), DD (Globally)
36.	<i>Cuon alpinus</i> Wild dog		Arunachal Pradesh	Cohen (1978) has reviewed the species (in Mammalian speices)	CITES : Appendix III; CAMP : LRnt
37.	<i>Vulpes bengalensis</i> Indian fox		Arunachal Pradesh	Nil	CITES : Appendix III; CAMP : LRnt (Nationally), DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
38.	<i>Catopuma temminckii</i> Asiatic golden cat	FELIDAE	Arunachal Pradesh	Hemmer (1978) and Groves (1982a) placed in <i>Catopuma</i> . Pocock (1932a), Weigel (1961), Kral and zima (1980) and kratochvi (1982) placed this under	CITES : Appendix I
39.	<i>Felis chaus</i> Jungle Cat		Arunachal Pradesh	<i>F. chaus</i> Guldenstadt 1776 is invalid (Allen, 1920), affinis is the subspecies found in Arunachal Pradesh	CITES : Appendix II; CAMP : LRnt (Nationally), DD (Globally)
40.	<i>Prionailurus bengalensis</i> Leopard cat		Arunachal Pradesh	The nominate subspecies <i>bengalensis</i> is found in Arunachal Pradesh	RDB : VU, CITES : Appendix I CAMP : LRnt (Nationally), DD (Globally)
41.	<i>Prionailurus viverrinus</i> Fishing cat		Arunachal Pradesh	Nil	RDB : VU, CITES : CAMP : LRnt (Nationally), DD (Globally)
42.	<i>Neofelis nebulosa</i> Clouded leopard		Arunachal Pradesh	Pocock (1917), weigel (1961), hemmer (1978) placed it under genus <i>Neofelis</i> where as kratochvil (1982) and Groves (1982a) placed it under	RDB : VU, CITES : Appendix I CAMP : LRnt (Nationally), DD (Globally)
43.	<i>Pardofelis marmorata</i> Marbled cat		Arunachal Pradesh	The subspecies of this species in India is charltoni	RDB : EN, CITES : Appendix I CAMP : LRnt (Nationally), DD (Globally)
44.	<i>Panthera pardus</i> Leopard/panther		Arunachal Pradesh	According to Pocock (1930a, 1930b), three subspecies of this species	RDB : VU, CITES : Appendix I CAMP : LRnt (Nationally), DD

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				occur in India	(Globally)
45.	<i>Uncia uncia</i> Snow leopard		Arunachal Pradesh		RDB : EN, CITES : Appendix I CAMP : LRnt (Nationally), DD (Globally)
46.	<i>Herpestes urva</i> Crab eating mongoose	HERPESTIDAE	Arunachal Pradesh	Rare	CITES : Appendix III; CAMP : VU (Nationally), DD (Globally)
47.	<i>Herpestes javanicus</i> Small Indian Mongoose		Arunachal Pradesh	Nil	CAMP : LRlc (Nationally), DD (Globally)
48.	<i>Amblonyx cinereus</i> Small clawed otter	MUSTELIDAE	Arunachal Pradesh	Subspecies of this species is concolor which is found in Arunachal Pradesh	CITES : Appendix II; CAMP : NE (Nationally), DD (Globally)
49.	<i>Lutra lutra</i> Common otter		Arunachal Pradesh	Nil	CITES : Appendix I CAMP : NE (Nationally), DD (Globally)
50.	<i>Melogale moschata</i> Chinese ferret badger		Arunachal Pradesh	The subspecies of this species in India is millsii	CAMP : NE (Nationally), DD (Globally)
51.	<i>Martes flavigula</i> Yellow throated marten		Arunachal Pradesh	In India, the nominate subspecies flavigula is found	CITES : Appendix III CAMP : LRLC (Nationally), DD (Globally)
52.	<i>Arctonyx collaris</i> Hog badger		Arunachal Pradesh	Subspecies of this species in Arunachal Pradesh is collaris	RDB : IK; CAMP : DD (Nationally), DD (Globally)
53.	<i>Mustela strigidorsa</i> Black striped weasel		Arunachal Pradesh	Nil	CAMP : DD (Nationally)
54.	<i>Ailurus fulgens</i> Red panda	URSIDAE	Arunachal Pradesh	This species is sometimes included in the	RDB : EN, CITES : Appendix I

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				Procyoridae because of its ringed tail, and superficial resembles of teeth and rounded skull of procyon, however, this species does not have the shared derived morphological characters that would place it there (Decker and Wozencraft, 1991)	CAMP : VU (Nationally), DD (Globally)
55.	<i>Helarctos malayanus</i> Malayan Sun bear		Arunachal Pradesh	Nil	RDB : EN, CITES : Appendix I, CAMP : DD (Nationally), DD (Globally)
56.	<i>Ursus thibetanus</i> Asiatic black bear		Arunachal Pradesh	Nil	CITES : Appendix I; CAMP : LRLC (Nationally) DD (Globally)
57.	<i>Arctictis binturong</i> Binturong or bear cat	VIVERRIDAE	Arunachal Pradesh	Nil	RDB : EN, CITES : Appendix III, CAMP : DD (Nationally), DD (Globally)
58.	<i>Paguma larvata</i> Masked palm civet		Arunachal Pradesh	Nil	CITES : Appendix III, CAMP : LRLC (Nationally), DD (Globally)
59.	<i>Paradoxurus hermaphroditus</i> Common Palm civet, toddy cat		Arunachal Pradesh	Ali et al. (1988) described <i>P. jorandensis</i> from Orissa, on the basis of its light colouration. However, Das et al. (1993) considered the type of <i>P. jorandensis</i> as an albinistic	CAMP : LRlc (Nationally), DD (Globally)



Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				specimen and treated P. jorandensis a synonym of P. hermaphrodites	
60.	<i>Viverra zibetha</i> Large Indian civet		Arunachal Pradesh	The nominate subspecies zibetha of the species is found in Arunachal Pradesh	CITES : Appendix III CAMP : VU (Nationally), DD (Globally)
61.	<i>Viverricula indica indica</i> Small Indian civet		Arunachal Pradesh	Nil	CITES : Appendix III CAMP : LRnt (Nationally), DD (Globally)
62.	<i>Elephas maximus indicus</i> Indian Elephant	ELEPHANTIDAE	Arunachal Pradesh	Nil	RDB : VU, CITES : Appendix I CAMP : VU (Nationally), DD (Globally)
63.	<i>Sus scrofa cristatus</i> Wild boar	SUIDAE	Arunachal Pradesh	Nil	RDB : IK; CAMP : LRlc (Nationally), DD (Globally)
64.	<i>Muntiacus muntjak vaginalis</i> Barking deer	CERVIDAE	Arunachal Pradesh	Nil	CAMP : LRlc (Nationally) DD (Globally)
65.	<i>Axis porcinus porcinus</i> Hog deer		Arunachal Pradesh	Honcki et al. 1982 kept this species under the genus cervus	CAMP : LRlc (Nationally) DD (Globally)
66.	<i>Cervus unicolor</i> Sambhar		Arunachal Pradesh	Equines is the subspecies of this species	CAMP : LRlc (Nationally) DD (Globally)
67.	<i>Bos frontalis</i> Indian bison	BOVIDAE	Arunachal Pradesh	Honacki et al. 1982 treated Bos gaurus as a synonym of Bos frontalis lambert	RDB : VU, CITES : Appendix I CAMP : VU (Nationally), DD (Globally)
68.	<i>Bubalus bubalis</i> Water buffalo		Arunachal Pradesh	Nil	RDB : EN, CITES : Appendix III CAMP : EN (Nationally),
69.	<i>Budorcas taxicolor</i>		Arunachal Pradesh	Nil	CITES : Appendix II

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
	Takin				
70.	<i>Naemorhaedus goral</i> Goral		Arunachal Pradesh	Nil	CITES : Appendix I
71.	<i>Naemorheadus sumatraensis</i> Serow		Arunachal Pradesh	Nil	RDB : VU, CITES : Appendix I CAMP : VU (Nationally), DD (Globally)
72.	<i>Manis pentadactyla aurita</i> Chinese pangolin	MANIDAE	Arunachal Pradesh	Nil	RDB : IK, CITES : Appendix II CAMP : LRnt (Nationally), DD (Globally)
73.	<i>Callosciurus erythraeus intermedius</i> Pallas's squirrel	SCUIRIDAE	Arunachal Pradesh	The species was revised by Moore and Tate (1965) and Chkraborty (1985)	CAMP : LRnt (Nationally), DD (Globally)
74.	<i>Callosciurus pygerythrus stevensi</i> Irrawadi squirrel		Arunachal Pradesh	The form inornatus allocated to this species by Ellerman and Morrison-Scott (1951) has been given specific rank by Corbet and Hill (1992)	CAMP : LRnt (Nationally), DD (Globally)
75.	<i>Dremomys lokriah lokriah</i> Orange bellied Himalayan squirrel		Arunachal Pradesh	Nil	CAMP : LRnt (Nationally), DD (Globally)
76.	<i>Ratufa bicolor gigantea</i> Malayan Giant squirrel		Arunachal Pradesh	Lives in high trees in dense forests and never comes to the ground	CITES : Appendix II CAMP : VU (Nationally), DD (Globally)
77.	<i>Tamiops maccllellandi</i> Himalayan striped squirrel		Arunachal Pradesh	Nil	CAMP : LRnt (Nationally), DD (Globally)
78.	<i>Belomys</i>		Arunachal	Corbet and Hill	CAMP : DD

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
	<i>pearsoni</i> Hairy footed flying squirrel		Pradesh	1992 synonymised monotypic genus <i>Belomys</i> with <i>Tragopterus</i>	(Nationally & Globally)
79.	<i>Biswamoyopterus biswas</i> Namdapha Flying squirrel		Arunachal Pradesh	This species is known only by the holotype. The genus and the species are newly described taxa by saha (1982)	CAMP : CR
80.	<i>Hylopetes alboniger</i> Particoloured Flying squirrel		Arunachal Pradesh	Nil	CAMP : VU (Nationally), DD (Globally)
81.	<i>Eothenomys melanogaster libonotus</i> Pere David's vole	MURIDAE	Arunachal Pradesh	Musser and Carleton (In Wilson and Reeder, 1993) did not include India within the scope of this species. However, Corbet and Hill 1992 on the basis of report of Hinton 1923, kept Arunachal Pradesh within its range	CAMP : DD & (Nationally & Globally)
82.	<i>Berylmys bowersi</i> Bower's rat		Arunachal Pradesh	Nocturnal and fossorial. Commonly found is primary forest and in the highlands above 600m altitude.	CAMP : EN (Nationally) DD (Globally)
83.	<i>Chiropodomys gliroides</i> Pencil tailed tree mouse		Arunachal Pradesh	Out of five subspecies, only the nominate subspecies occurs in India (Musser, 1979)	CAMP : VU (Nationally) DD (Globally)
84.	<i>Vandeleuria oleracea dumeticola</i>		Arunachal Pradesh	Agrawal 2000 on the basis of examination of further material	CAMP : LRlc (Nationally) DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
	Indian long tailed tree mouse			recognized only two subspecies namely dumeticola and oleracea	
85.	<i>Dacnomys millardi wroughtoni</i> Millard's Rat		Arunachal Pradesh	Two subspecies occur in India	CAMP : VU (Nationally) DD (Globally)
86.	<i>Leopoldamys edwardsi</i> Edward's rat		Arunachal Pradesh	The species L. sabanus reported from Meghalaya is a misidentification of L. edwardsi, as such L. sabanus does not occur in India (Musser, 1981)	CAMP : DD (Nationally) DD (Globally)
87.	<i>Mus booduga</i> Common Indian field mouse		Arunachal Pradesh	Nil	CAMP : LRlc (Nationally) DD (Globally)
88.	<i>Mus cookie nagarum</i> Ryley's spiny mouse		Arunachal Pradesh	Nil	CAMP : LRnt (Nationally) DD (Globally)
89.	<i>Mus musculus castaneus</i> House mouse		Arunachal Pradesh	An indoor subspecies	CAMP : LRlc (Nationally) DD (Globally)
90.	<i>Mus pahari pahari</i> Sikkim mouse		Arunachal Pradesh	Nil	CAMP : DD (Nationally) DD (Globally)
91.	<i>Niviventer brahma</i> Thomas Chestnut rat		Arunachal Pradesh	Ellerman (1961) treated <i>Epimys brahma</i> as a subspecies of <i>Rattus fulvescens</i> , but Musser (1970) resuscited it as a full species under the genus <i>Niviventer</i> , and considered it more near to <i>N.</i>	CAMP : EN (Nationally) DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				eha than to N. fulverscens	
92.	<i>Niviventer fulvescens</i> Himalayan Chestnut Rat		Arunachal Pradesh	Nil	CAMP : LRlc (Nationally) DD (Globally)
93.	<i>Niviventer niviventer</i> Himalayan white bellied rat		Arunachal Pradesh	The nominate subspecies is found in Arunachal Pradesh (Mishmi Hills)	CAMP : DD (Nationally) DD (Globally)
94.	<i>Rattus nitidus</i> Himalayan rat		Arunachal Pradesh	Agrawal (2000) has conformed that there is no clear cut difference between R. n. nitidus and R. n. obsoletus either in colour of the undersurface of body or in the length of tail. Hence, the subspecies R. nitidus obsoletus is being treated here as a synonym of R. nitidus nitidus	CAMP : DD (Nationally) DD (Globally)
95.	<i>Rattus rattus</i> Common rat		Arunachal Pradesh	Nil	CAMP : LRlc (Nationally) DD (Globally)
96.	<i>Rattus sikkimensis</i> Sikkim Rat		Arunachal Pradesh	Hinton 1919 described the subspecies R. rattus sikkimensis, which was later synonymised with R. rattus brunneusculus by Ellerman 1961. Musser and Heaney 1985 have considered R. rattus	CAMP : DD (Nationally) DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				sikkimensis as a separate species distinct from <i>Rattus rattus</i> . Agrawal (2000) observed that the differences between <i>Rattus sikkimensis</i> and <i>Rattus rattus</i> do not stand in collections present in ZSI especially when compared with <i>R. r. brunneusculus</i> or <i>R. r. gangutrianus</i>	
97.	<i>Cannomys bodius</i> Bay Bamboo rat		Arunachal Pradesh	Ellerman 1961 maintained three subspecies of <i>Cannomys bodius</i> , namely, <i>badius</i> , <i>castaneus</i> and <i>pater</i> . However, Agrawal 2000 has treated all the three subspecies as synonym of the nominate subspecies	CAMP : LRlc (Nationally) DD (Globally)
98.	<i>Atherurus macrourus</i> Brush tailed Porcupine	HYSTRICIDAE	Arunachal Pradesh	Agrawal 2000 synonymised the subspecies <i>assamensis</i> with the nominate subspecies by examining body and skull measurements and colour	CAMP : EN (Nationally) DD (Globally)
99.	<i>Hystrix bachyura subcristata</i> Himalayan crestless		Arunachal Pradesh	Lekagul and McNeely 1977 thought maintained <i>hodgsoni</i> as a species distinct	CAMP : VU (Nationally), DD (Globally)

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Status
				from brachyuran, yet Van Weers 1979, however kept <i>Hystrix hodgsoni</i> under <i>Hystrix brachyuran</i>	
100.	<i>Platanista gangetica gangetica</i> Ganges River Dolphin, Blind River Dolphin, Ganges Susu	Platanistidae	Brahmaputra and Subansiri Rivers mainly confined to 100-110 km upstream of the confluence (Baruah et al, 2012).		Endangered

#### AVES

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
1.	<i>Phalacrocorax fuscicollis</i> Indian Shag	PHALACROCORACIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Dutta (1998) noted a family party consisting of two adults and one immature on a large boulder in Kameng river towards Sangti, Dirang, 45 km ahead of Bomdila, W. Kameng district. Solitary bird flying along the Subansiri river, Dumporijo, U. Subansiri.	LC	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
2.	<i>Dendrocygna javanica</i> Lesser Whistling Teal	ANATIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	A flock consisting of four birds were seen swimming on the Subansiri river, at Dumporijo, U. Subansiri.	LC	R
3.	<i>Milvus migrans</i> Pariah Kite	ACCIPITRIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazli);	Datta et al. (1998) reported this species found twice around Yazali, Lower Subansiri District.	LC	R
4.	<i>Haliatus Indus Indus</i> Brahminy Kite		India: Arunachal Pradesh (Lower Subansiri, Pitapool, Yazli);		LC	R
5.	<i>Amauornis phoenicurus chinensis</i> Whitebreasted Waterhen	RALLIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Observed and collected specimen from Upper Subansiri district. So it is well distributed in Arunachal Pradesh and it extended upto western Pradesh.	LC	R
6.	<i>Treron sphenura sphenura</i> Kokla or Wedgetailed Green Pigeon	COLUMBIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);		LC	NA
7.	<i>Treron pompadora phayrei</i> Ashyheaded Green Pigeon		India: Arunachal Pradesh (Upper Subansiri);		LC	R



Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
8.	<i>Ducula badia griscicapilla</i> Greyheaded Imperial Pigeon		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	This species reported between 1800-4000 in Subansiri District. A flock consisting of eight birds were seen by us in between Taliha and Daichook, Daporijo, Upper Subansiri.	LC	R
9.	<i>Columba pulchricollis</i> ; Nepal or Ashy Wood Pigeon		India: Arunachal Pradesh (Subansiri);	This species is reported from Pein and Apa Tani Valley and collected a specimen from Sovo (6000 ft.), Subansiri District.	LC	r
10.	<i>Streptopelia orientalis orientalis</i> Rufous Turtle-Dove		India: Arunachal Pradesh (Subansiri);	This species is reported as common in Apa Tani Valley, Subansiri District.	LC	RW
11.	<i>Chalcophas indica indica</i> Indian Emerald Dove		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	This bird is in good numbers in Upper Subansiri & Dumporijo.	LC	R
12.	<i>Cuculus micropterus micropterus</i> Indian Cuckoo		CUCULIDAE	India: Arunachal Pradesh (Subansiri);	It is very common in this area.	LC
13.	<i>Centropus sinensis sinensis</i> Common Crow-		India: Arunachal Pradesh (Upper Subansiri,	Reported one solitary bird in the bush at Dumporijo, Upper	LC	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
	Pheasant		Dumporijo);	Subansiri.		
14.	<i>Centropus toulou bengalensis</i> Lesser Coucal		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Two to three pairs were also noted in a bush at Dumporijo, Upper Subansiri. One bird was trapped in the mist net but unfortunately flew away.	LC	R
15.	<i>Glaucidium cuculoides austerum</i> East Himalayan Barred Owlet	STRIGIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazli);		LC	r
16.	<i>Apus pacificus kanoi Tibetan</i> White-rumped Swift	APODIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Many of this species were seen moving around the sky on each cloudy afternoon at Daporijo, Upper Subansiri. But doubt about the identification of this bird upto sub-species level.	LC	R
17.	<i>Harpactes erythrocephalus helenae</i> Mishmi Redheaded Trogon	TRONGONIDAE	India: Arunachal Pradesh (Subansiri);		LC	R
18.	<i>Alcedo atthis bengalensis</i> Indian Small Blue Kingfisher	ALCEDINIDAE	India: Arunachal Pradesh (Apa Tani Valley);	Reported as the only Kingfisher in Apa Tani Valley.	LC	R
19.	<i>Eurystomus orientalis cyanicollis</i>	MEROPIDAE	India: Arunachal Pradesh	This species reported as not		

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
	Himalayan Broad-billed Roller		(Subansiri);	uncommon in Panioy Valley, Subansiri area.		
20.	<i>Rhyticeros undulates ticehursti</i> Assam Wreathed Hornbill	BUCEROTIDAE	India: Arunachal Pradesh (Subansiri);	Reported as common upto 6000 sq. ft. in Subansiri District.	LC	NA
21.	<i>Buceros bicornis homrai</i> Great Pied Hornbill		India: Arunachal Pradesh (Subansiri);	Reported it at lower elevation (2000 ft) in Subansiri district.	NT	R
22.	<i>Picumnus innominatus innominatus</i> Northern Speckled Piculet	PICIDAE	India: Arunachal Pradesh (Subansiri);	Reported from Pein river, Subansiri area.	LC	R
23.	<i>Sasia ochracea ochracea</i> Himalayan Rufous Piculet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Reported this bird from Pein river, Subansiri area.	LC	r
24.	<i>Pitta nipalensis nipalensis</i> Bluenaped Pitta	PITTIDAE	India: Arunachal Pradesh (Apa Tani);		LC	r
25.	<i>Delichon nipalensis nipalensis</i> Nepal House Martin	HIRUNDINIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	A flock of more than fifty birds were seen after rain on the flat hill top in between Taliha and Daichook, Daporijo, Upper Subansiri.	LC	r
26.	<i>Lanius tephronotus tephronotus</i>	LANIIDAE	India: Arunachal Pradesh		LC	rW

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
	Eastern Tibetan Graybacked Shrike		(Upper & Lower Subansiri, Daporijo, Yazali, Yachuli);			
27.	<i>Lanius schach tricolor</i> Blackheaded Shrike		India: Arunachal Pradesh (Pein Valley, Apa Tani Valley);		LC	R
28.	<i>Oriolus traillii</i> Indian Maroon Oriole	ORIOOLIDAE	India: Arunachal Pradesh (Apa Tani Valley);	This species as not uncommon.	LC	r
29.	<i>Dicrurus leucophaeus hopwoodi</i> Assam Grey Drongo	DICRURIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo);	This species to occur at lower elevations in the river valleys. Whenever drizzling starts, hundred of insectivorous birds, especially drongos and swallows come from everywhere and catch insects in a agricultural farm, near Taliha.	LC	R
30.	<i>Dicrurus aeneus aeneus</i> Bronzed Drongo		India: Arunachal Pradesh (Upper & Lower Subansiri, Apa Tani Valley);	Fairly common in and around Tezu, Lohit district in Nov., 1998. Several birds were seen in an agricultural field at Dumporijo,	LC	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
				Upper Subansiri District.		
31.	<i>Dicrurus remifer tectirostris</i> Lesser Racket tailed Drongo		India: Arunachal Pradesh (Lower Subansiri);	Almost in every light, several drongos of this species were feeding on insects near a bamboo cluster.	LC	r
32.	<i>Dicrurus hottentottus hottentottus</i> Haircrested or Spangled Drongo		India: Arunachal Pradesh (Subansiri);	This species is not common but upto 7000 ft. in Subansiri area.	LC	R
33.	<i>Cissa chinensis chinensis</i> Green Magpie		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Thinlyo populated in Yachuli and Yazali, Sunansiri district. Once noted in Yazali.	LC	r
34.	<i>Dendroctia fromosae himalayensis</i> East Himalayan Tree Pie	CORVIDAE	India: Arunachal Pradesh (Subansiri);	To occur throughout the area (= Subansiri) but most numerous in the tropical rain forest.	LC	r
35.	<i>Corvus macrorhynchos tibetosinensis</i> Wiegold Tibetan Jungle Crow		India: Arunachal Pradesh (Lower Subansiri);	Solitary bird was seen at Dirang, West Kameng District.	LC	R
36.	<i>Hemipus picatus capitalis</i> Brownbacked Pied Flycatcher-Shrike	CAMPEPHAGIDAE	India: Arunachal Pradesh (Subansiri);	This species as quite common all over the hills upto 7000 ft. in Subansiri area.	LC	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
37.	<i>Pericrocotus brevirostris</i> Shortbilled Minivet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);		LC	r
38.	<i>Perierocotus flammeus speciosus</i> Scarlet Minivet		India: Arunachal Pradesh (Lower Subansiri, Kimun and Yazali);	Population is very thin in and around both at Yachuli and Yazali.	LC	R
39.	<i>Percrocotus ethologus lactus</i> Himalayan Longtailed Minivet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);		LC	r
40.	<i>Pycnonotus melanicterus flavirentis</i> Blackcrested Yellow Bulbul	PYCNONOTIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Common on flat hilltop.	LC	R
41.	<i>Pycnonotus jocosus monticola</i> Assam Redwhishered Bulbul		India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo, Pein Valley);	Arunachal Pradesh in lower elevation. Plenty in Dirak and Mahadebpur, Lohit district. Common at Yachuli, Lower Subansiri district. Fairly common at Taliha and Damporijo, Upper Subansiri district.	LC	R
42.	<i>Pycnonotus cafer stanfordii</i> Burmese Redvented		India: Arunachal Pradesh (Upper Subansiri,	Fairly good population in and around Forest Rest House, Tezu,	LC	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
	Bulbul		Daporijo);	Lohit district.		
43.	<i>Hypsipetes mccllellandi mccllellandi</i> Rufousbellied Bulbul		India: Arunachal Pradesh (Kore, Subansiri);		LC	NA
44.	<i>Alcippe nipalensis nipalensis</i> Nepal Quaker Babbler		India: Arunachal Pradesh (Pein Valley in Subansiri);		LC	r
45.	<i>Heterophasia annectens annectens</i> Chestnut backed Sibia		India: Arunachal Pradesh (Kore, Subansiri);		LC	r
46.	<i>Melanochlora sultanea sultanea</i> Sultan Tit		India: Arunachal Pradesh (Subansiri);	This species as widely distributed and fairly common from plain upto 4000 ft. in small parties of 3-4 birds in Subansiri area.	LC	r
47.	<i>Parus monticolus monticolus</i> Green Backed Tit	PARIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazali);	This species as fairly common from 5000 ft. upwards, also occurs in the Apa Tani Valley. He also collected specimen at Kore (5000 ft) in Subansiri area.	LC	r
48.	<i>Paurs spilonotus subvirdis</i> Brumese Blackspotted Yellow Tit		India: Arunachal Pradesh (Apa Tani Valley);		LC	r

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
49.	<i>Sitta castanea cinnamoventris</i> Eastern Chestnutbellied Nuthatch	SITTIDAE	India: Arunachal Pradesh (Upper Subansiri, Abor-Miri Hills, Damporijo);		LC	R
50.	<i>Sitta himalayensis australis</i> Assam Whitetailed Nuthatch		India: Arunachal Pradesh (Subansiri, Kore and Apa Tani Valley);		LC	R
51.	<i>Anthus hodgsoni hodgsoni</i> Tree Pipit	MOTACILLIDAE	India: Arunachal Pradesh (Lower Subansiri, Yachuli);	Found in large numbers in cultivated filed around Forest Rest House, Tezu, Lohit district. A good population also recorded near the Forest Rest House, Yazali and in a large Firm House, Yachuli, Lower Subansiri district.	LC	RW
52.	<i>Montacilla alba alboides ]</i> Pied Wagtail		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);		LC	rW
53.	<i>Nectarinia asiatica intermedia</i> Assam Purple Sunbird	NECTARINIIDAE	India: Arunachal Pradesh (Pita Pool, Lower Subansiri);	A thin population in the dense forest.	LC	R
54.	<i>Aethopyga saturate assamensis</i>		India: Arunachal Pradesh		LC	r



Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1	Habit
	Assam Blackbreasted Sunbird		(Apa Tani Valley);			
55.	<i>Zosterops palpebrosa palpebrosa</i> White-eye	ZOSTEROPIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);		LC	R
56.	<i>Passer montanus hepaticus</i> Mishmi Tree sparrow	PLOCEIDAE	India: Arunachal Pradesh (Lower Subansiri, Yachuli, Yazali);		LC	R
57.	<i>Passer rutilans cinnamomeus</i> Himalayan Cinnamon Tree Sparrow		India: Arunachal Pradesh (Upper Subansiri, Daporijo, Apa Tani Valley);	This species in fair numbers.	LC	r

R = Widespread Resident, r = Sparse resident, W = Widespread winter visitor, NA = No Information Available

#### REPTILIA

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1
1.	<i>Ahaetulla prasina</i> Short-nose Whipe Snake		India: Arunachal Pradesh (Lower Subansiri);	A very gentle snake, quite unafraid and easily handled.	LC

#### AMPHIBIA

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1
1.	<i>Rana cyanophlyctis</i> Schneider Skipping Frog	Ranidae	India: Arunachal Pradesh (Lower Subansiri);	1 ex., of frog collected from Seppa, East Kameng dist. And another ex. Of frog from Yembung, East Siang dist. Possess darker,	LC

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1
				thickly warty skin on dorsum and smooth and spotted skin on ventrum. Adults used in college laboratories for disceting purpose.	
2.	<i>Rana limnocharis</i> Boie Cricket Frog		India: Arunachal Pradesh (Lower Subansiri);	Frogs are generally found inside the bush grown by the sides of cultivated land and streams.	LC

### PISCES

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1
1.	<i>Barilius bendelisis</i>	Cyprinidae	India: Arunachal Pradesh (Subansiri);		LR-nt
2.	<i>B. barna</i>				LRnt
3.	<i>B. vagra</i>				VU
4.	<i>Danio aequipinnatus</i>				LR-nt
5.	<i>D. devario</i>				LR-nt
6.	<i>Garra gotyla gotyla</i>				VU
7.	<i>G. kempfi</i>				VU
8.	<i>G. nasuta</i>				LR-lc
9.	<i>Tor tor</i>				EN
10.	<i>T. putitora</i>				EN
11.	<i>Neolissocheilus hexagonalepis</i>				LR-nt
12.	<i>Schizothorax richardsonii</i>				VU
13.	<i>Aspidoparia jaya</i>		India: Arunachal Pradesh (Subansiri);	Live in clear rivers and streams. A. jaya can be distinguished from A. morar by the increased number of lateral line scales.	LC
14.	<i>Labeo bata</i>		India: Arunachal Pradesh (Subansiri);	Extensively cultured for stocking tanks	LC

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	IUCN 3.1
				especially in West Bengal.	
15.	<i>Botia dario</i>	Cobitidae			LR-lc
16.	<i>B. rostrata</i>				VU
17.	<i>Schistura rupecola rupecola</i>				LR-nt
18.	<i>Nemacheilus devdevi</i>				LR-nt
19.	<i>Cirrhinus mrigala</i>	Labeoninae			LR-nt
20.	<i>Ompok pabo</i>	Siluridae			LR-nt
21.	<i>Clarias batrachus</i>	Clariidae			VU
22.	<i>Channa orientalis</i>	Channidae			VU
23.	<i>C. punctata</i>				LR-nt
24.	<i>Badis spp.</i>	Badidae			LR-lc
25.	<i>Chanda nama</i>	Ambassidae			LR-lc
26.	<i>Xenentodon cancila</i>	Belonidae			LR-nt
27.	<i>Macrognathus aral</i>	Mastecembelidae			LR-nt
28.	<i>Oncorhynchus mykiss</i>	Salmonidae			NE

#### Insecta: Odonata

Sr. No.	Name of Species	Family	Distribution	Remarks	IUCN 3.1
1.	<i>Libellago lineate lineate</i>	CHLOROCYPHIDAE	India: Arunachal Pradesh (Subansiri);		LC
2.	<i>Rhinocypha ignipennis</i>		India: Arunachal Pradesh (Subansiri);		LC
3.	<i>Rhinocypha fenestrella fenestrella</i>		India: Arunachal Pradesh (Subansiri);		LC
4.	<i>Rhinocypha quadrimaculata</i>		India: Arunachal Pradesh (Subansiri);		LC
5.	<i>Lestes praemorsus decipiens</i>	LESTIDAE	India: Arunachal Pradesh (Subansiri);		LC
6.	<i>Ceriagrion fallax cerinomelas</i>	COENAGRIONIDAE	India: Arunachal Pradesh (Upper Subansiri);		LC
7.	<i>Ceriagrion olivaceum</i>		India: Arunachal Pradesh (Subansiri);		LC
8.	<i>Pseudagrion australasiae</i>		India: Arunachal Pradesh (Subansiri); in ground moss		LC

Sr. No.	Name of Species	Family	Distribution	Remarks	IUCN 3.1
9.	<i>Aciagrion olympicum</i>		India: Arunachal Pradesh (Lower & Upper Subansiri); in ground moss		LC
10.	<i>Agriocnemis clauseni</i>		India: Arunachal Pradesh (Subansiri);		LC
11.	<i>Anax guttatus</i>	ASEHNIDAE	India: Arunachal Pradesh (Subansiri);		LC
12.	<i>Tetrathemis platyptera</i>		India: Arunachal Pradesh (Subansiri);		LC
13.	<i>Orthetrum brunneum brunneum</i>		India: Arunachal Pradesh (Subansiri);		LC
14.	<i>Orthetrum luzonicum</i>		India: Arunachal Pradesh (Subansiri);		LC
15.	<i>Orthetrum Sabina Sabina</i>		India: Arunachal Pradesh (Subansiri);		LC
16.	<i>Orthetrum glaucum</i>		India: Arunachal Pradesh (Subansiri);		LC
17.	<i>Orthetrum triangulare triangulare</i>		India: Arunachal Pradesh (Subansiri);		LC
18.	<i>Orthetrum pruinosum neglectum</i>		India: Arunachal Pradesh (Subansiri);		LC
19.	<i>Potomarcha congener</i>	LIBELLULIDAE	India: Arunachal Pradesh (Ziro);		LC
20.	<i>Palpopleura sexmaculata sexmaculata</i>		India: Arunachal Pradesh (Subansiri);		LC
21.	<i>Acisoma panorpoides panorpoides</i>		India: Arunachal Pradesh (Subansiri);		LC
22.	<i>Crocothemis servilia servilia</i>		India: Arunachal Pradesh (Daporizo, Kameng & Subansiri);		LC
23.	<i>Sympetrum commixtum</i>		India: Arunachal Pradesh (Kameng, Subansiri);		LC
24.	<i>Trithemis festiva</i>		India: Arunachal Pradesh (Subansiri);		LC
25.	<i>Rhyothemis variegata</i>		India: Arunachal Pradesh		LC

Sr. No.	Name of Species	Family	Distribution	Remarks	IUCN 3.1
	<i>variegata</i>		(Subansiri);		

*Acronym:*

CAMP: Conservation Assessment and Management Plan

RDB: Red Data Book

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

CR: Critically Endangered

EN: Endangered

VU: Vulnerable

LR/Nt: Lower Risk/near threatened

LR/lc: Lower Risk/least concern

LC: Least Concern

NE: Not Evaluated

IK:= insufficient known;

DD: Data Deficient

NA: No Information Available

Source:

Fauna of Arunachal Pradesh, Zoological Survey of India (ZSI), 2006 (No. 13 Part-1 and Part 2) and IUCN



## **Annexure – 6.15**

**Faunal species reported in Subansiri Basin, Arunachal Pradesh and listed in Schedules of Wildlife Protection Act, 1972 (as amended till date)**





MAMMALS

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
1.	<i>Cynopterus brachyotis</i> Lesser dog faced fruit bat	PTEROPODIDAE	Arunachal Pradesh	There is difference of opinions as regard the allocation of different names under this speices (Corbet and Hill 1992, Wilson and Reeder 1993)	IWPA : Schedule V
2.	<i>Sphaerias blanfordi</i> Blanford's fruit bat		Arunachal Pradesh	This species has been reported form Mizoram (Mandal et al. 2000)	IWPA : Schedule V
3.	<i>Nycticebus coucang bengalensis</i> Slow loris	LORIDAE	Arunachal Pradesh	Nil	IWPA : Schedule I
4.	<i>Macaca assamensis assamensis</i> Assamese Macaque	CERCOPITHECIDAE	Arunachal Pradesh	Nil	IWPA : Schedule II
5.	<i>Macaca arctoides</i> Stump tailed Macaque		Arunachal Pradesh	The species arctoides was considered as a subspecies of M. speciosa (Cuvier) by Ellerman and Morrison-Scott (1951). However, Fooden 1969, 1976 considered as a junior synonym	IWPA : Schedule II
6.	<i>Macaca mulatta</i> Rhesus Macaque		Arunachal Pradesh	Nil	IWPA : Schedule II
7.	<i>Macaca nemestrina</i>		Arunachal Pradesh	India was not included within	IWPA : Schedule II

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
	Pig tailed Macaque			the range of this species by Groves (In Wilson and Reeder 1993) and Corbet and Hill 1992. But Agrwal and Alfred (in DZSI, 1994) and Das et al. 1995 have recorded it from northeast India	
8.	<i>Trachypithecus pileatus</i> Capped langur		Arunachal Pradesh	Nil	IWPA : Schedule I
9.	<i>Hylobates hoolock</i> Hoolock gibbon	HYLOBATIDAE	Arunachal Pradesh	Nil	IWPA : Schedule I
10.	<i>Canis aureus</i> Asiatic Jackal	CANIDAE	Arunachal Pradesh	Nil	IWPA : Schedule II, Part II
11.	<i>Canis lupus</i> Wolf		Arunachal Pradesh	Nil	IWPA : Schedule I, Part I
12.	<i>Cuon alpinus</i> Wild dog		Arunachal Pradesh	Cohen (1978) has reviewed the species (in Mammalian species)	IWPA : Schedule II, Part I
13.	<i>Vulpes bengalensis</i> Indian fox		Arunachal Pradesh	Nil	IWPA : Schedule II, Part II
14.	<i>Catopuma temminckii</i> Asiatic golden cat	FELIDAE	Arunachal Pradesh	Hemmer (1978) and Groves (1982a) placed in <i>Catopuma</i> . Pocock (1932a), Weigel (1961), Kral and zima (1980) and kratochvi (1982) placed this under	IWPA : Schedule I

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
15.	<i>Felis chaus</i> Jungle Cat		Arunachal Pradesh	f. chaus Guldenstadt 1776 is invalid (Allen, 1920), affinis is the subspecies found in Arunachal Pradesh	IWPA : Schedule II, Part II
16.	<i>Prionailurus bengalensis</i> Leopard cat		Arunachal Pradesh	The nominate subspecies bengalensis is found in Arunachal Pradesh	IWPA : Schedule I, Part I
17.	<i>Prionailurus viverrinus</i> Fishing cat		Arunachal Pradesh	Nil	IWPA : Schedule I, Part I
18.	<i>Neofelis nebulosa</i> Clouded leopard		Arunachal Pradesh	Pocock (1917), weigel (1961), hemmer (1978) placed it under genus Neofelis where as kratochvil (1982) and Groves (1982a) placed it under	IWPA : Schedule I, Part I
19.	<i>Pardofelis marmorata</i> Marbled cat		Arunachal Pradesh	The subspecies of this species in India is charltoni	IWPA : Schedule I, Part I
20.	<i>Panthera pardus</i> Leopard/panther		Arunachal Pradesh	According to Pocock (1930a, 1930b), three subspecies of this species occur in India	IWPA : Schedule I, Part I
21.	<i>Uncia uncia</i> Snow leopard		Arunachal Pradesh		IWPA : Schedule I, Part I
22.	<i>Herpestes urva</i> Crab eating mongoose	HERPESTIDAE	Arunachal Pradesh	Rare	IWPA : Schedule IV
23.	<i>Herpestes javanicus</i>		Arunachal Pradesh	Nil	IWPA : Schedule IV

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
	Small Indian Mongoose				
24.	<i>Lutra lutra</i> Common otter	MUSTELIDAE	Arunachal Pradesh	Nil	IWPA : Schedule I, Part II
25.	<i>Melogale moschata</i> Chinese ferret badger		Arunachal Pradesh	The subspecies of this species in India is millsii	IWPA : Schedule I, Part I
26.	<i>Martes flavigula</i> Yellow throated marten		Arunachal Pradesh	In India, the nominate subspecies flavigula is found	IWPA : Schedule II, Part II
27.	<i>Arctonyx collaris</i> Hog badger		Arunachal Pradesh	Subspecies of this species in Arunachal Pradesh is collaris	IWPA : Schedule I, Part I
28.	<i>Ailurus fulgens</i> Red panda	URSIDAE	Arunachal Pradesh	This species is sometimes included in the Procyoridae because of its ringed tail, and superficially resembles of teeth and rounded skull of procyon, however, this species does not have the shared derived morphological characters that would place it there (Decker and Wozencraft, 1991)	IWPA : Schedule I, Part I
29.	<i>Helarctos malayanus</i> Malayan Sun bear		Arunachal Pradesh	Nil	IWPA : Schedule I, Part I

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
30.	<i>Arctictis binturong</i> Binturong or bear cat	VIVERRIDAE	Arunachal Pradesh	Nil	IWPA : Schedule I, Part I
31.	<i>Paguma larvata</i> Masked palm civet		Arunachal Pradesh	Nil	IWPA : Schedule II, Part II
32.	<i>Paradoxurus hermaphroditus</i> Common Palm civet, toddy cat		Arunachal Pradesh	Ali et al. (1988) described <i>P. jorandensis</i> from Orissa, on the basis of its light colouration. However, Das et al. (1993) considered the type of <i>P. jorandensis</i> as an albinistic specimen and treated <i>P. jorandensis</i> a synonym of <i>P. hermaphroditus</i>	IWPA : Schedule II, Part II
33.	<i>Viverra zibetha zibetha</i> Large Indian civet		Arunachal Pradesh	The nominate subspecies <i>zibetha</i> of the species is found in Arunachal Pradesh	IWPA : Schedule II, Part II
34.	<i>Viverricula indica indica</i> Small Indian civet		Arunachal Pradesh	Nil	IWPA : Schedule II, Part II
35.	<i>Elephas maximus Indicus</i> Indian Elephant	ELEPHANTIDAE	Arunachal Pradesh	Nil	IWPA : Schedule I, Part I,
36.	<i>Sus scrofa cristatus</i> Wild boar	SUIDAE	Arunachal Pradesh	Nil	IWPA : Schedule III

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
37.	<i>Muntiacus muntjak vaginalis</i> Barking deer	CERVIDAE	Arunachal Pradesh	Nil	IWPA : Schedule III
38.	<i>Axis porcinus porcinus</i> Hog deer		Arunachal Pradesh	Honcki et al. 1982 kept this species under the genus cervus	IWPA : Schedule III;
39.	<i>Cervus unicolor</i> Sambhar		Arunachal Pradesh	Equines is the subspecies of this species	IWPA : Schedule III
40.	<i>Bos frontalis</i> Indian bison	BOVIDAE	Arunachal Pradesh	Honacki et al. 1982 treated Bos gaurus as a sgnonym of Bos frontalis lambert	IWPA : Schedule I, Part I,
41.	<i>Bubalus bubalis</i> Water buffalo		Arunachal Pradesh	Nil	IWPA : Schedule I, Part I,
42.	<i>Naemorheadu s sumatraensis</i> Serow		Arunachal Pradesh	Nil	IWPA : Schedule I, Part I,
43.	<i>Manis pentadactyla aurita</i> Chinese pangolin	MANIDAE	Arunachal Pradesh	Nil	IWPA : Schedule I, Part I,
44.	<i>Ratufa bicolor gigantea</i> Malayan Giant squirrel	SCUIRIDAE	Arunachal Pradesh	Lives in high trees in dense forests nd never comes to the ground	IWPA : Schedule II, Part II,
45.	<i>Eothenomys melanogaster libonotus</i> Pere David's vole	MURIDAE	Arunachal Pradesh	Musser and Carleton (In Wilson and Reeder, 1993) did not include India within the scope of this species. However, Corbet and Hill 1992 on the basis of	IWPA : Schedule V,

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
				report of Hinton 1923, kept Arunachal Pradesh within its range	
46.	<i>Berylmys bowersi</i> Bower's rat		Arunachal Pradesh	Nocturnal and fossorial. Commonly found in primary forest and in the highlands above 600m altitude.	IWPA : Schedule V;
47.	<i>Chiropodomys gliroides</i> Pencil tailed tree mouse		Arunachal Pradesh	Out of five subspecies, only the nominate subspecies occurs in India (Musser, 1979)	IWPA : Schedule V;
48.	<i>Vandeleuria oleracea dumeticola</i> Indian long tailed tree mouse		Arunachal Pradesh	Agrawal 2000 on the basis of examination of further material recognized only two subspecies namely <i>dumeticola</i> and <i>oleracea</i>	IWPA : Schedule V;
49.	<i>Dacnomys millardi wroughtoni</i> Millard's Rat		Arunachal Pradesh	Two subspecies occur in India	IWPA : Schedule V;
50.	<i>Leopoldamys edwardsi</i> Edward's rat		Arunachal Pradesh	The species <i>L. sabanus</i> reported from Meghalaya is a misidentification of <i>L. edwardsi</i> , as such <i>L. sabanus</i> does not occur in India (Musser, 1981)	IWPA : Schedule V;
51.	<i>Mus booduga</i> Common Indian field mouse		Arunachal Pradesh	Nil	IWPA : Schedule V;
52.	<i>Mus cookie nagarum</i>		Arunachal Pradesh	Nil	IWPA : Schedule V;

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
	Ryley's spiny mouse				
53.	<i>Mus musculus castaneus</i> House mouse		Arunachal Pradesh	An indoor subspecies	IWPA : Schedule V;
54.	<i>Mus pahari pahari</i> Sikkim mouse		Arunachal Pradesh	Nil	IWPA : Schedule V;
55.	<i>Niviventer brahma</i> Thomas Chestnut rat		Arunachal Pradesh	Ellerman (1961) treated <i>Epimys brahma</i> as a subspecies of <i>Rattus fulvescens</i> , but Musser (1970) resuscitated it as a full species under the genus <i>Niviventer</i> , and considered it more near to <i>N. eha</i> than to <i>N. fulverscens</i>	IWPA : Schedule V;
56.	<i>Niviventer fulvescens</i> Himalayan Chestnut Rat		Arunachal Pradesh	Nil	IWPA : Schedule V;
57.	<i>Niviventer niviventer</i> Himalayan white bellied rat		Arunachal Pradesh	The nominate subspecies is found in Arunachal Pradesh (Mishmi Hills)	IWPA : Schedule V;
58.	<i>Rattus nitidus</i> Himalayan rat		Arunachal Pradesh	Agrawal (2000) has conformed that there is no clear cut difference between <i>R. n. nitidus</i> and <i>R. n. obsoletus</i> either in colour of the undersurface of body or in the length of tail. Hence, the	IWPA : Schedule V;



Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
				subspecies R. nitidus absoletus is being treated here as a synonym of R. nitidus nitidus	
59.	<i>Rattus rattus</i> Common rat		Arunachal Pradesh	Nil	IWPA : Schedule V;
60.	<i>Rattus sikkimensis</i> Sikkim Rat		Arunachal Pradesh	Hinton 1919 described the subspecies R. rattus sikkimensis, which was later synonymised with R. rattus brunneusculus by Ellerman 1961. Musser and Heaney 1985 have considered R. rattus sikkimensis as a separate species distinct from Rattus rattus. Agrawal (2000) observed that the differences between Rattus sikkimensis and Rattus rattus do not stand in collections present in ZSI especially when compared with R. r. brunneusculus or R. r. gangutrianus	IWPA : Schedule V;
61.	<i>Cannomys badius</i> Bay Bamboo rat		Arunachal Pradesh	Ellerman 1961 maintained three subspecies of Cannomys badius, namely,	IWPA : Schedule V;

Sr. No.	Scientific Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
				badius, castaneus and pater. However, Agrawal 2000 has treated all the three subspecies as synonym of the nominate subspecies	
62.	<i>Atherurus macrourus</i> Brush tailed Porcupine	HYSTRICIDAE	Arunachal Pradesh	Agrawal 2000 synonymised the subspecies assamensis with the nominate subspecies by examining body and skull measurements and colour	IWPA : Schedule V
63.	<i>Platanista gangetica</i> Ganges River Dolphin, Blind River Dolphin, Ganges Susu	PLATANISTIDAE	Arunachal Pradesh		IWPA : Schedule V

**AVES**

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
1.	<i>Phalacrocorax fuscicollis</i>  Indian Shag	PHALACROCORA CIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Dutta (1998) noted a family party consisting of two adults and one immature on a large boulder in Kameng river towards Sangti, Dirang, 45 km ahead of Bomdila, W. Kameng district. Solitary bird flying along the Subansiri river, Dumporijo, U. Subansiri.	Schedule IV	R
2.	<i>Dendrocygna javanica</i>  Lesser Whistling Teal	ANATIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	A flock consisting of four birds were seen swimming on the Subansiri river, at Dumporijo, U. Subansiri.	Schedule IV	R
3.	<i>Milvus migrans</i>  Pariah Kite	ACCIPITRIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazli);	Datta et al. (1998) reported this species found twice around Yazali, Lower Subansiri District.	Schedule I	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
4.	<i>Haliastur Indus Indus</i> Brahminy Kite		India: Arunachal Pradesh (Lower Subansiri, Pitapool, Yazli);		Schedule I	R
5.	<i>Amaurornis phoenicurus chinensis</i> Whitebreasted Waterhen	RALLIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Observed and collected specimen from Upper Subansiri district. So it is well distributed in Arunachal Pradesh and it extended upto western Pradesh.	Schedule IV	R
6.	<i>Treron sphenura sphenura</i> Kokla or Wedgetailed Green Pigeon	COLUMBIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);		Schedule IV	N A
7.	<i>Treron pompadora phayrei</i> Ashyheaded Green Pigeon		India: Arunachal Pradesh (Upper Subansiri);		Schedule IV	R
8.	<i>Ducula badia griseicapilla</i> Greyheaded Imperial Pigeon		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	This species reported between 1800-4000 in Subansiri District. A flock consisting of eight birds were seen by us in between Taliha	Schedule IV	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
				and Daichook, Daporijo, Upper Subansiri.		
9.	<i>Columba pulchricollis</i> ; Nepal or Ashy Wood Pigeon		India: Arunachal Pradesh (Subansiri);	This species is reported from Pein and Apa Tani Valley and collected a specimen from Sovo (6000 ft.), Subansiri District.	Schedule IV	r
10.	<i>Streptopelia orientalis orientalis</i> Rufous Turtle-Dove		India: Arunachal Pradesh (Subansiri);	This species is reported as common in Apa Tani Valley, Subansiri District.	Schedule IV	RW
11.	<i>Chalcophas indica indica</i> Indian Emerald Dove		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	This bird is in good numbers in Upper Subansiri & Dumporijo.	Schedule IV	R
12.	<i>Cuculus micropterus micropterus</i> Indian Cuckoo		India: Arunachal Pradesh (Subansiri);	It is very common in this area.	Schedule IV	R
13.	<i>Centropus sinensis sinensis</i> Common Crow-Pheasant	CUCULIDAE	India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Reported one solitary bird in the bush at Dumporijo, Upper Subansiri.	Schedule IV	R
14.	<i>Centropus toulou bengalensis</i> Lesser Coucal		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);	Two to three pairs were also noted in a bush at Dumporijo, Upper Subansiri. One bird was trapped	Schedule IV	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
				in the mist net but unfortunately flew away.		
15.	<i>Glaucidium cuculoides austerum</i> East Himalayan Barred Owlet	STRIGIDAE	India: Arunachal Pradesh (Lower Subansiri, Yazli);		Schedule IV	r
16.	<i>Harpactes erythrocephalus helenae</i> Mishmi Redheaded Trogon	TRONGONIDAE	India: Arunachal Pradesh (Subansiri);		Schedule IV	R
17.	<i>Alcedo atthis bengalensis</i> Indian Small Blue Kingfisher		India: Arunachal Pradesh (Apa Tani Valley);	Reported as the only Kingfisher in Apa Tani Valley.	Schedule IV	R
18.	<i>Rhyticeros undulates ticehursti</i> Assam Wreathed Hornbill	BUCEROTIDAE	India: Arunachal Pradesh (Subansiri);	Reported as common upto 6000 sq. ft. in Subansiri District.	Schedule I	N A
19.	<i>Buceros bicornis homrai</i> Great Pied Hornbill		India: Arunachal Pradesh (Subansiri);	Reported it at lower elevation (2000 ft) in Subansiri district.	Schedule I	R
20.	<i>Picumnus innominatus innominatus</i> Northern Speckled Piculet	PICIDAE	India: Arunachal Pradesh (Subansiri);	Reported from Pein river, Subansiri area.	Schedule IV	R
21.	<i>Sasia ochracea ochracea</i> Himalayan Rufous Piculet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Reported this bird from Pein river, Subansiri area.	Schedule IV	r

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
22.	<i>Pitta nipalensis nipalensis</i> Bluenaped Pitta	PITTIDAE	India: Arunachal Pradesh (Apa Tani);		Schedule IV	r
23.	<i>Oriolus traillii traillii</i> Indian Maroon Oriole	ORIOOLIDAE	India: Arunachal Pradesh (Apa Tani Valley);	This species is not uncommon.	Schedule IV	r
24.	<i>Dicrurus leucophaeus hopwoodi</i> Assam Grey Drongo	DICRURIDAE	India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo);	This species occur at lower elevations in the river valleys. Whenever drizzling starts, hundred of insectivorous birds, especially drongos and swallows come from everywhere and catch insects in a agricultural farm, near Taliha.	Schedule IV	R
25.	<i>Dicrurus aeneus aeneus</i> Bronzed Drongo		India: Arunachal Pradesh (Upper & Lower Subansiri, Apa Tani Valley);	Fairly common in and around Tezu, Lohit district in Nov., 1998. Several birds were seen in an agricultural field at Dumporijo, Upper Subansiri District.	Schedule IV	R
26.	<i>Dicrurus remifer</i>		India: Arunachal	Almost in every light,	Schedule IV	r

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
	<i>tectirostris</i> Lesser Racket tailed Drongo		Pradesh (Lower Subansiri);	several drongos of this species were feeding on insects near a bamboo cluster.		
27.	<i>Dicrurus hottentottus hottentottus</i> Haircrested or Spangled Drongo		India: Arunachal Pradesh (Subansiri);	This species is not common but upto 7000 ft. in Subansiri area.	Schedule IV	R
28.	<i>Cissa chinensis chinensis</i> Green Magpie		India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Thinly populated in Yachuli and Yazali, Sunansiri district. Once noted in Yazali.	Schedule IV	r
29.	<i>Dendroctia fromosae himalayensis</i> East Himalayan Tree Pie	CORVIDAE	India: Arunachal Pradesh (Subansiri);	To occur throughout the area (= Subansiri) but most numerous in the tropical rain forest.	Schedule IV	r
30.	<i>Corvus macrorhynchos tibetosinensis</i> Tibetan Jungle Crow		India: Arunachal Pradesh (Lower Subansiri);	Solitary bird was seen at Dirang, West Kameng District.	Schedule IV	R
31.	<i>Hemipus picatus capitalis</i> Brownbacked Pied Flycatcher-Shrike	CAMPEPHAGIDAE	India: Arunachal Pradesh (Subansiri);	This species as quite common all over the hills upto 7000 ft. in Subansiri area.	Schedule IV	R
32.	<i>Pericrocotus brevirostris brevirostris</i>		India: Arunachal Pradesh (Upper		Schedule IV	r



Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
	Shortbilled Minivet		Subansiri, Daporijo);			
33.	<i>Perierocotus flammeus speciosus</i> Scarlet Minivet		India: Arunachal Pradesh (Lower Subansiri, Kimun and Yazali);	Population is very thin in and around both at Yachuli and Yazali.	Schedule IV	R
34.	<i>Percrocotus ethologus lactus</i> East Himalayan Longtailed Minivet		India: Arunachal Pradesh (Upper Subansiri, Daporijo);		Schedule IV	r
35.	<i>Pycnonotus melanicterus flaviventris</i> Blackcrested Yellow Bulbul	PYCNONOTIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);	Common on flat hilltop.	Schedule IV	R
36.	<i>Pycnonotus jocosus monticola</i> Assam Redwhishered Bulbul		India: Arunachal Pradesh (Upper & Lower Subansiri, Daporijo, Pein Valley);	Arunachal Pradesh in lower elevation. Plenty in Dirak and Mahadebpur, Lohit district. Common at Yachuli, Lower Subansiri district. Fairly common at Taliha and Damporijo, Upper Subansiri district.	Schedule IV	R
37.	<i>Pycnonotus cafer stanfordii</i> Burmese Redvented		India: Arunachal Pradesh (Upper Subansiri,	Fairly good population in and around Forest Rest	Schedule IV	R

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
	Bulbul		Daporijo);	House, Tezu, Lohit district.		
38.	<i>Hypsipetes mccllellandi mccllellandi</i> Rufousbellied Bulbul		India: Arunachal Pradesh (Kore, Subansiri);		Schedule IV	N A
39.	<i>Alcippe nipalensis nipalensis</i> Nepal Quaker Babbler		India: Arunachal Pradesh (Pein Valley in Subansiri);		Schedule IV	r
40.	<i>Heterophasia annectens annectens</i> Chestnut backed Sibia		India: Arunachal Pradesh (Kore, Subansiri);		Schedule IV	r
41.	<i>Melanochlora sultanea sultanea</i> Sultan Tit	PARIDAE	India: Arunachal Pradesh (Subansiri);	This species as widely distributed and fairly common from plain upto 4000 ft. in small parties of 3-4 birds in Subansiri area.	Schedule IV	r
42.	<i>Parus monticolus monticolus</i> Green Backed Tit		India: Arunachal Pradesh (Lower Subansiri, Yazali);	This species as fairly common from 5000 ft. upwards, also occurs in the Apa Tani Valley. He also collected specimen at Kore (5000 ft) in Subansiri area.	Schedule IV	r

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
43.	<i>Paurspilonotus subvirdis</i>  Brumese Blackspotted Yellow Tit		India: Arunachal Pradesh (Apa Tani Valley);		Schedule IV	r
44.	<i>Anthus hodgsoni hodgsoni</i>  Tree Pipit	MOTACILLIDAE	India: Arunachal Pradesh (Lower Subansiri, Yachuli);	Found in large numbers in cultivated fields around Forest Rest House, Tezu, Lohit district. A good population also recorded near the Forest Rest House, Yazali and in a large Firm House, Yachuli, Lower Subansiri district.	Schedule IV	RW
45.	<i>Montacilla alba alboides</i>  Hodgson's Pied Wagtail		India: Arunachal Pradesh (Upper Subansiri, Dumporijo);		Schedule IV	rW
46.	<i>Nectarinia asiatica intermedia</i>  Assam Purple Sunbird	NECTARINIIDAE	India: Arunachal Pradesh (Pita Pool, Lower Subansiri);	A thin population in the dense forest.	Schedule IV	R
47.	<i>Aethopyga saturate assamensis</i>  Assam Blackbreasted Sunbird		India: Arunachal Pradesh (Apa Tani Valley);		Schedule IV	r

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per WPA 1972	Habit
48.	<i>Zosterops palpebrosa palpebrosa</i> White-eye	ZOSTEROPIDAE	India: Arunachal Pradesh (Upper Subansiri, Daporijo);		Schedule IV	R
49.	<i>Passer montanus hepaticus</i> Mishmi Tree sparrow	PLOCEIDAE	India: Arunachal Pradesh (Lower Subansiri, Yachuli, Yazali);		Schedule IV	R
50.	<i>Passer rutilans cinnamomeus</i> Himalayan Cinnamon Tree Sparrow		India: Arunachal Pradesh (Upper Subansiri, Daporijo, Apa Tani Valley);	This species in fair numbers.	Schedule IV	r

R = Widespread Resident, r = Sparse resident, W = Widespread winter visitor,  
NA = No Information Available

## AMPHIBIA

Sr. No.	Scientific & Common Name Species	Family	Distribution	Remarks	Schedule as per Indian Wildlife Protection Act (IWPA), 1972 as amended till date
1	<i>Rana cyanophlyctis</i> Skipping Frog	Ranidae	India: Arunachal Pradesh (Lower Subansiri);	1 ex., of frog collected from Seppa, East Kameng dist. And another ex. Of frog from Yembung, East Siang dist. Possess darker, thickly warty skin on dorsum and smooth and spotted skin on ventrum. Adults used in college laboratories for dissecting purpose.	Schedule IV
2	<i>Rana limnocharis</i> Cricket Frog		India: Arunachal Pradesh (Lower Subansiri);	Frogs are generally found inside the bush grown by the sides of cultivated land and streams.	Schedule IV

## INSECTA (LEPIDOPTERA)

Sr. No.	Scientific name	Common name	Indian WPA 1972
<b>Papilionidae</b>			
1.	<i>Byasa polla</i>	De Nicéville's Windmill	Schedule I Part IV
2.	<i>Byasa dasarada dasarada</i>	Great Windmill	Schedule II Part II
3.	<i>Papilio nephelus chaon</i>	Yellow Helen	Schedule II Part II
4.	<i>Papilio memnon agenor</i>	Great Mormon	Schedule I Part IV
5.	<i>Graphium evemon albociliatis</i>	Lesser Jay	Schedule II Part II
6.	<i>Meandrusa lachinus lachinus</i>	Brown Gorgon	Schedule II Part II
<b>Pieridae</b>			
7.	<i>Eurema andersoni andersoni</i>	One-Spot Grass Yellow	Schedule II Part II
8.	<i>Appias nero galba</i>	Orange Albatross	Schedule IV
9.	<i>Appias albina darada</i>	Common Albatross	Schedule II Part II

Sr. No.	Scientific name	Common name	Indian WPA 1972
10.	<i>Appias indra indra</i>	Plain Puffin	Schedule II Part II
11.	<i>Cepora nadina nadina</i>	Lesser Gull	Schedule II Part II
<b>Lycaenidae</b>			
12.	<i>Castalius rosimon rosimon</i>	Common Pierrot	Schedule I Part IV
13.	<i>Zinaspas todara distorta</i>	Silver Streaked Acacia Blue	Schedule II Part II
14.	<i>Yasoda tripunctata tripunctata</i>	Branded Yamfly	Schedule II Part II
15.	<i>Chliaria kina cachara</i>	Blue Tit	Schedule II Part II
16.	<i>Spindasis nipalicus evansii</i>	Silvergrey Silverline	Schedule II Part II
17.	<i>Spindasis rukmini</i>	Khaki Silverline	Schedule I Part IV
18.	<i>Spindasis lohita himalayanus</i>	Long-banded Silverline	Schedule II Part II
19.	<i>Nacaduba pactolus continentalis</i>	Large-4-Lineblue	Schedule II Part II
20.	<i>Nacaduba hermus nabo</i>	Pale-4-Lineblue	Schedule II Part II
21.	<i>Jamides elpis pseudelpis</i>	Glistening Cerulean	Schedule II Part II
22.	<i>Jamides alecto eurysaces</i>	Metallic Cerulean	Schedule II Part II
23.	<i>Lampides boeticus</i>	Peablu	Schedule II Part II
24.	<i>Megisba malaya</i>	Malayan	Schedule II Part II
25.	<i>Acytolepis puspa gisca</i>	Common Hedge Blue	Schedule II Part II
<b>Nymphalidae</b>			
26.	<i>Libythea lepita lepita</i>	Common Beak	Schedule II Part II
27.	<i>Euploea mulciber mulciber</i>	Striped Blue Crow	Schedule IV
28.	<i>Charaxes athamas athamas</i>	Common Nawab	Schedule II Part II
29.	<i>Libythea lepita lepita</i>	Common Beak	Schedule II Part II
30.	<i>Euploea mulciber mulciber</i>	Striped Blue Crow	Schedule IV
31.	<i>Charaxes athamas athamas</i>	Common Nawab	Schedule II Part II
32.	<i>Charaxes bernardus hierax</i>	Tawny Rajah	Schedule II Part II
33.	<i>Charaxes aristogiton</i>	Scarce Tawny Rajah	Schedule II Part II
34.	<i>Charaxes kahruha</i>	Variiegated Rajah	Schedule II Part II
35.	<i>Charaxes marmax marmax</i>	Yellow Rajah	Schedule II Part II
36.	<i>Discophora sondaica</i>	Common Duffer	Schedule I Part IV
37.	<i>Lethe europa niladana</i>	Bamboo Treebrown	Schedule I Part IV
38.	<i>Lethe sinorix</i>	Tailed Red Forester	Schedule II Part II
39.	<i>Lethe nicetella</i>	Small Woodbrown	Schedule II Part II
40.	<i>Penthema lisarda lisarda</i>	Yellow Kaiser	Schedule II Part II
41.	<i>Mycalesis anaxias aemate</i>	Whitebar Bushbrown	Schedule II Part II
42.	<i>Mycalesis malsarida</i>	Plain Busbrown	Schedule II Part II
43.	<i>Mycalesis mineus mineus</i>	Dark-brand Bushbrown	Schedule II Part II?
44.	<i>Mycalesis misenus misenus</i>	Salmon-branded Bushbrown	Schedule II Part II
45.	<i>Ragadia crisilda crisilda</i>	Striped Ringlet	Schedule II Part II
46.	<i>Limenitis zulema</i>	Scarce White Commodore	Schedule I Part IV
47.	<i>Athyma ranga ranga</i>	Blackvein Sergeant	Schedule II Part II
48.	<i>Neptis radha radha</i>	Great Yellow Sailer	Schedule II Part II
49.	<i>Neptis ananta ochracea</i>	Yellow Sailer	Schedule II Part II
50.	<i>Neptis manasa manasa</i>	Pale Hockeystick Sailer	Schedule I Part IV
51.	<i>Neptis soma soma</i>	Creamy Sailer	Schedule II Part II
52.	<i>Neptis sankara amba</i>	Broad-banded Sailer	Schedule I Part IV

Sr. No.	Scientific name	Common name	Indian WPA 1972
53.	<i>Euthalia lubentina</i>	Gaudy Baron	Schedule IV
54.	<i>Euthalia francae</i>	French Duke	Schedule II Part II
55.	<i>Mimathyma chevana</i>	Sergeant Emperor	Schedule II Part II
56.	<i>Sephisa chandra</i>	Eastern Courtier	Schedule I Part IV
57.	<i>Rohana parvata</i>	Brown Prince	Schedule II Part II
58.	<i>Doleschallia bisaltide indica</i>	Autumn Leaf	Schedule I Part IV
<b>Hesperiidae</b>			
59.	<i>Bibasis sena sena</i>	Orange-tail Awl	Schedule II Part II
60.	<i>Baoris farri</i>	Paintbrush Swift	Schedule IV

### Acronym

IWPA: Indian Wildlife Protection Act, 1972 (as amended till date)

### Source:

Fauna of Arunachal Pradesh, Zoological Survey of India (ZSI), 2006 (No. 13, Part 1 and Part-2) and Indian Wildlife Protection Act, 1972 (as amended till date).





## **Annexure – 6.16**

### **List of Fauna reported in Talle Wildlife Sanctuary**



Sr. No.	Name of Species	
	English name	Scientific name
<b>Mammals</b>		
1.	Assamese macaque	<i>Macaca assamensis</i>
2.	Bamboo rat	<i>Cannomys</i> sp.
3.	Barking deer	<i>Muntiacus muntjak</i>
4.	Bush rat	<i>Golunda ellioti</i>
5.	Capped langur	<i>Presbytis pileatus</i>
6.	Common mongoose	<i>Herpestes</i> spp.
7.	Clouded leopard	<i>Neofelis nebulosa</i>
8.	David's vole	<i>Eothenomys melanogaster</i>
9.	Eastern mole	<i>Talpa micrura</i>
10.	Field mice	<i>Mus booduga</i>
11.	Flying squirrel	<i>Petaurisata</i> sp.
12.	Gaur	<i>Bos gauras</i>
13.	Giant flying squirrel	<i>Petaurista petaurista</i>
14.	Grizzled giant squirrel	<i>Ratufa macroura</i>
15.	Himalayan palm civet	<i>Paguma larvata</i>
16.	Himalayan hoary bellied squirrel	<i>Callosciurus pygerythrus</i>
17.	Himalayan black bear	<i>Selenarctos thibetanus</i>
18.	Indian elephant	<i>Elephas maximus indicus</i>
19.	Indian fox	<i>Calpus bengalensis</i>
20.	Indian porcupine	<i>Hystrix indica</i>
21.	Indian pangolin	<i>Manis crassicaudata</i>
22.	Jungle cat	<i>Felis chaus</i>
23.	Large Indian civet	<i>Viverra zibetha</i>
24.	Leopard	<i>Panthera pardus</i>
25.	Leopard cat	<i>Felis bengalensis</i>
26.	Malayan giant squirrel	<i>Ratufa bicolor</i>
27.	Mole rat	<i>Bandicota bengalensis</i>
28.	Orange bellied Himalayan squirrel	<i>Dremomys lokriah</i>
29.	Otter	<i>Lutra lutra</i>
30.	Palm civet	<i>Paradoxurus hermaphrodites</i>
31.	Red panda	<i>Ailurus fulgens</i>
32.	Roylet's vole	<i>Alticola roylei</i>
33.	Rhesus monkey	<i>Macaca mulatta</i>
34.	Small Indian civet	<i>Veverricula indica</i>
35.	Slow loris	<i>Nycticebus bengalensis</i>
36.	Himalayan Striped squirrel	<i>Tamiops maccllellandi</i>
37.	Toddy cat	<i>Paradoxuras hermaphroditus</i>
38.	Tree mouse	<i>Vandeleuria oleracea</i>
39.	Tiger	<i>Panthera tigris</i>
40.	Tree shrew	<i>Tupia</i> sp.
41.	White bellied rat	<i>Rattus viviventor</i>
42.	Wild boar	<i>Sus scrofa</i>

Sr. No.	Name of Species	
	English name	Scientific name
43.	Wild dog	<i>Cuon alpinus</i>
44.	Wild buffalo	<i>Bulbalus bulbalis</i>
<b>Reptiles and Amphibians</b>		
45.	Assam trinket snake	<i>Elaphe frenata</i>
46.	Assam snail eater	<i>Pareas monticola</i>
47.	Banded wolf snake	<i>Lycodon fasciatus</i>
48.	Black krait	<i>Bungarus niger</i>
49.	Blotched pit viper	<i>Trimeresurus monticola</i>
50.	Bull frog	<i>Rana</i> spp.
51.	Bush frog	<i>Philantus</i> spp.
52.	Common Indian blind snake	<i>Typhlops braminus</i>
53.	Copper head trinket snake	<i>Coelognathus radiatus</i>
54.	Coral snake	<i>Calliophis macclellandi</i>
55.	Diard's blind snake	<i>Typhlops diardi</i>
56.	Eastern gama	<i>Boiga gokool</i>
57.	False cobra	<i>Pseudoxenodon macrops</i>
58.	Golden tree snake	<i>Chrysopelea ornata</i>
59.	Green rat snake	<i>Ptyas nigromarginata</i>
60.	Himalayan cat snake	<i>Boiga multifasciata</i>
61.	Indo Chinese rat snake	<i>Ptyas korros</i>
62.	King cobra	<i>Ophiophagus hannah</i>
63.	Large Indian blind snake	<i>Typhlops praminus</i>
64.	Large Indian monitor lizard	<i>Varanus bengalensis</i>
65.	Lizard	<i>Colotes</i> spp.
66.	Mock viper	<i>Psammodynastes pulverulentus</i>
67.	Monocellate cobra	<i>Naja naja kaouthia</i>
68.	Mountain keel black	<i>Amphiesma platyceps</i>
69.	Pit viper	<i>Trimeresurus</i> spp
70.	Python	<i>Python molurus</i>
71.	Rat snake	<i>ptyas mucosa mucosa</i>
72.	Skink	<i>Mabuya</i> spp.
73.	Striped keel back	<i>Amphiesma stolata</i>
74.	Tree frog	<i>Rhacophorus</i> spp.
75.	Vine snake	<i>Ahaetulla prasina</i>
76.	White barred kukri	<i>Oligodon abocinctus</i>
77.	Checked keel back	<i>Xenochropis piscator</i>

Sr. No.	Name of Species	
	Scientific name/English name	Family name
<b>Arthropoda</b>		
1.	<i>Carcinus</i> spp.	Crustacea (Crabs)
<b>Insects</b>		
<b>Lepidoptera</b>		
2.	<i>Papilio Krishna moore</i>	Papilionidae

Sr. No.	Name of Species	
	Scientific name/English name	Family name
3.	<i>Papilio protenor carver</i>	Papilionidae
4.	<i>Papilio machon</i>	Papilionidae
5.	<i>Childrena childreni</i>	Nymphalidae
6.	<i>Lipolimnus missipius</i>	Nymphalidae
7.	<i>Neptischlimiodes</i>	Nymphalidae
8.	<i>Lethe margaritae</i>	Satyoridae
9.	<i>Mycalsis feldri feldri</i>	Satyridae
10.	<i>Idea lycenus</i>	Danidae
11.	Hawk moth	Sphingidae
<b>Hymenoptera</b>		
12.	<i>Apis</i> sp.	Apidae
13.	<i>Polistes</i> sp.	Vespidae
14.	<i>Oecophylla smargdina</i>	Fomicidae
<b>Diptera</b>		
15.	<i>Simulium</i> sp.	Simuliidae
16.	<i>Hieroglyphus bonion</i>	Acridae
17.	<i>Tryxis</i> sp.	Acridae
18.	<i>Microcentrum</i> sp.	Tettigonidae
19.	<i>Gryllus</i> sp.	Grylliade
<b>Dermaptera</b>		
20.	Earwing	Forcipulata
<b>Isoptera</b>		
21.	<i>Carausius</i> sp.	Phasmidae
<b>Coleoptera</b>		
22.	<i>Alaus sculpus</i>	Elateridae
23.	<i>Leptalad darjeelini</i>	Passalidae
24.	<i>Heterorrhinia elegans</i>	Scarabidae
25.	<i>Batocera</i> sp.	Meloidae
26.	<i>Lecon</i> sp.	Elateridae
27.	<i>Holotrichia</i> sp.	Scarabidae
<b>Odonata</b>		
28.	<i>Gomphus</i> sp.	
29.	<i>Aeschna</i> sp.	
<b>Annelida</b>		
30.	<i>Pheretima</i> sp.	Oligochaeta
31.	<i>Hirudo</i> sp.	Hirudinea

Sources:

Working Plan 2012-13, Talley Valley Wildlife Sanctuary, Forest Dept. Arunachal Pradesh

Environment Impact Assessment and Environment Management Plan for Subansiri Lower Project, Arunachal Pradesh and Assam (2000 MW), NHPC/WAPCOS, Gurgaon.



## **Annexure – 6.17**

### **Description of Important Bird Areas Located in Upper Subansiri, Lower Subansiri and Kurung Kumey Districts, Subansiri Basin**





## 1. KOLORIANG-SARLI-DAMINAREAS, LOWER SUBANSIRI DISTRICT

IBA Site Code	IN-AR-10
State	Arunachal Pradesh
District	Lower Subansiri
Coordinates	27° 40' 18" N, 93° 17' 51" E
Ownership	Community
Area	c. 2,00,000 ha
Altitude	800 - 5,000 m
Rainfall	>1,800 mm
Temperature	0 °C to 25 °C
Biogeographic Zone	Himalaya
Habitats	Sub-tropical Dry Evergreen, Montane Wet Temperate Forest, Sub-Alpine Dry Scrub, Alpine Dry Pasture

### General Description

This site is a large area c. 2,00,000 ha in the Lower Subansiri district around Koloriang, Sarli and Damin areas. As the altitude varies from 800 m to 5,000 m, four biome types are found in this area. Tropical evergreen and semi-evergreen forests usually occur in the lower areas, mainly below 900 m. Here, closed canopy forests with many storeys are seen. Subtropical forests occur from 900 m to 1,800 m, temperate forests between 1,800 m and 3,500 m, sub- alpine from 3,500 m to 4,300 m, and alpine meadows from 3,700 m to 5,500 m.

### Avifauna

A detailed checklist of the birds of this IBA is not available. However, Singh (1994) and Kumar and Singh (1999) have conducted general surveys of this and other areas of Arunachal Pradesh.

A significant discovery from this area is a new monal species of *Lophophorus*. The males of the new monal appeared very similar to the male of Sclater's Monal *Lophophorus sclateri*, except for the completely white tail in the former. The new monal was sighted on nine occasions (5 males, 13 females and 1 subadult) in the Sarli circle of Lower Subansiri district. All sightings were made in the alpine meadows between 3,900 m and 4,200 m (Kumar and Singh 1999). Feathers of this taxon were found in Tali and Damin, indicating a wide distribution in this area (Kumar and Singh 1999).

In the upper reaches of Lower Subansiri district, beside the new taxon of monal pheasant, Kumar and Singh (1999) have recorded the following pheasants: Temminck's Tragopan *Tragopan temminckii*, Blood Pheasant *Ithaginis cruentus* and Black-brested Kaleej *Lophura leucomelanos lathami*.

Kumar and Singh (1999) found feathers of the Rufous-necked Hornbill *Aceros nipalensis* near Koloriang at an altitude of 1,000 m. There is a stray record of Black-necked Crane *Grus nigricollis* in Koloriang (Choudhury 2002).

This site falls in the Eastern Himalayas Endemic Bird Area (EBA) (Stattersfield *et al.* 1998), in which 21 species are considered as Restricted Range. Nine Restricted Range species are found here but some need further confirmation. The new monal taxon is confined to a narrow altitudinal belt in Arunachal Pradesh (Kumar and Singh 1999), so it would also qualify for Restricted Range status.

As the altitude of this IBA varies from 800 to 5,000 m, four biomes are represented here: Biome-5 (Eurasian High Montane- Alpine and Tibetan) above c. 3,600 m; Biome-7 (Sino-Himalayan Temperate Forest,) between c. 1,800 m to 3,600 m; Biome-8 (Sino- Himalayan Subtropical Forest,) between c. 1,000 m to 2,000 m; and Biome-9 (Indo-Chinese Tropical Moist Forest,) below 1,000 m. Studies on birds are required to find out how many Biome- restricted species are found in this IBA. As the habitat is intact in many parts of this IBA, significant populations of many Biome- restricted species are likely to be present. Therefore, we feel that this IBA perfectly fits A3 criteria also.

<b>Endangered</b>	
New Monal Taxon	<i>Lophophorus</i> sp.
<b>Vulnerable</b>	
Rufous-necked Hornbill	<i>Aceros nipalensis</i>
Rusty-bellied Shortwing (?)	<i>Brachypteryx hyperythra</i>
Mishmi Wren-Babbler (?)	<i>Spelaeornis badeigularis</i>
<b>Near Threatened</b>	
Ward's Trogon (?)	<i>Harpactes wardi</i>
Wedge-billed Wren-Babbler	<i>Sphenocichla humei</i>
<b>Endemic Bird Area 130: Eastern Himalayas</b>	
Ward's Trogon (?)	<i>Harpactes wardi</i>
Rusty-bellied Shortwing (?)	<i>Brachypteryx hyperythra</i>
Mishmi Wren-Babbler (?)	<i>Spelaeornis badeigularis</i>
Wedge-billed Wren-Babbler	<i>Sphenocichla humei</i>
Brown-throated Tit- Babbler	<i>Alcippe ludlowi</i>
Beautiful Sibia	<i>Heterophasia pulchella</i>
White-naped Yuhina	<i>Yuhina bakeri</i>
Black-browed Leaf-Warbler	<i>Phylloscopus cantator</i>
Broad-billed Flycatcher-Warbler	<i>Tickellia hodgsoni</i>

### Other Key Fauna

There are confirmed records of Tiger *Panthera tigris* and Leopard *P. pardus* in Sarli and Damin areas (Kumar and Singh 1999). Other larger mammals found in this IBA are the Asiatic Black Bear *Ursus thibetanus*, Takin *Budorcas taxicolor*, Serow *Nemorhaedus sumatraensis*, Goral *Nemorhaedus goral* and Musk Deer *Moschus chrysogaster*. Sambar *Cervus unicolor* and Barking Deer *Muntiacus muntjak* are reported from the lower region.

### Land Use

- Cultivation
- Sustainable hunting

### Threats and Conservation Issues

- Hunting
- Timber operation

The discovery of a new pheasant taxon gives this area (and other nearby IBAs where it is found) priority protection. Kumar and Singh (1999) found that all pheasant species, including the new taxon, are hunted for food. Hunting is a part of the culture of the tribes living here and in practice it would be difficult to curb. Therefore, the first step towards conservation of pheasants could be through setting up of large protected areas, and intense environmental education. Most of the protected areas in Arunachal Pradesh are in the lower reaches, only few are situated above 3,000 m. Most of the pheasant species of conservation concern inhabit above 2,000 m. Kumar

and Singh (1999) found evidence that the new pheasant taxon occurs only between 92° to 94° E, above 3,000 m elevation and along the Great Himalayan Range. Some of the areas important for pheasants are also the regular haunts of endangered species such as the Takin, Musk Deer and Red Panda - all Schedule I species under the Indian Wildlife (Protection) Act. We suggest that a new protected area should be declared in the habitat of the new Monal taxon that is probably endemic to Arunachal Pradesh. According to the local people, areas above 2,000 m are unfit for cultivation, so hunting is the only occupation.

This can be replaced by guided bird watching tours.

### **Key Contributors**

Suresh Kumar and Bikul Goswami

### **KeyReferences**

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## 2. TALEY VALLEY WILDLIFE SANCTUARY, LOWER SUBANSIRI DISTRICT

IBA Site Code	IN-AR-24
State	Arunachal Pradesh
District	Lower Subansiri
Coordinates	27° 41' 24" N, 93°50' 60" E
Ownership	State
Area	51,587 ha
Altitude	120-3,000 m
Rainfall	> 2,500 mm
Temperature	0 °C to 30 °C
Biogeographic Zone	Himalaya
Habitats	Tropical Wet Evergreen Forest, Broadleaf, Temperate Conifer, Subtropical Broadleaf Hill Forest

### General Description

A portion of the Taley Valley Reserved Forest in Lower Subansiri district of Arunachal Pradesh with an area of 33,700 ha. was declared as a wildlife sanctuary on July 14, 1995. The area of the Reserve Forest is c. 51,587 ha. We have considered the whole Reserve Forest and the Wildlife Sanctuary as an IBA. The Valley proper lies about 30 km away from the district headquarters, Hapoli. The area lies between the Subansiri, Supu and Pange rivers. It is surrounded by gentle sloping hills, clothed densely with thick vegetation.

There are two main valleys: the Pange Valley and the Taley Valley. Small rivers, flowing through these valleys, have formed deep gorges and rapid waterfalls. The smaller streams drain into the Subansiri River which ultimately joins the mighty Brahmaputra. The hills are gently sloping, except for a few peaks that are very steep.

The following forest types are found in Taley Valley area: East Himalayan Subtropical Forest, East Himalayan Wet Temperate Forest, Lauraceae Forest, Oak Forest, High-level Oak Forest and East Himalayan Mixed Coniferous Forest (Haridasan *et al.* 1999). The site is a refuge to a few rare and endangered plants, and abounds with economically important plants. Taley Valley is also known for dense growth of bamboo. Five species of bamboo are recorded of which *Pleioblastus simonii* is known in India only from here (Haridasan *et al.* 1999). *Taxus baccata*, the Yew tree, that has come under increasing pressure from illegal collectors due to its medicinal property is still seen in Taley Valley.

Taley Valley shows some very interesting phenomena as far as vegetation is concerned. Normally, in altitudinal succession of vegetation types, coniferous forest appears above the broadleaf type. Here, it is the reverse. The coniferous forest appears in the valleys, while broadleaf trees are seen on the hilltops.

Some plants found in the area are extremely rare and highly endangered. Some like *Paphiopedilum wardii* are believed to be extinct. Yet others are known only from restricted localities in Arunachal Pradesh, that too only for a limited time. Some species, that are locally abundant, are rare at the national or global level. We need to make greater efforts to conserve the plants for the benefit of human beings (Haridasan *et al.* 1999).

The Taley Valley and adjoining areas is the land of *Apatani* tribe, which is well known for its conservation ethics and sustainable practices.

## Avifauna

About 159 bird species have been recorded in Taley Valley WLS so far (Singh 1994). Most of these species breed here, enhancing the importance of this IBA site. The only globally threatened species confirmed from this area is the Rufous-necked Hornbill *Aceros nipalensis*. Presence of Blyth's Tragopan *Tragopan blythii*, another threatened species, has yet to be confirmed, though the related, Temminck's Tragopan *Tragopan temminckii* is reported. A few notable bird records from this IBA site are the Purple Cochoa *Cochoa purpurea*, the only record of the species from Arunachal Pradesh (Singh 1994). This rare species is reported to breed in Taley Valley forests. A record of Yellow-rumped Honeyguide *Indicator xanthonotus* is the second record of the species from the state.

The Eurasian Tree-creeper *Certhia familiaris*, a bird of the Western Himalayas, was first noted by Singh (1994) from Taley Valley, which is a considerable eastward extension of its range in the Himalayas. Another first record from Arunachal Pradesh is that of the Silver-backed Needletail *Hirundapus cochinchinensis*. It was seen by Singh (1994) in March 1994 at an elevation of 2,400 m.

Of the 21 species recorded in India in the Eastern Himalayas EBA (Stattersfield *et al.* 1998) 10 have been reported from this IBA. There are not many IBAs in this EBA where so many Restricted Range species are found due to altitudinal variation from 120 m to 3,000 m, this site represents three biomes: Biome-7 (Sino-Himalayan Temperate Forest), Biome-8 (Sino-Himalayan Subtropical Forest) and Biome-9 (Indo-Chinese Tropical Moist Forest). A total of 58 biome species are found in this IBA but they are too many to list here. Some of the interesting species seen here are Common Hill-Partridge *Arborophila torqueola*, Striated Laughingthrush *Garrulax striatus*, Slender-billed Scimitar-babbler *Xiphirhynchus supercilialis*, Rusty-flanked Tree-creeper *Certhia nipalensis*, Crimson-browed Finch *Pinicola subhimachala*, Brown Bullfinch *Pyrrhula nipalensis*, Rusty-fronted Barwing *Actinodura egertoni*, Red-headed Tit *Aegithalos concinnus*, Black-spotted Yellow Tit *Parus spilonotus* and Black-throated Sunbird *Aethopyga saturata*.

Vulnerable`	
Red-breasted Hill- Partridge (?)	<i>Arborophila mandellii</i>
Blyth's Tragopan (?)	<i>Tragopan blythii</i>
Rufous-necked Hornbill	<i>Aceros nipalensis</i>
Rusty-bellied Shortwing (?)	<i>Brachypteryx hyperythra</i>
Beautiful Nuthatch	<i>Sitta formosa</i>
Near Threatened	
Rufous-throated Wren-Babbler	<i>Spelaeornis caudatus</i>

Endemic Bird Area 130: Eastern Himalayas	
Red-breasted Hill- Partridge (?)	<i>Arborophila mandellii</i>
Tragopan (?)	<i>Tragopan blythii</i>
Rusty-bellied Shortwing	<i>Brachypteryx hyperythra</i>
Rufous-throated Wren-Babbler	<i>Spelaeornis caudatus</i>
Barwing	<i>Actinodura waldeni</i>
Brown-throated Tit- Babbler	<i>Alcippe ludlowi</i>
Beautiful Sibia	<i>Heterophasia pulchella</i>
White-naped Yuhina	<i>Yuhina bakeri</i>
Black-browed Leaf- Warbler	<i>Phylloscopus cantator</i>
Broad-billed Flycatcher-Warbler	<i>Tickellia hodgsoni</i>

### **Other Key Fauna**

The Talley valley is famous for rare and elusive cats such as the Clouded leopard *Neofelis nebulosa* and Golden Cat *Catopuma temmincki*. Some other mammals found in the area are Tiger *Panthera tigris*, Leopard *P. pardus*, Leopard Cat *Prionailurus bengalensis*, Capped Langur *Trachypithecus pileatus*, Asiatic Black Bear *Ursus thibetanus* and Chinese pangolin *Manis crassicaudata*.

### **Land Use**

- Nature conservation
- Tourism and recreation

### **Threats and Conservation Issues**

The Lower Subansiri hydroelectric project In India, Taley Valley is one of the few examples of undisturbed pristine climax vegetation. Though the forests in the Sanctuary are intact, the surrounding hills are almost barren.

### **Key Contributors**

Bharat Bhushan Bhatt, K. Haridasan, P. Singh, R. Suresh Kumar, Bikul Goswami and Manju Menon

### **KeyReferences**

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### 3. NACHO-LIMEKING-TAKSING-MAJHA, UPPER SUBANSIRI DISTRICT

IBA Site Code	IN-AR-16
State	Arunachal Pradesh
District	Upper Subansiri
Coordinates	28° 34' 60" N, 93° 31' 00" E
Ownership	Private land
Area	c. 2,00,000 ha
Altitude	800 - 4,500 m
Rainfall	1,500 mm
Temperature	0 °C to 28 °C
Biogeographic Zone	Himalaya
Habitats	Tropical Wet Evergreen, Subtropical Broadleaf Hill Forest, Temperate Broadleaf, Conifer, and Sub-Alpine Scrub

#### General Description

Nacho-Limeking-Taksing-Majha is a large area in the north of Arunachal Pradesh in Upper Subansiri district, close to Indo-China (Tibet) border. The area is largely mountainous with a number of peaks rising over 4,000 m. The River Subansiri, which originates in Tibet flows through this IBA. Also the area is criss-crossed by number of streams and small rivers that drain into the Subansiri. Most of the forest is inaccessible and still untouched. Road network is limited and the remoteness of the site has left a large extent of habitat intact. Local inhabitants are largely of the *Tagin* tribe and human settlements are very minimal.

In the lower reaches, below 1,500 m, elements of Tropical Wet Evergreen to Subtropical Broadleaf Forests are found. Himalayan Wet Temperate Forest, mixed with Bamboo and Cane, is found in the intermediate elevations from 1,500 to 3,000 m.

#### Avifauna

Not much information is available on the bird life, except for the general report of Singh (1994) in which he has described birds during his various surveys of the state. However, site-wise detailed lists are not available.

A significant discovery from this area is a new monal species of the genus *Lophophorus*. The males of the new monal appeared very similar to the male of Sclater's Monal *Lophophorus sclateri*, except for the completely white tail in the former. This was reported by local hunters of the Sarli Circle in Lower Subansiri district who also go for hunting to the Taksing area (Kumar and Singh 1999).

An interesting record of Honeyguide *Indicator xanthonotus*, one of the two records of this species in the state is from here (R. Suresh Kumar *pers. comm.* 2003) Of the 21 species found in the Eastern Himalayas Endemic Bird Area (Stattersfield *et al.* 1998) 12 have been reported from this IBA. There are not many IBAs in this EBA where so many Restricted Range species are found.

Four biomes are represented in this IBA: Biome-5 (Eurasian High Montane- Alpine and Tibetan); Biome-7 (Sino-Himalayan Temperate Forest); Biome-8 (Sino-Himalayan Subtropical Forest); and Biome-9 (Indo-Chinese Tropical Moist Forest). It is not possible to list all the species here.

<b>Vulnerable</b>	
Red-breasted Hill-Partridge (?)	<i>Arborophila mandellii</i>
Monal	<i>Lophophorus sclateri</i>
Rufous-necked Hornbill	<i>Aceros nipalensis</i>
Rusty-bellied Shortwing (?)	<i>Brachypteryx hyperythra</i>
Mishmi Wren-Babbler	<i>Spelaeornis badeigularis</i>
Beautiful Nuthatch	<i>Sitta formosa</i>
<b>Near Threatened</b>	
Trogon (?)	<i>Harpactes wardi</i>
Wedge-billed Wren-Babbler	<i>Sphenocichla humei</i>
<b>Endemic Bird Area 130: Eastern Himalayas</b>	
Red-breasted Hill-Partridge (?)	<i>Arborophila mandellii</i>
Monal	<i>Lophophorus sclateri</i>
Trogon (?)	<i>Harpactes wardi</i>
Rusty-bellied Shortwing (?)	<i>Brachypteryx hyperythra</i>
Mishmi Wren-Babbler	<i>Spelaeornis badeigularis</i>
Wedge-billed Wren-Babbler	<i>Sphenocichla humei</i>
Beautiful Sibia	<i>Heterophasia pulchella</i>
Barwing (?)	<i>Actinodura waldeni</i>
Brown-throated Tit-Babbler	<i>Alcippe ludlowi</i>
White-naped Yuhina	<i>Yuhina bakeri</i>
Black-browed Leaf-Warbler	<i>Phylloscopus cantator</i>
Broad-billed Flycatcher-Warbler	<i>Tickellia hodgsoni</i>

### **Other Key Fauna**

Not much information is available on the fauna of this large area. However, Takin *Budorcas taxicolor*, Serow *Nemorhaedus sumatraensis*, Goral *N. goral*, Red Panda *Ailurus fulgens*, Capped Langur *Trachypithecus pileatus* and Assamese Macaque *Macaca assamensis* have been recorded (A. U. Choudhury *pers. comm.* 2003).

The Bharal or Blue Sheep *Pseudois nayaur* was recently recorded from the Taksing area (R. Suresh Kumar *pers. comm.* 2003), which was also recorded in other areas like West Kameng, East Kameng, Upper Dibang Valley, etc.

### **Land Use**

- Forestry
- Agriculture

### **Threats and Conservation Issues**

- Hunting
- Felling of trees

The proposed Upper Subansiri Hydroelectric project will have some impact on these sites (A. U. Choudhury *pers. comm.* 2003). Hunting is a major threat to the wildlife in the area and species such as Musk Deer, Asiatic Black Bear *Ursus thibetanus*, Sclater's Monal *Lophophorus sclateri* and Temminck's Tragopan *Tragopan temminckii* are much sought after (R. Suresh Kumar *pers. comm.* 2003).

### **Key Contributors**

R. Suresh Kumar, Pratap Singh, Bharat Bhushan Bhatt and Anwaruddin Choudhury



**KeyReferences**

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## **Annexure – 7.1**

### **Tolerance and Classification**



As per ISI – IS: 2296-1982, the tolerance limits of parameters are specified as per classified use of water (Table 1, 2,3,4,5 below) depending on various uses of water. The following classifications have been adopted in India.

### Class of Water

Classification	Type of Use
Class A	Drinking water source without conventional treatment but after disinfection
Class B	Outdoor bathing
Class C	Drinking water source with conventional treatment followed by disinfection
Class D	Fish culture and wildlife propagation
Class E	Irrigation, industrial cooling or controlled waste disposal

### Tolerance Limits

**Table -1: Tolerance Limits for Inland Surface Waters, Class – A**

S. No.	Characteristic	Tolerance
i.	pH	6.5 to 8.5
ii.	Dissolved Oxygen, mg/l	6.0
iii.	Bio-chemical Oxygen Demand	2.0
iv.	Total Coliform Organisms, MPN/100 ml, Max	50
v.	Colour, Hazen units, Max	10
vi.	Odour	Unobjectionable
vii.	Taste	Agreeable taste
viii.	Total Dissolved Solids, mg/l, Max	500
ix.	Total Hardness (as CaCO <sub>3</sub> ), mg/l, Max	300
x.	Calcium Hardness (as CaCO <sub>3</sub> ), mg/l, Max	200
xi.	Magnesium (as CaCO <sub>3</sub> ), mg/l, Max	100
xii.	Copper (as Cu), mg/l, Max	1.5
xiii.	Iron (as Fe), mg/l, Max	0.3
xiv.	Manganese (as Mn), mg/l, Max	0.5
xv.	Chlorides (as Cl), mg/l, Max	250
xvi.	Sulphate (as SO <sub>4</sub> ), mg/l, Max	400
xvii.	Nitrates (as NO <sub>2</sub> ), mg/l, Max	20
xviii.	Fluorides (as F), mg/l, Max	1.5
xix.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	0.002
xx.	Mercury (as Hg), mg/l, Max	0.001
xxi.	Cadmium (as Cd), mg/l, Max	0.01
xxii.	Selenium (as Se), mg/l, Max	0.01
xxiii.	Arsenic (as As), mg/l, Max	0.05
xxiv.	Cyanides (as CN), mg/l, Max	0.05
xxv.	Lead (as Pb), mg/l, Max	0.1
xxvi.	Zinc (as Zn), mg/l, Max	15
xxvii.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max	0.05
xxviii.	Anionic detergents, (as MBAS), mg/l, Max	0.2
xxix.	Poly-nuclear aromatic hydrocarbons (PAH)	0.2
xxx.	Mineral oil, mg/l, Max	0.01
xxxi.	Barium (as Ba), mg/l, Max	1.0
xxxii.	Silver (as Ag), mg/l, Max	0.05

S. No.	Characteristic	Tolerance
xxxiii.	Pesticides	Absent
xxxiv.	Alpha emitters, µ/ml, Max	10 <sup>-9</sup>
xxxv.	Beta emitters, µc/ml, Max	10 <sup>-8</sup>

#### Tolerance Limits for Inland Surface Waters, Class – B

S. No.	Characteristic	Tolerance
i.	pH	6.5 to 8.5
ii.	Dissolved Oxygen, mg/l, Max	5.0
iii.	Bio-chemical Oxygen Demand (5 days at 20°C), Max	3.0
iv.	Total Coliform Organisms, MPN/100 ml, Max	500
v.	Fluorides (as F) <mg/l, Max	1.5
vi.	Colour, Hazen units, Max	300
vii.	Cyanides (as CN), mg/l, Max	0.05
viii.	Arsenic (as As), mg/l, Max	0.2
ix.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	0.005
x.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max	1.0
xi.	Anionic detergents (as MBAS), mg/l, Max	1.0
xii.	Alpha emitters, µ/ml, Max	10 <sup>-6</sup>

#### Tolerance Limits for Inland Surface Waters, Class – C

S. No.	Characteristic	Tolerance
i.	pH	6.5 to 8.5
ii.	Dissolved Oxygen, mg/l, Minimum	4.0
iii.	Biochemical Oxygen Demand	3.0
iv.	Total coliform organisms, MPN/100 ml, Max	5000
v.	Colour, Hazen units, Max	300
vi.	Fluorides (as F), mg/l, Max	1.5
vii.	Cadmium (as CD), mg/l, Max	0.01
viii.	Chlorides (as Cl), mg/l, Max	600
ix.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max	0.05
x.	Cyanides (as CN), mg/l, Max	0.05
xi.	Total Dissolved Solids, mg/l, Max	1500
xii.	Selenium (as Se), mg/l, Max	0.05
xiii.	Sulphates (as SO <sub>4</sub> ), mg/l, Max	400
xiv.	Lead (as Pb), mg/l, Max	0.1
xv.	Copper (as Cu), mg/l, Max	1.5
xvi.	Arsenic (as As), mg/l, Max	0.2
xvii.	Iron (as Fe), mg/l, Max	50
xviii.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	0.005
xix.	Zinc (as Zn), mg/l, Max	15
xx.	Insecticides, mg/l, Max	Absent
xxi.	Anionic detergents (as MBAS), mg/l, Max	1.0
xxii.	Oils and grease, mg/l, Max	0.1
xxiii.	Nitrates (as NO <sub>3</sub> ), mg/l, Max	50
xxiv.	Alpha emitters, µc/mg, Max	10 <sup>-9</sup>
xxv.	Beta emitters, µc/ml, Max	10 <sup>-8</sup>

#### Tolerance Limits for Inland Surface Waters, Class – D

S. No.	Characteristic	Tolerance
i.	pH	6.5 to 8.5
ii.	Dissolved Oxygen, mg/l, Min	4.0

iii.	Free Ammonia (as N), mg/l, Max	1.2
iv.	Electrical Conductance at 25°C, µS, Max	1000
v.	Free Carbon Dioxide (as CO <sub>2</sub> ), mg/l, Max	6.0
vi.	Oils and Grease, mg/l, max	0.1
vii.	Alpha emitters, µc/ml, Max	10 <sup>-9</sup>
viii.	Beta emitters, µc/ml, Max	10 <sup>-8</sup>

#### Tolerance Limits for Inland Surface Waters, Class – E

S. No.	Characteristic	Tolerance
i.	pH	6.5 to 8.5
ii.	Electrical Conductance at 25°C, µS, Max	2250
iii.	Sodium Adsorption Ratio, Max	26
iv.	Boron (as B), mg/l, Max	2.0
v.	Total Dissolved Solids, (inorganic), mg/l, max	2100
vi.	Sulphates (as SO <sub>4</sub> ), mg/l, Max`	1000
vii.	Chlorides (as Cl), mg/l, max	600
viii.	Sodium Percentage, Max	60
ix.	Alpha emitters, µc/ml, Max	10 <sup>-9</sup>
x.	Beta emitters, µc/ml, Max	10 <sup>-8</sup>

#### Test Characteristics for Drinking Waters (IS – 10500:1991)

S. No.	Substance Characteristic	Requirement	Undesirable effect outside the desirable limit	Permissible Limit**
<b>A. Essential Characteristics</b>				
1.	Colour, Hazen units, Max	5.0	Above 5.0, consumer acceptance decreases	25
2.	Odour	Unobjectionable	-	-
3.	Taste	Agreeable	-	-
4.	Turbidity, NTU, Max	5.0	Above 5.0, consumer acceptance decreases	10
5.	pH	6.5 to 8.5	Beyond this range the water will effect the mucous membrane and / or water supply system	No relaxation
6.	Total Hardness, (as CaCO <sub>3</sub> ), mg/l, Max	300	Encrustations in water supply structure and adverse effect on domestic use	600
7.	Iron (as Fe), mg/l, Max	0.3	Beyond this limit taste / appearance are affected, has adverse affect on domestic uses and water supply structures, and promotes iron bacteria	1.0
8.	Chlorides (as Cl), mg/l, max	250	Beyond this limit taste, corrosion and palatability are affected	1000
9.	Residual free Chlorine, mg/l, Max	0.2	-	-
<b>B. Desirable Characteristics</b>				
10.	Dissolved Solids, mg/l, Max	500	Beyond this palatability decreases and may cause Gastro intestinal irritation	2000

S. No.	Substance Characteristic	Requirement	Undesirable effect outside the desirable limit	Permissible Limit**
11.	Calcium (as Ca) mg/l, max	75	Encrustations in water supply structure and adverse effect on domestic use	200
12.	Magnesium (as Mg), mg/l, Max	30	Encrustations in water supply and adverse effect on domestic use	100
13.	Copper (as Cu), mg/l, Max	0.5	Astringent taste, discoloration and corrosion of pipes, fitting and utensils will be caused beyond this	1.5
14.	Manganese (as Mn), mg/l, Max	0.1	Beyond this limit, taste / appearance are affected, has adverse effect on domestic use and water supply structure	0.3
15.	Sulphates (as SO <sub>4</sub> ), mg/l, Max	200	Beyond this causes Gastro intestinal irritation when magnesium or sodium are present	400
16.	Nitrate (as NO <sub>3</sub> ) mg/l, Max	45	Beyond this methaemoglobinemia takes place	100
17.	Fluorides (as F), mg/l, Max	1.0	Fluoride may be kept as low as possible. High fluoride may cause fluorosis	1.5
18.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	0.001	Beyond this, it may cause objectionable taste and odour	0.002
19.	Mercury (as Hg), mg/l, Max	0.01	Beyond this, the water becomes toxic	No relaxation
20.	Cadmium (as Cd), mg/l, Max	0.01	Beyond this, the water becomes toxic	No relaxation
21.	Selenium (as Se), mg/l, Max	0.01	Beyond this, the water becomes toxic	No relaxation
22.	Arsenic (as As), mg/l, Max	0.2	Beyond this, the water becomes toxic	No relaxation
23.	Cyanides (as CN), mg/l, Max	0.05	Beyond this, the water becomes toxic	No relaxation
24.	Lead (as Pb), mg/l, Max	0.1	Beyond this, the water becomes toxic	No relaxation
25.	Zinc (as Zn), mg/l, Max	5.0	Beyond this limit, it can cause astringent taste and an opalescence in water	15
26.	Anionic detergents (as MBAS), mg/l, Max	0.2	Beyond this limit, it can cause a light froth in water	1.0
27.	Chromium (as Cr <sup>6+</sup> ), mg/l, Max	0.05	May be carcinogenic above this limit	No relaxation
28.	Polynuclear aromatic hydrocarbons	-	May be carcinogenic	-



S. No.	Substance Characteristic	Requirement	Undesirable effect outside the desirable limit	Permissible Limit**
	(as PAH), mg/l, Max			
29.	Mineral Oil, mg/l, Max	0.01	Beyond this limit, undesirable taste and odour after chlorination take place	0.03
30.	Pesticides mg/l, Max	Absent	Toxic	0.001
31.	Alpha emitters Bq/l, Max	-	-	0.1
32.	Beta emitters, pCi/l, Max	-	-	1.0
33.	Alkalinity mg/l, Max	200	Beyond this limit, taste becomes unpleasant	600
34.	Aluminum (as Al), mg/l, Max	0.03	Cumulative effect is reported to cause dementia	0.2
35.	Boron mg/l, Max	1.0	-	5.0

No sample should contain E. Coli in 100 ml.; No sample should contain more than 10 coliform organisms per 100 ml; and Coliform organisms should not be detectable in 100 ml of any two consecutive samples.

\*Desirable limit

\*\*in absence of alternate source

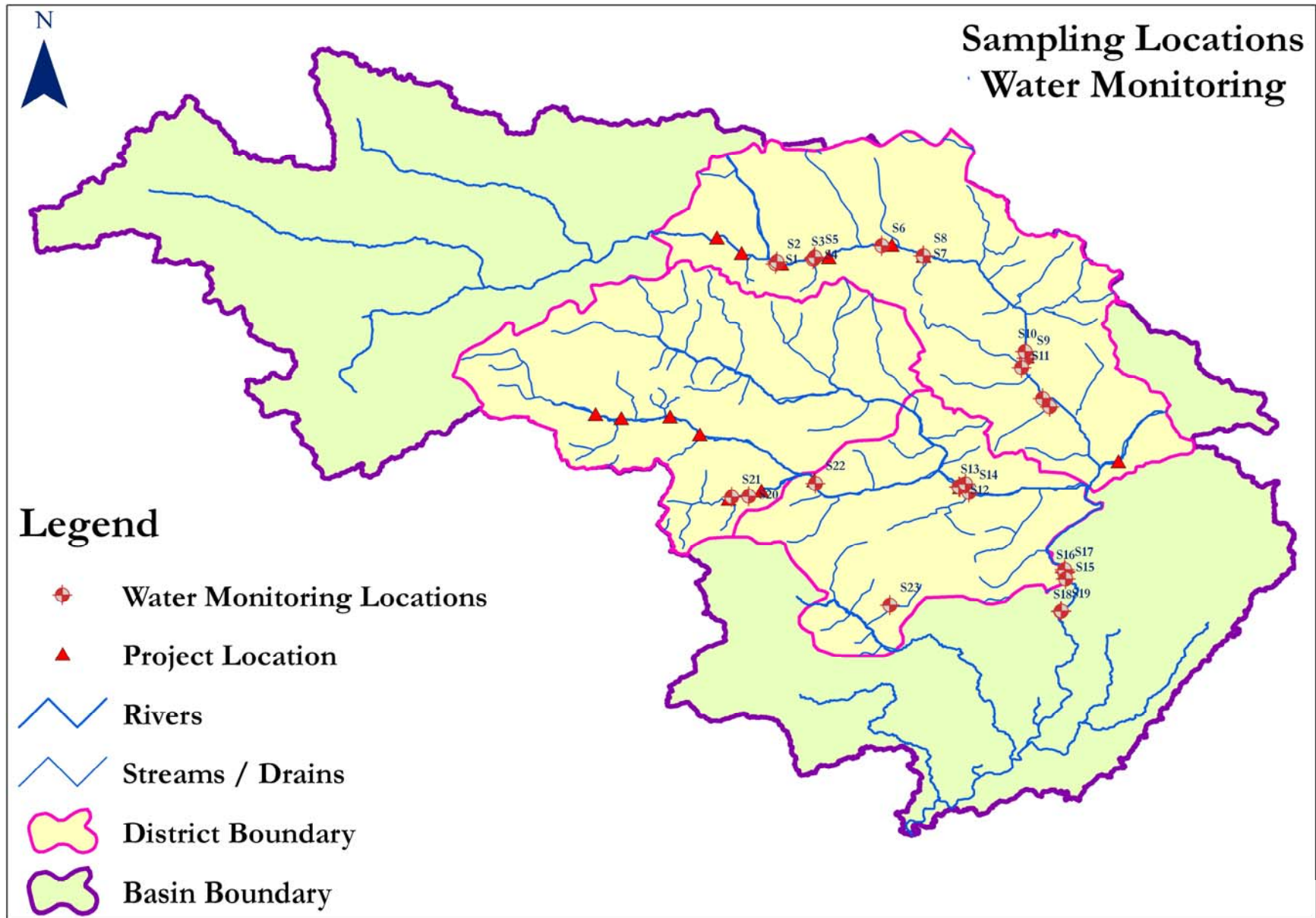
Source:  
Central Water Commission, Govt. of India



## **Annexure – 7.2**

### **Map Showing Water Quality Sampling Locations & Surface Water Quality**





**Water Sampling Locations**



# Surface Water Quality

## 1. Site - Niare

Parameter	Niare																							
	April 2012		May 2012		June 2012		July 2012		August 2012		September 2012		October 2012		November 2012		December 2012		January 2013		February 2013		March 2013	
	*S1	*S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2
pH	8.3	7.35	8.21	7.36	8.25	7.35	8.1	7.98	8.2	8.4	8.8	8.9	8.1	8.3	8.2	8.1	8.2	8.2	8.2	8.1	8.2	8.3	8.1	7.35
Electrical Conductivity	495.1	486.3	501.2	480.1	490.5	483.5	498.54	478.9	463.2	453.6	452.7	425.3	421.7	411.7	386.1	373.8	363.1	352.1	384.3	372.1	390.1	359.2	453.2	486.3
Sodium	6.25	5.98	6.12	5.1	6.15	4.71	7.65	4.2	7.98	5.3	7.1	6.1	9.2	8.9	8.1	7.2	8.6	6.7	9.2	8.3	8.7	10.7	7.2	5.98
Potassium	2.21	3.26	2.36	2.96	3.61	3.12	3.12	2.89	4.12	3.1	4.8	4.2	6.4	8.7	9.6	9.3	9.4	8.4	10.6	9.7	11.2	10.1	5.1	3.26
Total Hardness	115.1	107	119.2	117	117.52	111.2	116.52	115.2	118.2	116.3	120.5	118.9	132.3	121.7	135.8	117.2	121.8	111.9	135.9	123.8	133.8	129.8	119.2	107
Iron	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	<0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	<0.05
Chlorides	11.25	13	10.14	11.1	10.54	12.45	11.89	13.25	15.44	14.82	14.8	16.78	18.7	21.8	19.4	23.8	20.9	20.8	29.6	23.8	27.4	21.4	17.2	13
Total Dissolved Solid	304.2	297	314.1	289.1	308.25	290.2	311.89	292.5	309.5	301.8	335.7	311.8	401.8	342.1	347.9	331.6	386.2	376.8	401.4	367.8	383.8	364.1	302.3	297
Calcium	32.3	29	31.52	27.5	28.53	26.11	29.87	28.12	33.7	31.52	53.2	42.8	49.7	50.1	45.8	43.8	48.1	51.4	53.8	48.6	55.7	49.7	35.4	29
Magnesium	14.2	15	15.1	14.2	14.95	13.25	16.14	16.15	18.9	18.7	19.7	20.7	28.1	22.4	26.9	25.1	29.7	33.5	37.4	42.1	41.9	38.4	17.8	15
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphates	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.6	5.4	6.9	6.8	8.3	9.2	11.4	10.8	13.4	14.7	15.4	12.8	17.8	14.7	8.2	5
Nitrates	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	0.04	0.01	0.02	0.1	0.2	0.2	0.2	0.2	0.05
Chemical Oxygen Demand	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<5
Biochemical Oxygen Demand	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5
Dissolved Oxygen	8.5	6.2	8.7	6.3	8.8	6.9	8.3	7.1	7.9	7.8	8.1	8.2	8.2	8.3	8.2	8.1	8.2	8.2	8.3	8.4	8.1	8.2	7.2	6.2
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	61.2	66	58.1	63.8	53.6	60.25	61.8	59.56	61.2	58.1	78.1	64.2	90.2	82.1	96.7	89.3	108.2	101.6	123.1	121.8	128.6	117.1	90.9	111.3
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Note:

\*S1- Upstream of Dam Site

\*S2- Dam Site

2. Site - Naba

Naba																																				
Parameter	April 2012			May 2012			June 2012			July 2012			August 2012			September 2012			October 2012			November 2012			December 2012			January 2013			February 2013			March 2013		
	*S3	*S4	*S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5	S3	S4	S5
pH	6.12	7.26	8.26	7.12	6.59	8.21	6.99	7.21	7.66	7.12	7.89	7.89	7.7	8.1	7.9	8.9	7.16	9.1	7.3	10.7	9.36	7.1	9.4	9.8	7.2	9.2	9.4	7.8	9.9	8.2	7.9	9.5	8.4	7.1	7.46	8.1
Electrical Conductivity	271.6	279.3	281.1	263.4	272.8	276.3	265.52	269.1	264.5	263.64	273.5	264.5	258.7	266.9	273.5	274.8	280.1	281.2	267.6	262.8	263.8	258.4	267.6	266.1	249.7	255.1	254.1	253.9	261.2	257.5	254.9	257.1	256.8	263.9	265.7	269.3
Sodium	3.19	5.19	5.05	3.59	4.1	4.15	3.25	4.95	5.06	3.98	5.85	4.23	3.45	5.21	5.01	4.8	1.64	5.4	2.7	3.84	4.2	2.4	3.1	3.8	2.5	3.5	3.1	2.1	3.6	4.2	1.87	2.8	3.4	5.2	7.19	6.3
Potassium	0.6	1.69	1.59	1.6	2.11	1.18	0.8	1.99	0.99	1.15	2.45	2.21	1.29	3.8	2.83	2.1	0.91	2.6	1.25	2.5	1.58	1.6	2.9	2.7	1.8	3.4	3.1	1.3	3.8	2.1	1.68	3.1	2.8	0.9	1.89	2.1
Total Hardness	85.25	113	115	95.25	125.01	105	90.54	115.21	110.1	93.73	119.74	108.2	90.8	121.8	124.3	101.7	119.6	115.2	112.3	152.2	159.7	109.1	114.1	140.2	111.3	113.9	129.2	118.7	115.7	121.5	120.4	113.4	129.7	119.3	123	121.3
Iron	0.06	<0.05	0.05	<0.05	<0.05	0.05	<0.05	<0.05	0.04	<0.05	<0.05	0.02	0.01	0.02	0.02	0.01	0.16	0.01	0.01	0.012	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chlorides	8.21	11	9.25	8.21	13.25	8.35	9.1	12.42	9.21	8.88	11.86	8.87	9.24	16.78	14.7	14.7	15.8	15.7	12.7	21.3	19.8	11.8	17.4	21.3	13.1	18.4	20.1	17.9	17.1	21.2	21.8	18.7	23.1	14.6	11	17.8
Total Dissolved Solid	253.27	314	311	253.27	309.1	295.12	261.48	305.1	299.21	256.83	312.52	280.56	251.7	298.3	292.5	253.9	182.8	301.8	246.2	232.4	289.2	201.1	215.8	257.3	189.6	217.2	237.6	201.5	219.7	223.8	187.8	217.1	221.5	223.1	344	283.1
Calcium	15.58	30.1	20.25	14.25	25.24	18.2	16.01	28.9	19.25	15.82	29.37	20.99	16.24	27.2	27.6	23.8	35	31.7	21.7	42.3	31.7	19.7	34.6	32.6	20.1	31.8	29.8	17.8	33.5	33.4	19.3	31.8	34.1	23.8	33	31.2
Magnesium	10.42	14.1	15.24	9.85	15.16	12.85	10.12	15.52	14.85	11.95	15.13	13.54	10.8	15.93	16.7	18.7	7.77	18.9	17.9	9.7	18.9	14.6	17.4	19.8	17.8	15.4	17.5	14.1	13.9	19.3	16.4	16.8	23.9	15.7	17	21.8
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.05	0.01	<0.05	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.02
Sulphates	5.14	6.14	7.11	4.08	4.25	6.15	5.11	5.21	5.95	4.42	6.85	6.57	5.1	6.24	6.84	7.8	9.53	8.8	6.1	10.2	8.8	5.4	6.4	7.1	6.1	7.9	7.8	11.1	10.2	13.8	12.5	11.4	15.6	8.2	5	14.2
Nitrates	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.82	<0.05	<0.05	0.01	<0.05	0.02	0.01	0.01	0.02	0.02	0.02	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.5	0.1
Chemical Oxygen Demand	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Biochemical Oxygen Demand	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen	6.1	6.3	6.45	6	6.6	6.01	6.3	6.4	6.7	6.2	6.9	6.84	7.1	7.2	6.9	7.2	7.3	7.5	8.1	8.2	8.3	8.2	8.2	8.3	8.2	8.3	8.2	8.2	8.2	8.1	8.6	8.3	8.3	8.1	7.8	8.1
Phosphates	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Suspended Solid	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.0	<1.0	22.38	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.021	<0.05	<0.05	0.021	<0.05	<0.05	0.021	<0.05	<0.05	0.021	<0.05	<0.05	0.021	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	56.2	54.7	49.8	50.2	54.2	48.36	55.21	50.45	45.3	53.65	60.89	46.7	51.9	58.69	56.1	62.2	57.8	59.3	63.7	56.1	62.8	68.3	71.5	66.8	63.9	59.1	61.8	62.7	66.2	60.3	64.1	64.9	64.5	67.3	70.1	67.9
Total Coliform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

Note:

\*S3- Upstream of Dam

\*S4- Dam Site

\*S5- Downstream of Dam



### 3. Site - Nalo

Nalo (*S6)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
pH	8.1	8.11	8.12	8.2	8.21	8.1	8.14	8.1	8.18	8.2	8.1	8.11
Electrical Conductivity	407.6	382.1	401.8	382.1	332.1	407.6	376.4	351.3	312.3	301.9	324.8	273.2
Sodium	3.1	3.5	4.21	5.3	4.8	3.1	3.8	3.2	4.1	3.7	4.1	3.6
Potassium	2.5	2.2	2.6	3.41	2.58	2.5	3.1	3.8	4.5	5.1	6.2	5.7
Total Hardness	138	138.1	138.11	138.2	138.21	138.33	139.1	139.9	140.1	138.5	138.9	138.5
Iron	0.29	0.21	0.32	0.02	0.01	0.29	0.01	0.01	0.01	0.01	0.01	0.01
Chlorides	11.8	12.9	13.4	12.5	15.8	11.8	13.9	16.8	14.9	17.6	19.8	18.1
Total Dissolved Solid	242.8	241.9	233.5	240.23	263.2	242.8	231.8	227.2	217.7	271.2	253.4	251.3
Calcium	40.5	32.2	29.5	35.1	34.7	40.5	37.8	31.7	34.8	43.1	38.6	37.5
Magnesium	7.5	6.1	7.59	9.54	9.89	7.5	7.9	8.2	10.7	13.9	15.4	13.2
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphates	13.7	12.9	14.3	16.3	15.2	13.7	15.7	13.3	16.2	19.4	21.4	23.4
Nitrates	1.12	1.25	0.68	1.22	0.8	1.12	0.88	0.9	1.5	2.6	3.5	3.9
Chemical Oxygen Demand	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Biochemical Oxygen Demand	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen	7.8	7.81	7.9	8.1	8.11	8.14	8.2	8.23	8.2	8.2	8.1	8.11
Phosphates	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Mercury	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	0.027	0.025	0.024	0.021	0.021	0.027	0.027	0.027	0.027	0.02	0.03	0.02
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	72.8	70.1	71.9	92.8	101.2	72.8	68.1	75.3	89.7	101.2	124.2	139.8
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

**Note:**  
\*S6- Dam Site

4. Site - Dengser

Dengser																								
Parameter	April 2012		May 2012		June 2012		July 2012		August 2012		September 2012		October 2012		November 2012		December 2012		January 2013		February 2013		March 2013	
	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8	*S7	*S8
pH	7.31	6.12	6.35	7.21	7.85	6.46	7.99	7.86	8.1	7.9	7.99	8.1	8.1	7.9	8.2	8.6	8.1	8.2	8.3	7.5	8.1	8.2	7.37	7.7
Electrical Conductivity	241.4	249.7	244.2	247.8	239.1	242.3	243.6	249.1	253.1	261.8	264.8	266.4	262.8	265.7	270.1	271.5	267.8	269.1	272.3	270.4	268.5	266.7	273.9	273.5
Sodium	2.21	3.11	1.81	2.9	3.1	3.53	4.3	4.21	5.2	5.3	3.15	5.9	4.2	3.89	3.1	3.9	2.4	4.2	2.1	4.9	2.6	4.7	4.21	3.5
Potassium	1.11	1.2	1.17	0.89	0.89	1.21	1.82	0.98	2.5	2.8	1.29	2.5	0.98	1.58	1.8	2.1	2.7	3.5	2.9	3.9	3.5	3.7	1.11	4.1
Total Hardness	65.81	55.41	61.2	56.8	62.8	57.2	59.1	51.66	61.8	69.8	71.8	70.1	68.7	67.2	72.8	74.1	72.1	67.8	75.8	76.9	75.1	77.5	77.9	77.1
Iron	<0.05	<0.05	0.05	0.06	0.01	0.02	0.01	0.02	0.01	0.01	0.28	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01
Chlorides	9.1	10.12	10.5	9.95	9.86	10.32	12.2	13.98	13.5	16.8	15.8	19.8	18.3	24.7	14.2	20.1	17.8	23.8	19.2	27.8	23.7	28.7	18.1	26.9
Total Dissolved Solid	219.7	226.1	221.5	219.1	213.8	223.8	227.6	226.1	225.3	221.7	224.7	229.8	231.4	229.6	229.1	232.5	233.4	233.1	228.4	233.4	235.1	235.8	227.9	234.8
Calcium	20.1	21.3	19.28	20.2	21.85	18.6	51.9	21.8	61.3	31.7	31.3	38.7	29.7	34.9	33.3	32.7	47.2	57.5	49.7	51.2	47.2	53.2	24	33.8
Magnesium	10.1	9.2	12.2	11.1	11.9	12.5	13.8	14.6	16.8	17.9	8.99	19.8	9.1	15.8	9.5	13.5	12.9	20.9	11.8	22.8	13.4	27.8	12	21.1
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphates	7.25	8.3	8.52	8.4	9.65	9.45	13.4	11.88	15.8	16.7	12	17.8	11.8	15.7	12.4	13.2	10.4	17.5	13.4	17.9	16.9	24.8	10.2	15.4
Nitrates	0.75	0.65	1.2	0.7	1.7	0.8	0.9	1.21	1.35	1.85	0.68	2.1	0.71	1.75	0.8	1.1	2.1	2.8	3.2	2.7	4.5	3.4	2.3	2.9
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	<4.0	< 4.0	<4.0	< 4.0	<4.0	< 4.0	<4.0	< 4.0	<4.0	< 4.0	<4.0	< 4.0	<4.1	< 4.0
Biochemical Oxygen Demand	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<5	< 2.0
Dissolved Oxygen	6.4	6.7	6.5	7.2	7.65	8.1	8.1	8.3	8.2	8.3	8.49	8.4	7.8	8.1	8	8.1	8.1	8.1	8.1	8.2	8.2	8.2	7.7	7.8
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.01	< 0.01	<0.01	< 0.01	<0.01	< 0.01	<0.01	< 0.01	<0.01	< 0.01	<0.01	< 0.01	0.01	0.01
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	<0.0001	< 0.0001	<0.0001	< 0.0001	<0.0001	< 0.0001	<0.0001	< 0.0001	<0.0001	< 0.0001	<0.0001	< 0.0001	<0.0001	< 0.0001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	0.05	<0.05	0.04	<0.05	0.031	<0.05	0.031	<0.05	0.031	<0.05	0.031	<0.05	0.02	0.02	0.03	0.03	0.02	0.03
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	49	51.2	50.1	52.5	52.45	53.9	61.23	67.9	78.2	77.1	66.2	66.9	64.8	64.7	65.9	66.2	64.1	64.8	70.8	72.8	71.2	71.9	69.7	72.8
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0	<2.0	< 2.0

**Note:**

\*S7- Dam Site

\*S8- Downstream of Dam

**5. Site – Upper Subansiri**

Upper Subansiri																																					
Parameter	April 2012			May 2012			June 2012			July 2012			August 2012			September 2012			October 2012			November 2012			December 2012			January 2013			February 2013			March 2013			
	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	
pH	7.045	7.084	7.066	6.45	7.84	7.1	7.45	6.82	6.83	6.73	7.2	7.6	6.9	6.8	7.2	8.02	7.9	7.92	8.1	8.3	8.1	7.8	8.2	8.1	7.7	7.7	8.1	7.6	7.8	7.8	7.5	7.9	8.1	7.36	7.5	8.1	
Electrical Conductivity	287.2	285.13	289.63	285.1	275.35	290.21	281.52	280.42	281.35	283.69	273.27	271.4	272.3	274.8	281.4	284.1	281.2	278.1	277.9	267.8	271.9	275.8	273.1	273.8	284.3	294.1	297.8	293.7	296.8	301.1	303.4	308.2	306.1	304.6	301.2	307.6	
Sodium	2.13	0.66	0.05	1.82	1.65	1.5	2.22	0.79	1.25	1.73	1.01	0.89	0.88	0.9	1.01	4.89	5.1	2.5	4.2	5.8	3.5	3.4	3.8	3.9	3.1	3.4	4.2	2.8	3.8	4.1	3.1	4.8	5.2	4.5	3.2	3.8	
Potassium	0.53	1.01	0.48	0.66	1.21	1.21	1.21	0.89	0.51	1.21	1.1	1.02	0.69	0.81	1.56	3.4	3.6	1.94	3.1	3.8	2.8	2.8	3.1	3.6	2.4	2.8	4.9	2.1	3.1	5.3	3.5	5.1	5.9	1.17	2.1	1.8	
Total Hardness	52.6	51.2	53.8	49.8	50.8	55.8	54.1	57.8	59.7	60.2	58.1	58.7	57.9	55.1	57.1	61.2	59.1	62.5	65.1	64.9	67.5	69.2	70.5	69.8	73.2	74.1	75.8	69.7	73.2	72.3	71.2	74.6	77.8	75.1	74.5	76.3	
Iron	0.07	0.06	0.07	0.06	0.05	0.05	0.03	0.04	0.04	0.04	0.01	0.02	0.02	0.01	0.01	0.26	0.21	0.18	0.01	0.02	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	
Chlorides	11.81	15.75	15.75	12.14	14.57	16.51	12.89	16.41	14.52	13.89	14.88	15.36	11.3	12.8	14.1	15.8	11.8	7.9	14.2	13.1	15.4	11.9	13.8	15.9	13.4	14.2	14.9	12.1	13.7	16.1	14.5	20.7	24.8	11	12.4	8.2	
Total Dissolved Solid	256.6	251.2	253.8	250.1	249.8	258.1	261.8	257.8	268.8	267.5	269.4	269.9	272.8	275.1	273.8	269.1	269.9	268.1	268.8	270.1	274.1	273.1	271.9	267.5	267.9	266.2	266.7	261.8	263.1	261.7	264.3	265.7	268.5	270.1	273.9	274.6	
Calcium	13.8	14.2	14.89	11.98	13.21	15.45	13.54	12.2	13.84	16.71	14.64	12.74	15.4	14.85	16.3	18.4	20.2	16.6	16.3	18.3	17.8	14.8	16.8	18.2	13.2	14.9	17.3	14.7	13.2	16.1	17.9	21.7	21.9	22	17.6	19.1	
Magnesium	12.8	13.4	8.2	15.5	15.1	15.9	14.21	12.85	10.52	13.53	11.98	9.58	12.9	13.6	10.8	12.2	15.4	10.9	13.5	14.1	15.2	11.5	13.5	17.3	12.6	14.1	15.4	15.9	16.7	17.1	19.1	23.5	19.5	5.2	8.1	9.1	
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Sulphates	8.62	8.2	9.1	7.25	9.12	9.15	5.28	7.95	8.11	6.15	6.81	9.12	5.2	5.8	10.3	10.6	11.4	10.2	9.2	12.9	11.3	7.4	11.1	9.1	7.1	9.2	9.1	7.8	9.1	12.2	8.3	12.1	13.5	5.2	10.6	11.1	
Nitrates	0.76	0.69	0.61	0.79	0.7	0.69	0.04	0.07	0.06	0.05	0.05	0.05	0.03	0.04	0.06	0.78	0.8	0.65	0.64	0.9	0.72	0.53	0.6	0.061	0.4	0.5	0.4	0.5	0.4	0.5	0.4	1.1	0.9	1.2	0.75	1.3	
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	
Biochemical Oxygen Demand	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dissolved Oxygen	8.3	8.1	8.2	9	8.5	8.2	7.9	8.2	8.1	8.3	8	8.2	8.4	8.1	8.3	8.1	8.5	7.98	8.1	8.4	8.2	8.2	8.2	8.2	8.3	8.2	8.2	8.1	8.3	8.3	8.3	8.3	8.1	8.2	7.9	7.7	8.1
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Lead	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	0.02	0.019	0.021	0.02	0.019	0.021	0.02	0.019	0.021	0.01	0.02	0.021	0.01	0.02	0.021	0.029	0.024	0.021	0.02	0.024	0.021	0.02	0.024	0.021	0.02	0.024	0.021	0.02	0.024	0.021	0.02	0.024	0.021	0.02	0.029	0.021	
Total	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	

Upper Subansiri																																							
Parameter	April 2012			May 2012			June 2012			July 2012			August 2012			September 2012			October 2012			November 2012			December 2012			January 2013			February 2013			March 2013					
	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11	S9	S10	S11			
Chromium																																							
Total Alkalinity	40.1	38.5	39.1	37.2	35.28	36.8	35.1	36.85	35.1	31.54	30.1	33.6	29.4	32.7	32.9	33.6	35.8	37.8	36.1	37.5	38.1	40.1	41.2	40.8	42.6	43.8	40.5	39.8	38.5	39.4	40.1	40.2	40.8	41.8	43.2	44.5			
Total Coliform	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			

**Note:**  
 \*S9- Upstream of Dam  
 \*S10- Dam Site  
 \*S11- Downstream of Dam

## 6. Site – Middle Subansiri

Middle Subansiri																																						
Parameter	April 2012			May 2012			June 2012			July 2012			August 2012			September 2012			October 2012			November 2012			December 2012			January 2013			February 2013			March 2013				
	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14	S12	S13	S14		
pH	7.2	7.072	7.2	6.6	6.9	7.1	7.2	7.5	6.9	7.5	7.8	7.7	7.5	7.4	7.8	7.55	7.45	7.56	7.6	7.3	7.4	7.6	7.9	8	7.9	7.8	7.6	7.9	7.8	7.9	8.1	7.8	7.9	8.1	8.2	8.1		
Electrical Conductivity	210	208.6	207.4	212.8	213.4	216.8	218.7	220.1	219.3	216.7	208.1	207.2	201.5	199.7	196.8	200.1	197.8	201.9	210.8	215.6	221.5	227.9	235.6	235.9	237.6	231.7	227.8	226.3	227.8	238.1	240.9	242.8	241.2	243.1	245.8	250.8		
Sodium	0.43	1.37	0.71	0.37	1.02	0.72	1.21	1.31	1.32	1.37	1.32	1.67	2.8	2.54	2.1	4.75	1.2	1.6	3.1	2.5	3.6	2.3	2.9	3.1	1.5	2.4	2.9	3.6	2.8	3.2	3.14	3.5	4.8	2.41	3.2	4.1		
Potassium	0.61	0.69	0.8	0.52	1.2	0.7	0.84	0.91	0.65	0.74	1.01	0.99	1.45	2.14	2.16	2.05	0.68	0.98	2.3	1.1	2.6	1.5	1.9	2.78	1.1	2.1	2.9	1.8	2.4	3.7	3.6	3.9	5.7	2.6	3.1	3.8		
Total Hardness	45.8	44.3	47.1	47.9	45.8	47.1	51.8	49.2	50.1	52.1	52.9	52.5	53.4	54.8	51.6	49.8	52.4	54.5	50.5	52.1	54.6	57.1	56.1	54.2	53.8	51.8	50.1	54.6	57.2	56.2	56.9	53.7	55.3	54.1	56.8	57.1		
Iron	0.08	0.08	0.07	0.05	0.06	0.06	0.05	0.04	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.3	0.09	0.18	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Chlorides	11.81	15.75	19.68	10.11	14.26	17.12	11.21	15.12	18.34	12.25	15.52	16.53	15.4	16.8	17.2	15.8	7.9	11.8	11.8	13.4	14.7	13.7	16.7	16.9	11.1	14.8	15.4	13.6	16.1	18.7	17.1	23.4	29.2	19.8	21.9	31.5		
Total Dissolved Solid	174.6	175.6	181.3	187.5	186.3	189.9	181.5	183.6	183.9	182.4	181.2	183.6	179.8	178.6	184.6	182.4	177.6	179.2	189.1	193.2	196.7	201.4	199.1	203.9	197.8	198.8	202.7	191.6	192.6	204.8	201.7	196.1	196.9	190.4	187.6	186.8		
Calcium	15.26	8.5	8.8	8.21	9.14	8.7	12.55	11.25	9.66	12.85	12.31	11.23	13.51	15.6	16.4	25.8	11	12.9	19.6	20.1	18.7	17.1	18.4	21.4	15.4	16.4	17.8	13.4	15.7	18.2	19.7	23.8	25.7	17.8	19.1	23.7		
Magnesium	13.9	4.8	5.9	11.1	4.71	5.1	12.42	9.77	8.11	12.12	13.57	13.81	11.23	12.84	18.7	16.11	6.81	7.81	12.7	11.8	13.5	11.3	12.9	18.2	9.7	10.1	14.6	11.3	13.5	16.9	25.6	21	24.9	21.6	23.6	29.7		
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Manganese Sulphates	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Nitrates	10.38	9.8	10.03	9.12	8.85	9.9	7.42	8.25	8.3	7.98	8.32	8.93	8.84	9.44	10.8	11.1	8.4	10.71	8.3	9.1	10.1	8.9	8.7	11.6	8.1	9.2	11.9	8.3	9.9	12.3	16.7	15.8	17.8	11.2	12.7	19.4		
Nitrates	0.84	0.76	0.78	0.76	0.75	0.79	0.07	0.06	0.75	0.05	0.05	0.07	0.04	0.04	0.05	0.73	0.39	0.67	0.31	0.23	0.41	0.4	0.2	0.3	0.3	0.3	0.3	0.1	0.2	0.2	0.9	1.1	1.3	1.2	1.2	2.1		
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	
Biochemical Oxygen Demand	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dissolved Oxygen	8.1	8.4	8.1	8.2	8.3	8.5	8.1	8.4	8.5	8.4	8.5	8.3	8.4	8.5	8.3	8.3	8.1	8.3	8.1	8.2	8.3	8.4	8.1	8.1	8.2	8.2	8.1	8.2	8.2	8.1	8.1	8.2	8.1	8	8.1	8.2		
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Lead	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	0.025	0.022	0.022	0.022	0.021	0.022	0.021	0.022	0.021	0.022	0.021	0.021	0.022	0.021	0.021	0.03	0.012	0.023	0.03	0.012	0.023	0.03	0.012	0.023	0.03	0.012	0.023	0.01	0.012	0.03	0.01	0.012	0.02	0.01	0.012	0.02		
Total Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Alkalinity	54.2	54.9	53.7	51.8	48.6	47.1	44.9	43.2	45.32	47.8	49.53	48.21	48.2	49.8	51.2	53.8	54.8	55.1	55.9	53.2	53.4	53.9	51.7	57.2	56.1	55.2	57.1	57.9	54.3	51.2	54.8	58.2	60.2	61.2	61.9	57.2		
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	

**Note:**

\*S12- Upstream of Dam

\*S13- Dam Site

\*S14- Downstream of Dam

**7. Site – Lower Subansiri**

Lower Subansiri																																					
Parameter	April 2012			May 2012			June 2012			July 2012			August 2012			September 2012			October 2012			November 2012			December 2012			January 2013			February 2013			March 2013			
	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	
pH	6.9	7.011	6.957	6.9	7.12	7.9	6.83	6.99	7.7	6.77	7.1	7.3	7.8	7.7	7.8	7.1	7.59	7.14	7.1	7.6	7.5	7.2	8.1	8.2	7.1	7.8	8.1	7.8	8.1	8.5	7.5	8.2	8.3	7.33	7.1	7.9	
Electrical Conductivity	180.3	189.19	140.21	179	185.1	182.3	175.6	184.35	180.26	173.2	178.1	181.21	183.5	190.7	212.7	223.3	282	190.5	213.2	243.7	222.5	209.1	228.6	226.8	197.2	201.4	213.4	203.2	207.1	215.8	183.9	201.7	243.9	143.8	153.6	201.2	
Sodium	0.06	1.22	0.3	0.07	1.01	1	1.11	1.12	0.9	1.01	1.5	1.6	1.1	1.16	1.8	1.5	0.98	0.5	2.6	1.81	2.1	2.3	1.99	2.8	1.4	2.3	3.3	1.8	1.9	3.1	2.8	3.4	3.8	11.77	7.2	8.6	
Potassium	0.64	0.67	0.69	0.6	0.7	0.71	0.91	1.01	1.15	0.82	0.89	1.01	1.6	1.5	1.7	0.98	0.78	0.91	1.4	0.89	1.2	1.1	1.5	2.1	1.9	3.1	3.4	1.7	2.4	2.98	3.7	4.1	3.8	0.3	1.2	2.8	
Total Hardness	72.6	68.2	66.68	65.1	64.2	64.9	63.2	61.1	63.2	63.9	61.3	64.1	63.2	63.9	61.5	62.6	63.2	64.8	64.7	62.9	63.1	65.4	66.1	66.8	65.1	67.5	69.1	68.2	69.7	70.1	66.2	65.4	67.8	67.5	67.1	66.2	
Iron	0.06	0.07	0.07	0.06	0.07	0.071	0.04	0.04	0.04	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.1	0.22	0.01	0.1	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chlorides	15.75	11.81	15.75	11.5	12.15	14.42	12.57	13.01	14.65	13.21	17.25	18.25	16.3	18.1	20.1	15.8	11.8	11.8	11.9	15.6	14.2	12.8	16.8	18.1	9.7	15.4	16.4	11.7	17.1	19.4	13.7	16.8	18.1	11	9.2	13.2	
Total Dissolved Solid	164.2	161.2	158.2	161.1	165.47	165.6	153.5	159.21	163.87	167.3	165.27	170.2	176.8	179.4	183.2	184.8	178.4	171.6	169.8	179.5	178.6	175.6	181.7	183.6	179.5	177.8	176.9	181.2	182.1	185.1	178.2	176.9	172.2	168.8	175.2	174.8	
Calcium	4.8	4.8	9.26	5.9	5.8	5.9	4.85	4.98	5.41	5.01	5.11	6.12	6.3	7.8	7.81	26.7	3.7	16.6	10.8	11.6	12.9	9.7	12.7	13.8	10.4	11.4	12.7	12.1	13.4	19.4	16.8	18.7	21.4	12.2	11.6	20.8	
Magnesium	4.1	4.3	4.4	4.2	5.1	6.2	7.32	7.63	7.99	7.89	8.12	8.83	9.78	10.7	9.99	15.3	3.15	8.7	7.6	8.64	9.1	7.9	10.5	13.8	8.4	9.7	17.5	9.9	10.7	20.7	12.7	15.4	19.2	9.1	10.2	14.3	
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Sulphates	8.97	8.97	9.5	8.9	8.12	9.1	8.2	8.21	9.85	8.9	9.1	10.5	7.8	8.8	10.9	12.1	9	8.4	9.1	8.9	9.1	8.8	9.3	11.7	8.1	9.1	14.6	9.2	9.8	13.4	14.7	13.7	15.7	7.6	8.2	11.2	
Nitrates	0.61	0.61	0.69	0.62	0.62	0.67	0.71	0.61	0.66	0.51	0.57	0.81	0.61	0.6	0.6	0.63	0.39	0.42	0.29	0.28	0.3	0.3	0.4	0.3	0.2	0.3	0.3	1.2	1.1	1.5	2.6	2.9	3.1	2.6	3.2	3.6	
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	
Biochemical Oxygen Demand	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dissolved Oxygen	7.9	7.8	8	8.1	8.3	8.3	8.31	8.3	8.2	8.24	8.21	8.15	8.1	8.2	8.1	8.23	8.17	8.3	8.2	8.12	8.2	8.1	8.2	8.2	8.3	8.5	8.3	8.2	8.3	8.3	8.3	8.2	8.2	8	7.9	8.1	
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Lead	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	0.02	0.02	0.021	0.022	0.02	0.021	0.021	0.022	0.021	0.021	0.022	0.021	0.021	0.022	0.021	0.021	0.016	0.021	0.021	0.016	0.021	0.021	0.016	0.021	0.021	0.02	0.016	0.021	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.03
Total Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010

Lower Subansiri																																				
Parameter	April 2012			May 2012			June 2012			July 2012			August 2012			September 2012			October 2012			November 2012			December 2012			January 2013			February 2013			March 2013		
	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17	S15	S16	S17			
Total Alkalinity	36.6	33.4	36.6	34.2	35.8	37.1	35.33	36.21	40.57	37.5	37.1	41.24	40.5	42.3	44.1	47.2	47.9	46.5	47.2	46.7	46.9	45.1	45.3	46.1	46.2	43.1	43.8	43.2	44.1	45.2	42.7	43.8	44.1	46.5	45.6	45.1
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

**Note:**

\*S15- Upstream of Dam

\*S16- Dam Site

\*S17- Downstream of Dam

**8. Site - Chaulduaghat**

Chaulduaghat (*S 18)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
pH	6.9	7.2	8.1	8	8.1	6.9	7.4	7.9	8.2	8.8	9.1	8.6
Electrical Conductivity	130.94	132.21	130.1	131.2	143.8	170.94	163.7	143.2	162.7	156.8	168.9	152.3
Sodium	0.35	0.99	1.01	1.35	2.53	0.35	2.4	2.1	3.7	4.2	5.8	2.3
Potassium	0.67	1.01	1.32	2.32	2.84	0.67	1.6	2.3	3.9	4.8	6.7	1.9
Total Hardness	36.68	34.21	36.27	41.6	43.2	46.68	65.2	73.2	89.4	91.2	102.5	101.1
Iron	0.06	0.06	0.071	0.01	0.01	0.09	0.08	0.01	0.01	0.01	0.01	0.01
Chlorides	15.75	15.75	14.98	13.73	18.7	16.77	34.6	36.1	43.8	37.9	35.8	19.3
Total Dissolved Solid	85.6	85.6	91.67	101.3	112.3	107.2	107.21	112.8	117.8	116.4	118.1	117.2
Calcium	4.8	4.8	5.7	9.4	11.4	4.9	8.9	12.8	17.6	19.2	22.7	5.8
Magnesium	4.2	4.2	5.12	8.97	13.7	5.4	8.2	11.8	16.2	18.7	23.6	7.6
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Sulphates	9.32	9.32	9.89	8.21	9.7	9.15	16.1	17.2	15.7	21.5	23.7	10.8
Nitrates	0.61	0.61	1.27	0.99	1.12	0.81	2.3	3.1	4.3	5.6	6.8	1.5
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Biochemical Oxygen Demand	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dissolved Oxygen	7.8	7.81	7.9	8.1	8.11	8.2	8.13	8.1	8.2	8.1	8.14	8.1
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14.1
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Lead	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	0.021	0.021	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.03
Total Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Alkalinity	26.6	26.6	29.2	30.2	32.5	31.1	35.4	35.9	35.42	34.6	34.9	35.8
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

**Note:**

\*S18- Chaulduaghat near CWC's G&D station

## 9. Site - Batodighat

Batodighat (*S19)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
pH	6.91	7.12	7.42	7.7	8.2	9.1	8.8	9.8	9.4	9.1	8.7	8.1
Electrical Conductivity	150.94	145.12	147.5	131.2	148.4	153.2	146.7	153.8	138.4	143.5	145.7	183.2
Sodium	0.39	1.02	0.79	0.58	2.89	3.1	2.58	3.9	4.3	5.7	6.3	7.8
Potassium	0.61	0.65	1.29	1.51	2.87	1.8	2.6	3.4	4.6	5.6	4.2	3.4
Total Hardness	69.8	70.5	72.7	71.9	75.6	77.1	79.5	79.9	78.2	81.6	77.1	79.5
Iron	0.05	0.06	0.05	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01
Chlorides	12.75	13.99	12.53	11.2	20.1	23.8	35.9	43.7	52.1	53.2	61.7	53.8
Total Dissolved Solid	95.6	99.2	101.8	102.4	98.7	105.1	104.5	107.9	107.1	108.22	108.1	110.1
Calcium	7.8	6.89	9.86	10.4	15.2	18.7	17.5	18.9	19.8	25.6	21.8	14.3
Magnesium	5.2	5.25	6.54	7.7	9.7	10.7	12.2	11.3	17.2	19.7	24.9	18.3
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Sulphates	8.32	8.58	9.27	8.91	11.7	9.8	14.9	16.7	14.9	17.5	23.5	17.2
Nitrates	0.65	0.68	0.98	1.01	2.8	2.1	3.2	3.7	4.2	5.6	6.4	3.1
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Biochemical Oxygen Demand	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dissolved Oxygen	7.7	7.9	8.1	8.12	8.16	8.2	8.26	8.2	8.2	8.21	8.2	8.1
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Lead	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	0.021	0.032	0.031	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total Chromium	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Alkalinity	45.2	44.2	49.2	51.2	61.8	63.2	62.2	67.1	65.1	66.2	64.2	63.9
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

### Note:

\*S19- Batodighat near CWC's G&D stations

## 10. Site – Hiya

Hiya (*S20)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
pH	7.47	6.77	7.21	8.1	8.6	8.9	8.4	8.2	7.8	7.7	7.9	7.47
Electrical Conductivity	79.6	81.4	83.4	90.1	107.3	112.5	116.2	123.1	101.3	107.2	116.8	114.2
Sodium	2.63	1.13	1.86	1.21	2.87	3.78	4.1	3.6	3.1	4.2	5.6	2.63
Potassium	0.93	0.81	0.98	1.02	1.25	2.8	3.6	4.5	4.1	5.3	6.7	0.93



Hiya (*S20)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
Total Hardness	35.2	34.2	33.6	33.5	35.2	35.9	34.8	36.4	33.8	35.7	35.9	35.8
Iron	<0.05	0.05	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01	<0.05
Chlorides	8	9.2	8.4	10.9	18.7	20.4	29.4	27.8	23.4	43.5	51.7	8
Total Dissolved Solid	98	101.1	110.2	115.6	143.8	201.8	223.4	227.4	243.1	251.7	253.8	252.9
Calcium	5	4.95	7.32	10.8	15.7	18.9	24.6	21.9	23.7	27.8	32.7	5
Magnesium	<1.0	4.6	6.41	9.23	19.7	14.7	13.5	12.3	13.4	15.7	17.8	<1.0
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphates	<1.0	3.1	3.6	5.6	9.7	10.8	18.2	15.6	19.7	21.7	23.7	<1.0
Nitrates	<0.05	0.06	0.08	0.07	1.01	2.1	2.6	2.4	3.4	4.8	5.8	<0.05
Chemical Oxygen Demand	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<5
Biochemical Oxygen Demand	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5
Dissolved Oxygen	6.3	6.4	7.65	8.2	8.3	8.4	8.1	8.1	8.2	8.1	8.2	8.1
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.017
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.63
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	0.03	<0.05
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	36.9	36.1	38.1	37.5	40.1	39.8	38.8	42.1	43.6	43.1	39.8	38.1
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0

**Note:**

**\*S20- Dam Site**

### 11. Site - Nyepin

Nyepin (*S21)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
pH	7.52	6.95	7.24	8.32	8.3	8.7	8.5	9.1	7.8	7.8	7.9	7.52
Electrical Conductivity	95.2	91.7	93.52	101.3	109.7	113.8	116.1	102.4	115.7	129.2	143.2	139.2
Sodium	2.54	2.1	2.3	3.21	4.5	4.7	3.8	3.1	4.8	5.3	6.3	2.54
Potassium	0.84	0.75	1.01	1.12	0.9	1.1	0.73	1.9	3.1	4.6	5.9	0.84

Nyepin (*S21)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
Total Hardness	36.2	35.2	34.1	34.4	36.6	41.2	42.8	44.5	44.9	41.8	43.5	45.1
Iron	<0.05	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	<0.05
Chlorides	5	6.1	8.5	10.6	17.8	21.8	23.8	27.1	37.9	41.2	43.7	5
Total Dissolved Solid	82.4	79.1	80.85	83.4	82.1	87.1	90.2	93.5	91.2	91.9	89.7	94.2
Calcium	4	5.1	10.53	11.47	12.8	17.2	18.2	28.4	21.7	23.8	25.7	4
Magnesium	6	5.9	6.9	8.5	9.1	11.9	10.52	11.2	9.4	11.7	13.9	6
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphates	<2.0	2	3.1	4.9	6.7	14.7	16.7	15.4	17.9	19.7	21.8	<2.0
Nitrates	<0.05	0.05	0.06	0.09	1.1	2.7	1.9	2.1	4.2	5.6	6.8	<0.05
Chemical Oxygen Demand	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<5
Biochemical Oxygen Demand	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5
Dissolved Oxygen	6.1	6.3	7.85	8.1	8.2	8.1	7.9	8	8.2	8.1	8.2	7.9
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	0.03	<0.05
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	33.4	35.1	45.2	44.1	46.8	43.5	41.9	42.8	39.8	41.2	43.8	47.2
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0

Note:

\*S21- Dam Site

## 12. Site – Kurung – I&II

Kurung-I&II (*S-22)													
Parameter	Units	November 2012	December 2012	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013	October 2013
pH	--	6.5	7.2	7.5	7.3	7.2	6.95	6.93	7.8	7.9	8.1	7.21	8.5
Electrical	µg/cm	95.2	92.4	93.1	101.2	94.17	94.12	94.14	122.7	138.9	180.4	172.4	163.2

Kurung-I&II (*S-22)													
Parameter	Units	November 2012	December 2012	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013	October 2013
Conductivity													
Sodium	mg/l	2.1	1.8	1.4	1.37	1.39	1.43	1.41	1.5	2.4	2.8	3.2	2.8
Potassium	mg/l	0.5	0.62	0.6	0.83	0.85	0.8	0.82	0.7	1.1	0.5	0.8	1.01
Total Hardness	mg/l	34.5	33.2	32.6	36.22	36.24	36.2	36.21	37.8	41.5	51.5	47.6	36.9
Iron	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorides	mg/l	4.1	4.5	4.7	5.74	5.76	5.8	5.78	5.1	6.1	6.2	5.79	6.1
Total Dissolved Solid	mg/l	48.2	50.7	50.1	51.13	51.16	51.1	51.13	57.8	61.6	77.5	74.6	80.1
Calcium	mg/l	6.2	7.4	7.8	8.41	8.45	8.41	8.44	7.8	8.2	8.45	7.8	12.5
Magnesium	mg/l	2.4	2.9	3.1	3.44	3.47	3.4	3.42	4.1	4.5	3.47	3.1	3.47
Copper	mg/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphates	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrates	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Biochemical Oxygen Demand	mg/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dissolved Oxygen	mg/l	8.27	8.9	8.5	8.25	8.27	8.27	8.25	8.9	8.8	8.6	7.8	8.3
Phosphates	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solid	mg/l	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	mg/l	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	Mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Kurung-I&II (*S-22)													
Parameter	Units	November 2012	December 2012	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013	October 2013
Total Chromium	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	Mg/l	25.8	27.8	28.4	29.69	29.7	29.72	29.74	34.2	34.9	39.8	35.2	29.71
Total Coliform	MPN/100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

**Note:**

**\*S22- Dam Site**

### 13. Site – Tago – 1

Tago-I (*S23)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
pH	7.45	6.95	7.25	8.1	7.9	8.9	8.2	8.3	8.1	7.4	7.3	7.45
Electrical Conductivity	164	159.2	161.58	162.83	154.2	161.8	198.5	176.7	146.7	141.8	169.2	164
Sodium	7.97	7.02	6.99	6.12	5.32	6.7	70.5	58.2	49.7	47.2	43.8	7.97
Potassium	2.89	2.12	1.85	2.73	1.84	3.7	2.7	3.1	3.6	3.1	5.4	2.89
Total Hardness	20	25.1	30.14	27.1	25.1	37.8	54.8	51.8	55.7	67.8	69.2	68.1
Iron	<0.05	<0.05	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	<0.05
Chlorides	13	12.2	14.1	12.89	10.8	19.8	25.3	26.1	33.4	32.2	31.2	13
Total Dissolved Solid	173	165	170.21	162.87	157.1	201.7	253.1	234.7	231.8	226.2	231.7	173
Calcium	6	6.85	6.58	7.72	7.11	15.9	14.8	16.9	15.8	17.5	19.1	6
Magnesium	2	2.65	2.14	3.86	4.1	10.8	12.6	13.4	12.6	15.6	19.3	2
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Manganese	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphates	<5	<5	1.25	2.61	3.12	5.4	4.2	6.3	6.1	7.8	8.1	<5
Nitrates	<0.05	<0.05	<0.05	<0.05	0.02	0.01	0.03	0.1	0.3	0.2	0.5	<0.05
Chemical Oxygen Demand	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	21
Biochemical Oxygen	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<5

Togo-I (*S23)												
Parameter	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013
Demand												
Dissolved Oxygen	6.5	7.6	8.3	8.1	7.8	8.1	8.2	8.3	8.1	8.2	8.3	8.1
Phosphates	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.024
Total Suspended Solid	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	<0.001
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Alkalinity	33	31.57	35.64	32.73	41.3	83.7	93.8	101.9	97.4	110.9	113.6	111.12
Total Coliform	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.1

**Note:**

**\*S23- Dam Site**

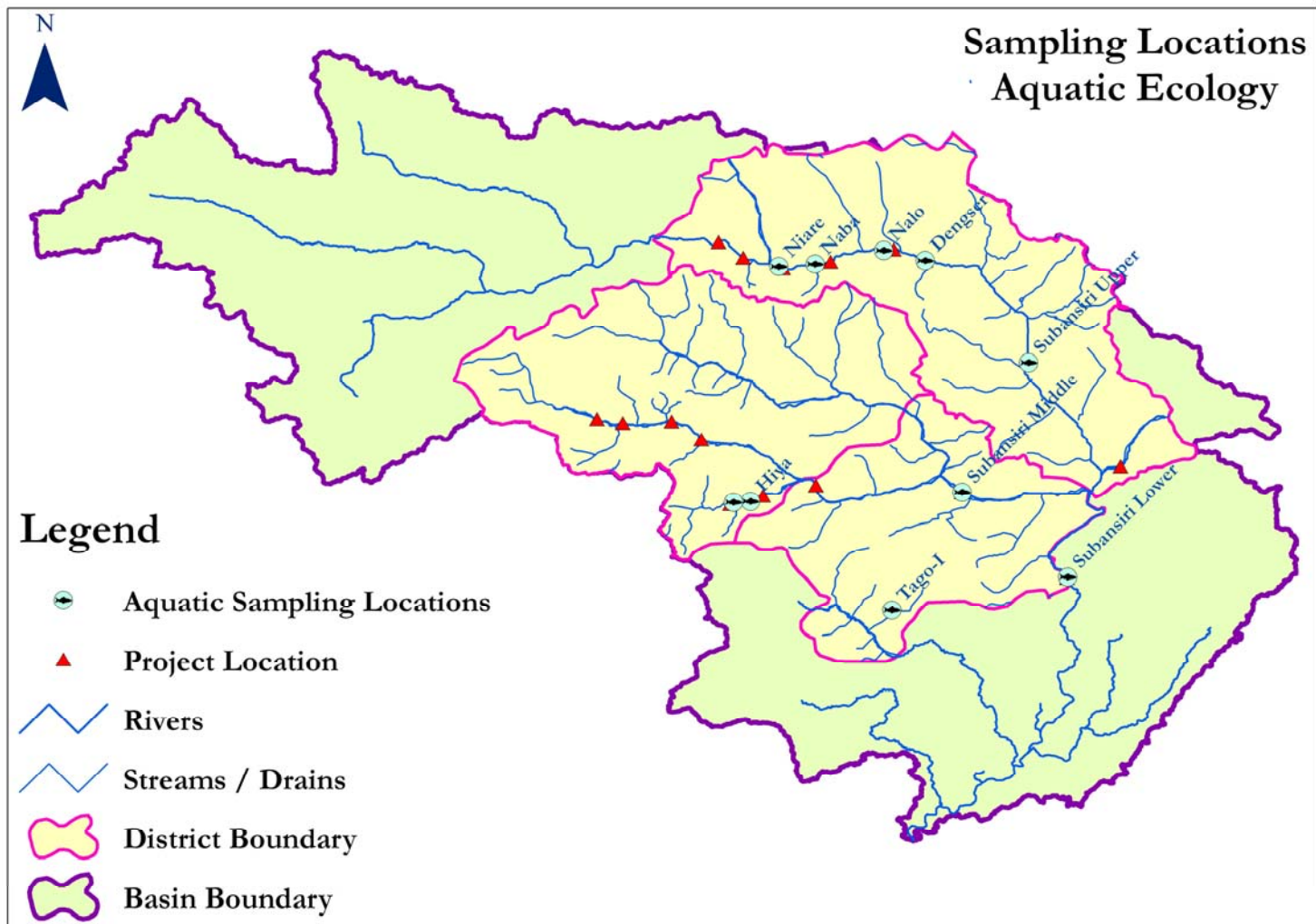


## **Annexure – 7.3**

**Map of Fish Sampling Locations & Fish species recorded at various HEPs site in different months during 2013**







**Fish Sampling Locations**



Fish species recorded at various HEPs site in different months during 2013  
(Y=Yes; N=No)

Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
	Jan	Feb	Mar	June	July	Aug	Oct	Nov	Dec
<b>1. Middle Subansiri</b>									
<i>Barilius bendelisis</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>B. barna</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>B. vagra</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>B.barila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio aequipinnatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Danio) dangila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Brachydanio) rerio</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>D. devario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Garra gotyla gotyla</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. kempfi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. nasuta</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. mcClellandi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>T. putitora</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>T.progenies</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Labeo dero</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Semiplotus semiplotus</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Psilorhynchous balitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Aborichthys elongatus</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>A.kempfi</i>	Y	Y	Y	Y	N	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>Lepidocehlichthys bermorrei</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Lepidocephalus annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.guntea</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Cirrhinus mrigala</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Glypthothorax ater</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>G.horai</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Amblyceps apangi</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>A.mangois</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.arunachalensis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Olyra longicaudata</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Channa orientalis</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>C. punctata</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>C.gachua</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C.stewarti</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C.striata</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Chanda nama</i>	Y	Y	Y	Y	Y	N	N	Y	Y
<i>Chanda baculis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C.ranga</i>	Y	Y	N	Y	Y	Y	Y	Y	Y

Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
	Jan	Feb	Mar	June	July	Aug	Oct	Nov	Dec
<b>2. Upper Subansiri</b>									
<i>Barilius bendelisis</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>B. barna</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. vagra</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. barila</i>	N	Y	Y	Y	N	Y	Y	Y	Y
<i>Danio aequipinnatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Danio) dangila</i>	Y	Y	Y	Y	N	Y	Y	Y	Y
<i>Danio (Brachydanio) rerio</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>D. devario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Garra gotyla gotyla</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. nasuta</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. mcClellandi</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. putitora</i>	Y	Y	Y	Y	N	Y	Y	Y	Y
<i>T. progenies</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>Labeo dero</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Semiplotus semiplotus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Psilorhynchous balitora</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Aborichthys elongatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A. kempi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Lepidocephalus annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L. guntea</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Amblyceps apangi</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>A. mangois</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A. arunachalensis</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Olyra longicaudata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Channa orientalis</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>C. punctata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C. gachua</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>C. stewarti</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C. striata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Chanda nama</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Chanda baculis</i>	N	Y	Y	Y	Y	N	Y	Y	Y
<i>C. ranga</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>3. Dengser</b>									
<i>G. kempi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax richardsonii</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax esonicus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y

Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
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<i>B. rostrata</i>	Y	Y	N	Y	Y	N	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Pseudecheneis sulcata</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<b>4. Niare</b>									
<i>Schizothorax richardsonii</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Schizothorax esonicus</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>Pseudecheneis sulcata</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<b>5. Naba</b>									
<i>Tor tor</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. putitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. progenies</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Schizothorax richardsonii</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax esonicus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	Y	Y	Y	Y	N	Y
<i>Pseudecheneis sulcata</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<b>6. Tago - 1</b>									
<i>Barilius bendelisis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. barna</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. vagra</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. barila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio aequipinnatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Danio) dangila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Brachydanio) rerio</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>D. devario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Garra gotyla gotyla</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. kempfi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. nasuta</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>G. annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. mcClellandi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	Y	Y	Y	Y	N	Y	Y	Y	Y
<i>T. putitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. progenies</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Labeo dero</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Semiplotus semiplotus</i>	Y	Y	Y	Y	Y	Y	Y	N	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y

Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
	Jan	Feb	Mar	June	July	Aug	Oct	Nov	Dec
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocephalus annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.guntea</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>Cirrhinus mrigala</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Glypthothorax ater</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G.horai</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Amblyceps apangi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.mangois</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.arunachalensis</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Olyra longicaudata</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<b>7. Lower Subansiri</b>									
<i>Barilius bendelisis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. barna</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. vagra</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B.barila</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Danio aequipinnatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Danio) dangila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Brachydanio) rerio</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>D. devario</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Garra gotyla gotyla</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. kempfi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. nasuta</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. annandalei</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>G. mcClellandi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	N	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. putitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T.progenies</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Amblypharyngodon mola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Aspidoparia jaya</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>A. morar</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>Labeo dero</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.bata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.calbasu</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.gonius</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.pangusia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.rohita</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>Osteobama cotio cotio</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Puntius chola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>P. sophore</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>P. ticto</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>P.conchonius</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>P. sarana sarana</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>P. gelius</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>P.rasbora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Raimas bola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y

Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
	Jan	Feb	Mar	June	July	Aug	Oct	Nov	Dec
<i>Salmostoma bacila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Semiplotus semiplotus</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Psilorhynchous balitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Aborichthys elongatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.kempi</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B.bredmorei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	N	Y	Y	Y	Y
<i>Lepidocehlichthys bermorrei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocephalus annandalei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>L.guntea</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Balitora brucei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Cirrhinus mrigala</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Glyphothorax ater</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>G.horai</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Bagarius bagarius</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Erethistes pussilis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Gagata cenia</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>G.gagata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Ompok pabo</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>O.bimaculatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Wallogo attu</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Heteropneustes fossilis</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Clarias batrachus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Amblyceps apangi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.mangois</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.arunachalensis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Olyra longicaudata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Mystus bleekari</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>M.tengara</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>M.cavasius</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>M.vittatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Sperata aor</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Batasio batasio</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B.tangana</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>Ailia coila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Clupisoma garua</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Eutropiichthys atherinodes</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Silonia silondia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Channa orientalis</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>C. punctata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C.gachua</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C.stewarti</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>C.striata</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Badis spp.</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Chanda nama</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Chanda baculis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y

Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
	Jan	Feb	Mar	June	July	Aug	Oct	Nov	Dec
<i>C.ranga</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>Xenentodon cancila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Macrogathus aral</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>M.pancalus</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>Macrogathus aral</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>8. Nalo</b>									
<i>Barilius bendelisis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. barna</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. vagra</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>B.barila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio aequipinnatus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Danio) dangila</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Danio (Brachydanio) rerio</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>D. devario</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>Garra gotyla gotyla</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. kempi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. nasuta</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. annandalei</i>	Y	Y	Y	Y	Y	N	Y	Y	Y
<i>G. mcClellandi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. putitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T.progenies</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Labeo dero</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>Schistura rupecola rupecola</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorei</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocephalus annandalei</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>L.guntea</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Amblyceps apangi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.mangois</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>A.arunachalensis</i>	Y	Y	Y	Y	N	Y	Y	Y	Y
<i>Olyra longicaudata</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<b>9. Nyepin</b>									
<i>Garra gotyla gotyla</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. kempi</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>G. nasuta</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T. putitora</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>T.progenies</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax richardsonii</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax esonicus</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	N	Y	Y	Y	Y	Y	Y



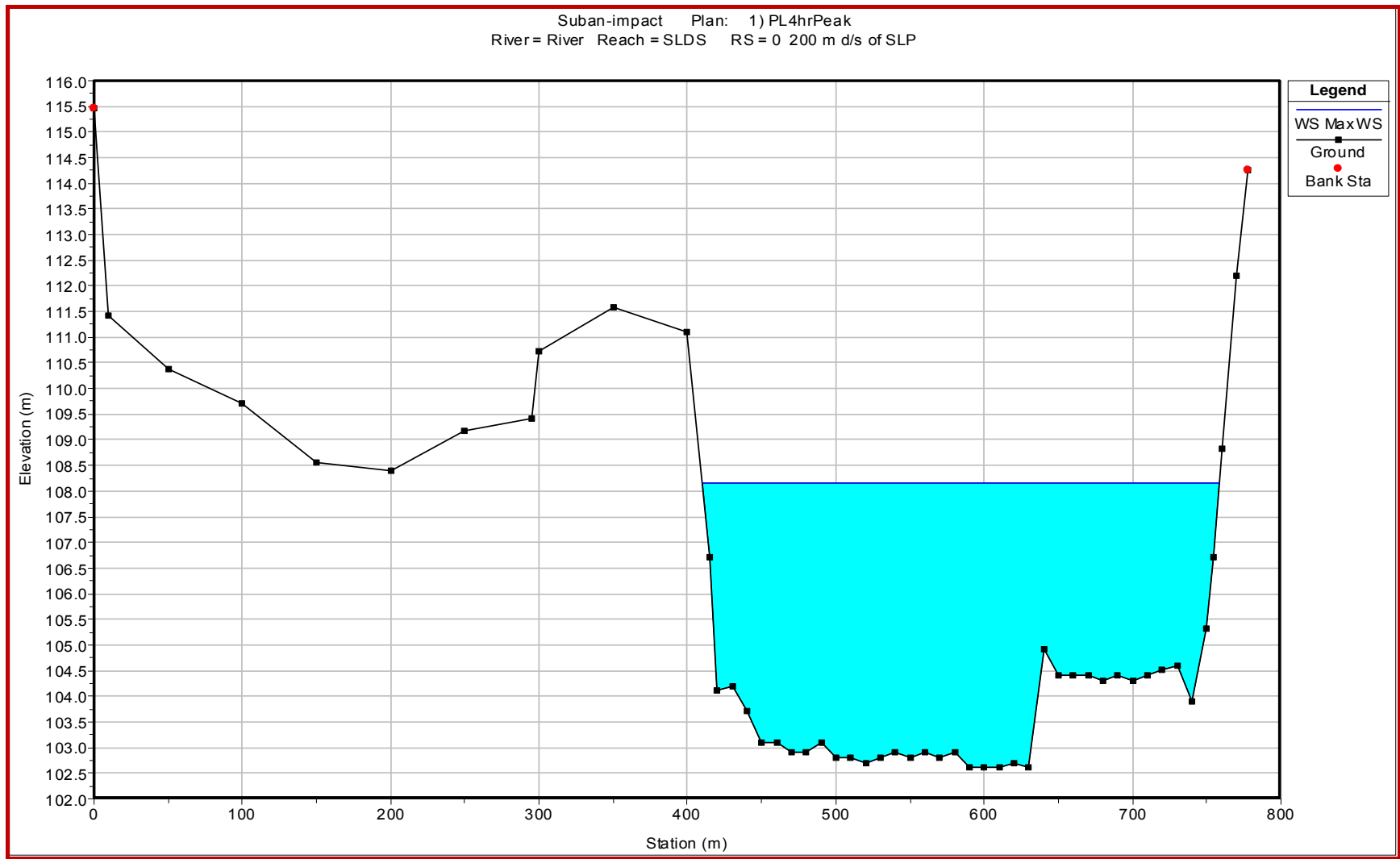
Fish Spp	Pre-monsoon			Monsoon			Post-monsoon		
	Jan	Feb	Mar	June	July	Aug	Oct	Nov	Dec
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	Y	Y	Y	N	Y	Y
<i>Pseudecheneis sulcata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Oncorhynchus mykiss</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>10. Hiya</b>									
<i>Garra gotyla gotyla</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>G. kempfi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>G. nasuta</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Tor tor</i>	Y	Y	Y	Y	Y	Y	Y	N	Y
<i>T. putitora</i>	Y	Y	N	Y	Y	Y	Y	Y	Y
<i>T. progenies</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Neolissocheilus hexagonalepis</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax richardsonii</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schizothorax esonicus</i>	Y	N	Y	Y	Y	Y	Y	Y	Y
<i>Acanthocobitis botia</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Botia dario</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>B. rostrata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Schistura rupecola rupecola</i>	Y	Y	Y	Y	Y	Y	Y	Y	N
<i>Nemacheilus devdevi</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Lepidocehlichthys berdmorrei</i>	Y	Y	Y	N	Y	Y	Y	Y	Y
<i>Pseudecheneis sulcata</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
<i>Badis spp.</i>	Y	N	Y	Y	Y	Y	Y	Y	Y



## **Annexure – 9.1**

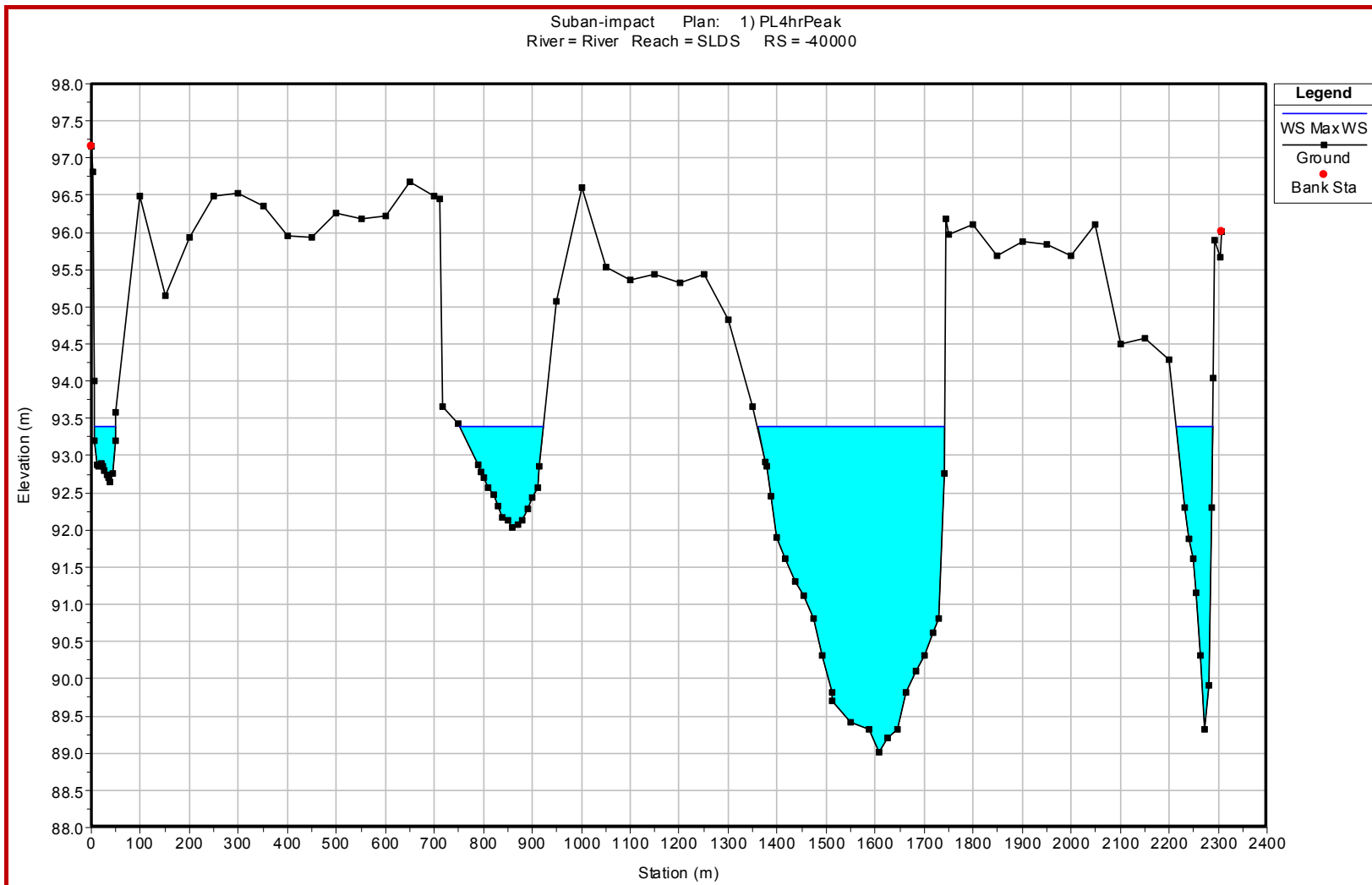
**Plots of Subansiri and Brahmaputra river cross sections along with the maximum water level corresponding to 4 hours peaking**





**Cross section of Subansiri River about 200 m downstream of Subansiri Lower HE Project**

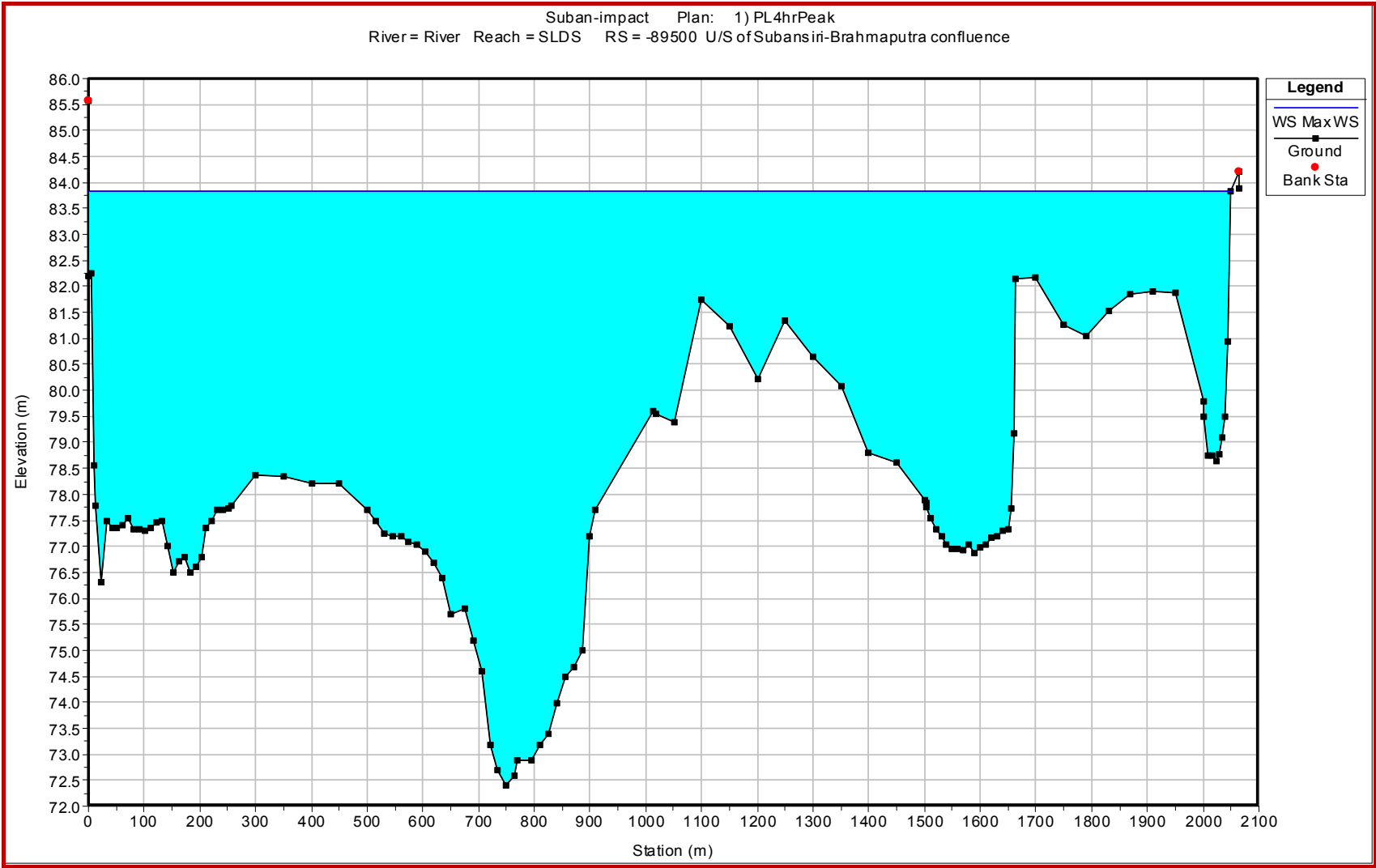




Cross section of Subansiri River near North Lakhimpur located about 40 km downstream of Subansiri Lower HE Project

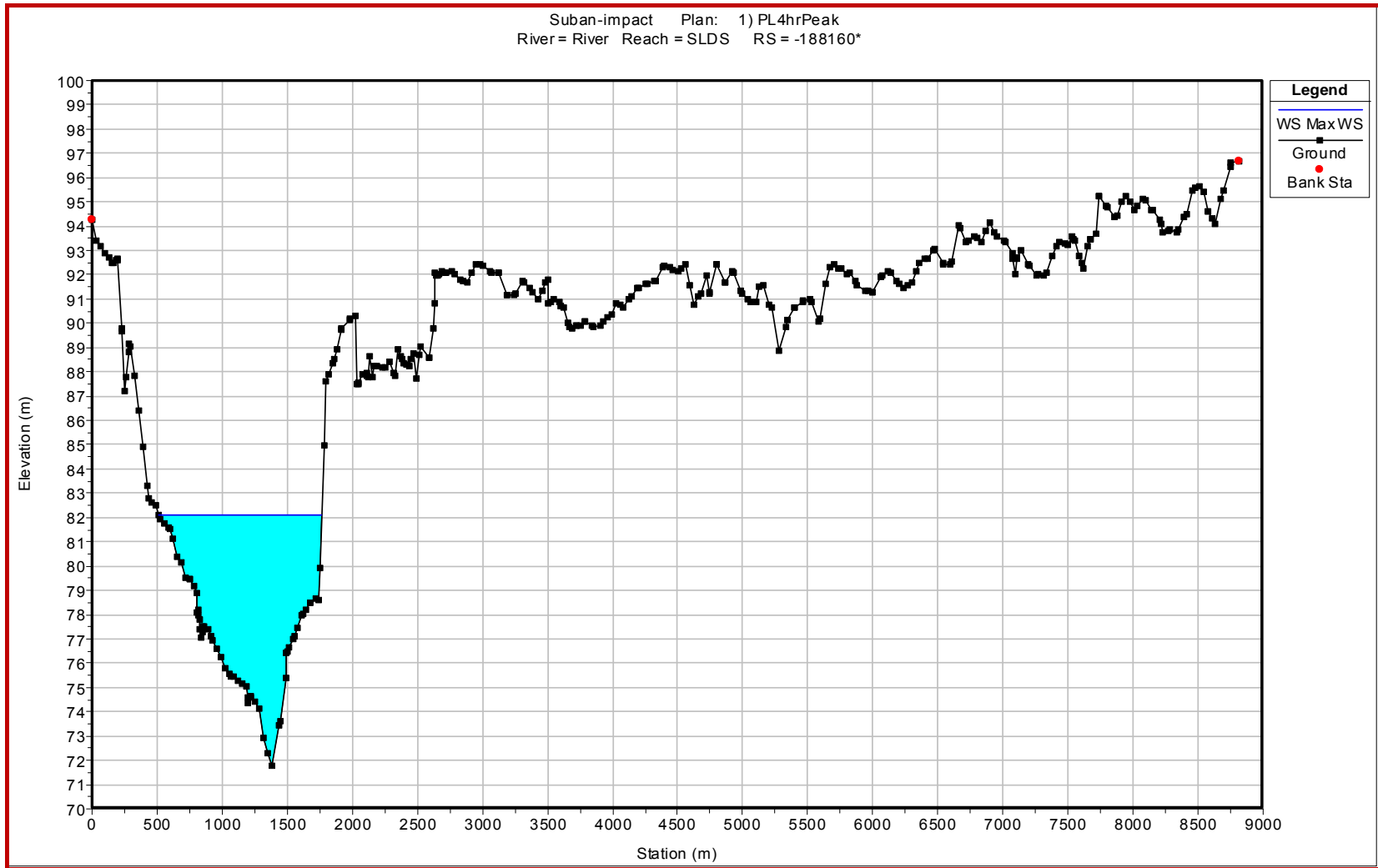






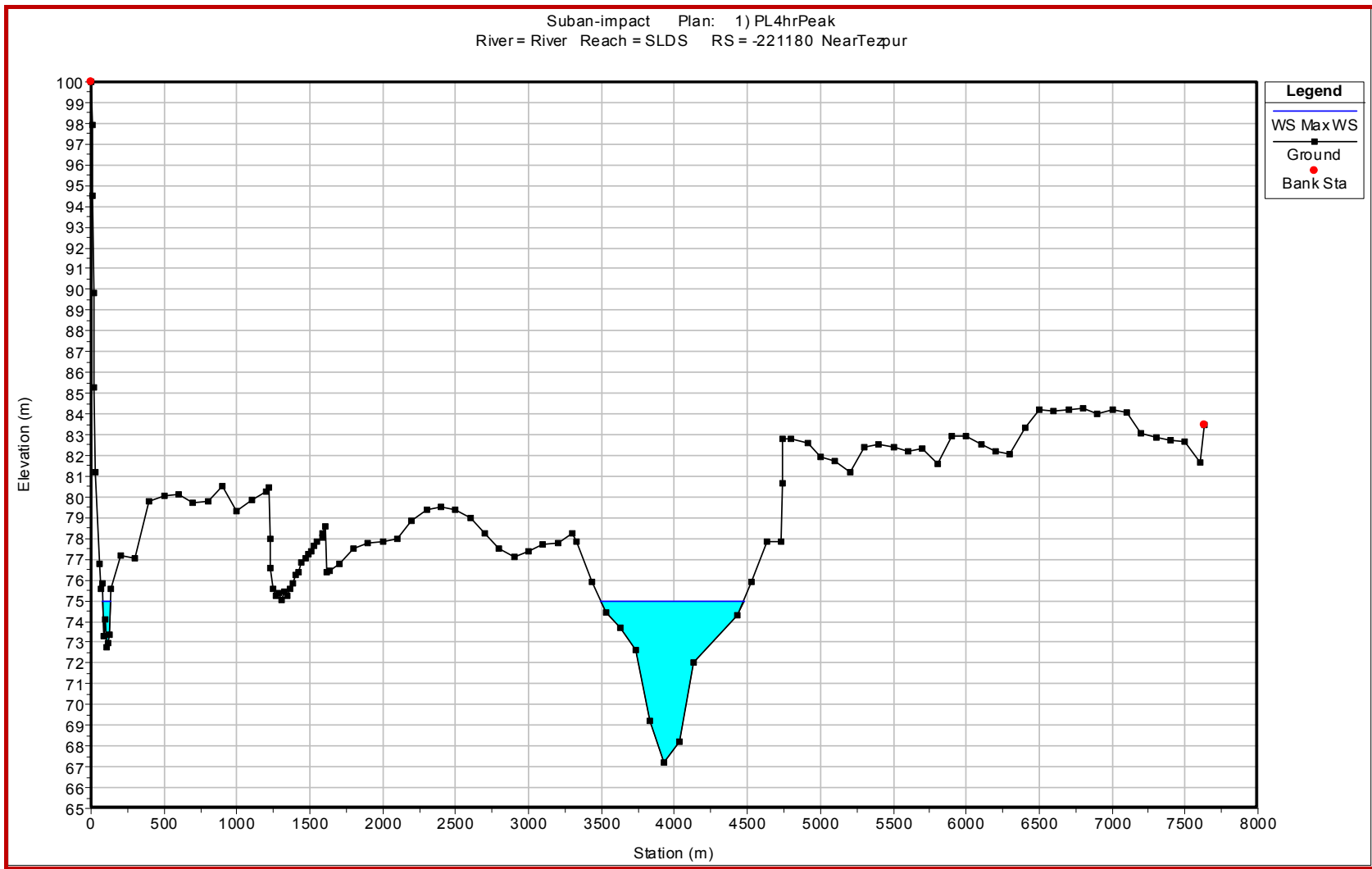
Cross section of Subansiri River near Brahmaputra confl located about 89.5 km downstream of Subansiri Lower HE Project





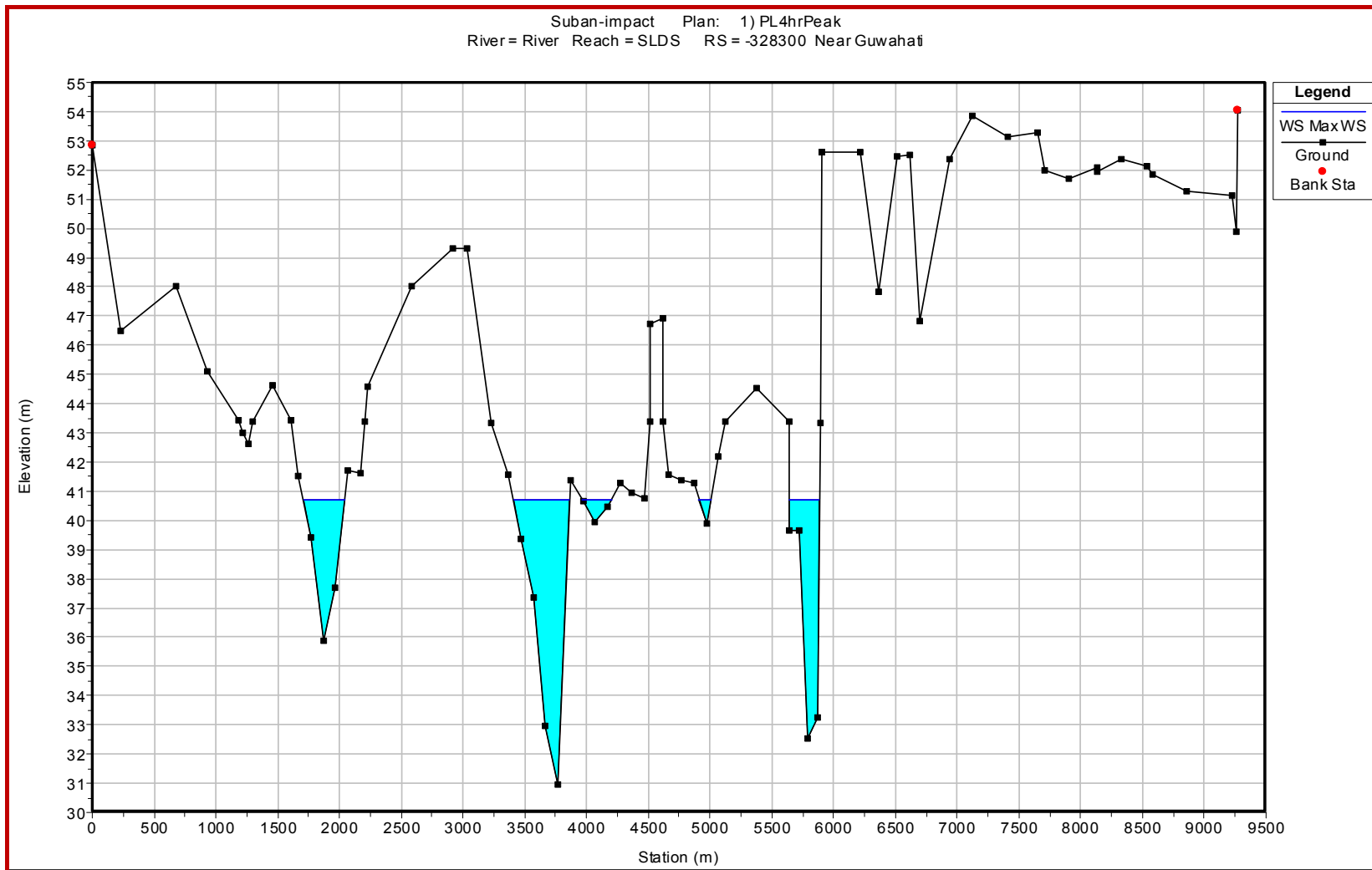
Cross section of Brahmaputra River near Kaziranga located about 188.16 km downstream of Subansiri Lower HE Project





**Cross section of Brahmaputra River near Tezpur located about 221.18 km downstream of Subansiri Lower HE Project**





**Cross section of Brahmaputra River near Guwahati located about 328.30 km downstream of Subansiri Lower HE Project**





## **Annexure – 9.2**

**Flow depth, flow velocity and flow top width for  
lean discharge release condition, Monsoon  
discharge release condition and other four  
months discharge release condition of HEPs in  
Subansiri Basin**



Oju-I HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Oju-I Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	5.27	1860	1861.27	127	1.31	6.56
Subansiri	-100	PF 10% release	5.27	1859.16	1860.09	93	2.15	5.29
Subansiri	-200	PF 10% release	5.27	1856.86	1857.8	94	2.14	5.29
Subansiri	-300	PF 10% release	5.27	1854.56	1855.5	94	2.15	5.29
Subansiri	-400	PF 10% release	5.27	1852.26	1853.19	93	2.14	5.39
Subansiri	-500	PF 10% release	5.27	1849.1	1850.04	94	2.16	5.23
Subansiri	-600	PF 10% release	5.27	1845.93	1846.86	93	2.15	5.32
Subansiri	-700	PF 10% release	5.27	1842.77	1843.67	90	2.11	5.54
Subansiri	-800	PF 10% release	5.27	1839.1	1839.95	85	2.07	6.01
Subansiri	0 (dam site)	PF 15% release	7.91	1860	1861.48	148	1.42	8.49
Subansiri	-100	PF 15% release	7.91	1859.16	1860.25	109	2.33	6.23
Subansiri	-200	PF 15% release	7.91	1856.86	1857.96	110	2.32	6.23
Subansiri	-300	PF 15% release	7.91	1854.56	1855.67	111	2.32	6.29
Subansiri	-400	PF 15% release	7.91	1852.26	1853.35	109	2.3	6.39
Subansiri	-500	PF 15% release	7.91	1849.1	1850.21	111	2.33	6.2
Subansiri	-600	PF 15% release	7.91	1845.93	1847.03	110	2.31	6.29
Subansiri	-700	PF 15% release	7.91	1842.77	1843.83	106	2.29	6.51
Subansiri	-800	PF 15% release	7.91	1839.1	1840.1	100	2.22	7.1
Subansiri	0 (dam site)	PF 20% release	10.55	1860	1861.63	163	1.51	9.98
Subansiri	-100	PF 20% release	10.55	1859.16	1860.39	123	2.46	7.01
Subansiri	-200	PF 20% release	10.55	1856.86	1858.1	124	2.46	6.99
Subansiri	-300	PF 20% release	10.55	1854.56	1855.8	124	2.44	7.11
Subansiri	-400	PF 20% release	10.55	1852.26	1853.49	123	2.43	7.18
Subansiri	-500	PF 20% release	10.55	1849.1	1850.34	124	2.48	6.94
Subansiri	-600	PF 20% release	10.55	1845.93	1847.16	123	2.45	7.06
Subansiri	-700	PF 20% release	10.55	1842.77	1843.96	119	2.44	7.27
Subansiri	-800	PF 20% release	10.55	1839.1	1840.22	112	2.37	7.94
Subansiri	0 (dam site)	PF 30% release	15.82	1860	1861.87	187	1.64	12.29
Subansiri	-100	PF 30% release	15.82	1859.16	1860.6	144	2.67	8.24
Subansiri	-200	PF 30% release	15.82	1856.86	1858.31	145	2.67	8.28
Subansiri	-300	PF 30% release	15.82	1854.56	1856.01	145	2.65	8.42
Subansiri	-400	PF 30% release	15.82	1852.26	1853.69	143	2.66	8.42
Subansiri	-500	PF 30% release	15.82	1849.1	1850.56	146	2.69	8.16
Subansiri	-600	PF 30% release	15.82	1845.93	1847.37	144	2.68	8.25
Subansiri	-700	PF 30% release	15.82	1842.77	1844.17	140	2.63	8.54
Subansiri	-800	PF 30% release	15.82	1839.1	1840.42	132	2.56	9.32
Subansiri	0 (dam site)	PF 40% release	21.09	1860	1862.08	208	1.7	15.28
Subansiri	-100	PF 40% release	21.09	1859.16	1860.78	162	2.82	9.25
Subansiri	-200	PF 40% release	21.09	1856.86	1858.49	163	2.81	9.4
Subansiri	-300	PF 40% release	21.09	1854.56	1856.19	163	2.8	9.47
Subansiri	-400	PF 40% release	21.09	1852.26	1853.87	161	2.81	9.46
Subansiri	-500	PF 40% release	21.09	1849.1	1850.74	164	2.84	9.17
Subansiri	-600	PF 40% release	21.09	1845.93	1847.55	162	2.83	9.26
Subansiri	-700	PF 40% release	21.09	1842.77	1844.34	157	2.79	9.57
Subansiri	-800	PF 40% release	21.09	1839.1	1840.58	148	2.74	10.3
Subansiri	0 (dam site)	PF 50% release	26.37	1860	1862.26	226	1.68	19.59
Subansiri	-100	PF 50% release	26.37	1859.16	1860.92	176	2.96	10.16
Subansiri	-200	PF 50% release	26.37	1856.86	1858.63	177	2.96	10.28

River	Ch d/s of Oju-I Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-300	PF 50% release	26.37	1854.56	1856.34	178	2.93	10.39
Subansiri	-400	PF 50% release	26.37	1852.26	1854.01	175	2.94	10.35
Subansiri	-500	PF 50% release	26.37	1849.1	1850.89	179	2.96	10.05
Subansiri	-600	PF 50% release	26.37	1845.93	1847.7	177	2.96	10.12
Subansiri	-700	PF 50% release	26.37	1842.77	1844.48	171	2.94	10.41
Subansiri	-800	PF 50% release	26.37	1839.1	1840.72	162	2.85	11.34
Subansiri	0 (dam site)	PF 100% release	52.73	1860	1862.76	276	2.03	21.5
Subansiri	-100	PF 100% release	52.73	1859.16	1861.49	233	3.36	13.72
Subansiri	-200	PF 100% release	52.73	1856.86	1859.2	234	3.35	13.78
Subansiri	-300	PF 100% release	52.73	1854.56	1856.89	233	3.35	13.79
Subansiri	-400	PF 100% release	52.73	1852.26	1854.58	232	3.35	13.72
Subansiri	-500	PF 100% release	52.73	1849.1	1851.47	237	3.34	14.04
Subansiri	-600	PF 100% release	52.73	1845.93	1848.3	237	3.28	14.64
Subansiri	-700	PF 100% release	52.73	1842.77	1845.11	234	3.13	16.66
Subansiri	-800	PF 100% release	52.73	1839.1	1841.26	216	3.17	16.33

Oju-I HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Oju-I Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	46.67	1860	1862.66	266	1.96	21.15
Subansiri	-100	PF 10% release	46.67	1859.16	1861.38	222	3.28	13.03
Subansiri	-200	PF 10% release	46.67	1856.86	1859.09	223	3.27	13.09
Subansiri	-300	PF 10% release	46.67	1854.56	1856.78	222	3.27	13.1
Subansiri	-400	PF 10% release	46.67	1852.26	1854.47	221	3.28	13.05
Subansiri	-500	PF 10% release	46.67	1849.1	1851.34	224	3.31	12.78
Subansiri	-600	PF 10% release	46.67	1845.93	1848.15	222	3.32	12.71
Subansiri	-700	PF 10% release	46.67	1842.77	1844.93	216	3.29	13.06
Subansiri	-800	PF 10% release	46.67	1839.1	1841.16	206	3.1	15.38
Subansiri	0 (dam site)	PF 15% release	70	1860	1863.03	303	2.19	22.41
Subansiri	-100	PF 15% release	70	1859.16	1861.77	261	3.56	15.42
Subansiri	-200	PF 15% release	70	1856.86	1859.48	262	3.53	15.67
Subansiri	-300	PF 15% release	70	1854.56	1857.18	262	3.51	15.96
Subansiri	-400	PF 15% release	70	1852.26	1854.86	260	3.5	16.3
Subansiri	-500	PF 15% release	70	1849.1	1851.78	268	3.38	17.8
Subansiri	-600	PF 15% release	70	1845.93	1848.6	267	3.31	19.08
Subansiri	-700	PF 15% release	70	1842.77	1845.37	260	3.22	21.16
Subansiri	-800	PF 15% release	70	1839.1	1841.5	240	3.34	18.62
Subansiri	0 (dam site)	PF 20% release	93.34	1860	1863.35	335	2.38	23.48
Subansiri	-100	PF 20% release	93.34	1859.16	1862.08	292	3.76	17.37
Subansiri	-200	PF 20% release	93.34	1856.86	1859.78	292	3.75	17.74
Subansiri	-300	PF 20% release	93.34	1854.56	1857.48	292	3.71	18.28
Subansiri	-400	PF 20% release	93.34	1852.26	1855.17	291	3.67	18.8
Subansiri	-500	PF 20% release	93.34	1849.1	1852.07	297	3.54	21.03
Subansiri	-600	PF 20% release	93.34	1845.93	1848.89	296	3.43	22.72
Subansiri	-700	PF 20% release	93.34	1842.77	1845.64	287	3.34	24.5
Subansiri	-800	PF 20% release	93.34	1839.1	1841.77	267	3.56	20.65
Subansiri	0 (dam site)	PF 30% release	140	1860	1863.88	388	2.69	25.25
Subansiri	-100	PF 30% release	140	1859.16	1862.58	342	4.07	20.53

River	Ch d/s of Oju-I Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-200	PF 30% release	140	1856.86	1860.29	343	4.03	21.44
Subansiri	-300	PF 30% release	140	1854.56	1857.99	343	3.94	22.71
Subansiri	-400	PF 30% release	140	1852.26	1855.65	339	3.97	22.3
Subansiri	-500	PF 30% release	140	1849.1	1852.51	341	3.85	24.58
Subansiri	-600	PF 30% release	140	1845.93	1849.28	335	3.82	25.25
Subansiri	-700	PF 30% release	140	1842.77	1845.99	322	3.79	25.69
Subansiri	-800	PF 30% release	140	1839.1	1842.27	317	3.69	27.73
Subansiri	0 (dam site)	PF 40% release	186.67	1860	1864.31	431	2.95	26.68
Subansiri	-100	PF 40% release	186.67	1859.16	1863	384	4.28	23.84
Subansiri	-200	PF 40% release	186.67	1856.86	1860.7	384	4.21	24.88
Subansiri	-300	PF 40% release	186.67	1854.56	1858.37	381	4.16	25.81
Subansiri	-400	PF 40% release	186.67	1852.26	1856.03	377	4.22	24.9
Subansiri	-500	PF 40% release	186.67	1849.1	1852.85	375	4.15	26.2
Subansiri	-600	PF 40% release	186.67	1845.93	1849.62	369	4.09	27.03
Subansiri	-700	PF 40% release	186.67	1842.77	1846.32	355	4.09	27.24
Subansiri	-800	PF 40% release	186.67	1839.1	1842.59	349	3.93	30.89
Subansiri	0 (dam site)	PF 50% release	234.34	1860	1864.67	467	3.21	27.91
Subansiri	-100	PF 50% release	234.34	1859.16	1863.36	420	4.44	26.78
Subansiri	-200	PF 50% release	234.34	1856.86	1861.05	419	4.37	27.97
Subansiri	-300	PF 50% release	234.34	1854.56	1858.68	412	4.4	27.69
Subansiri	-400	PF 50% release	234.34	1852.26	1856.37	411	4.41	27.26
Subansiri	-500	PF 50% release	234.34	1849.1	1853.17	407	4.37	27.69
Subansiri	-600	PF 50% release	234.34	1845.93	1849.92	399	4.34	28.57
Subansiri	-700	PF 50% release	234.34	1842.77	1846.63	386	4.33	28.68
Subansiri	-800	PF 50% release	234.34	1839.1	1842.87	377	4.17	32.36
Subansiri	0 (dam site)	PF 100% release	466.68	1860	1865.92	592	4.22	31.8
Subansiri	-100	PF 100% release	466.68	1859.16	1864.6	544	5.13	34.38
Subansiri	-200	PF 100% release	466.68	1856.86	1862.25	539	5.12	34.63
Subansiri	-300	PF 100% release	466.68	1854.56	1859.88	532	5.17	33.8
Subansiri	-400	PF 100% release	466.68	1852.26	1857.58	532	5.22	32.59
Subansiri	-500	PF 100% release	466.68	1849.1	1854.36	526	5.17	33.58
Subansiri	-600	PF 100% release	466.68	1845.93	1851.09	516	5.16	33.7
Subansiri	-700	PF 100% release	466.68	1842.77	1847.79	502	5.14	34.16
Subansiri	-800	PF 100% release	466.68	1839.1	1843.93	483	4.99	37.47

**Oju-I HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Oju-I Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	18.76	1860	1861.98	198	1.7	13.35
Subansiri	-100	PF 10% release	18.76	1859.16	1860.7	154	2.78	8.79
Subansiri	-200	PF 10% release	18.76	1856.86	1858.41	155	2.77	8.9
Subansiri	-300	PF 10% release	18.76	1854.56	1856.11	155	2.75	9
Subansiri	-400	PF 10% release	18.76	1852.26	1853.8	154	2.73	9.05
Subansiri	-500	PF 10% release	18.76	1849.1	1850.66	156	2.77	8.76
Subansiri	-600	PF 10% release	18.76	1845.93	1847.47	154	2.77	8.83
Subansiri	-700	PF 10% release	18.76	1842.77	1844.27	150	2.74	9.1
Subansiri	-800	PF 10% release	18.76	1839.1	1840.51	141	2.66	9.9
Subansiri	0 (dam site)	PF 15% release	28.13	1860	1862.3	230	1.72	19.75
Subansiri	-100	PF 15% release	28.13	1859.16	1860.98	182	2.97	10.5
Subansiri	-200	PF 15% release	28.13	1856.86	1858.68	182	2.99	10.58
Subansiri	-300	PF 15% release	28.13	1854.56	1856.38	182	2.99	10.62
Subansiri	-400	PF 15% release	28.13	1852.26	1854.07	181	2.96	10.65
Subansiri	-500	PF 15% release	28.13	1849.1	1850.93	183	3	10.3
Subansiri	-600	PF 15% release	28.13	1845.93	1847.74	181	3.01	10.38
Subansiri	-700	PF 15% release	28.13	1842.77	1844.54	177	2.96	10.72
Subansiri	-800	PF 15% release	28.13	1839.1	1840.77	167	2.87	11.77
Subansiri	0 (dam site)	PF 20% release	37.51	1860	1862.49	249	1.85	20.58
Subansiri	-100	PF 20% release	37.51	1859.16	1861.2	204	3.15	11.88
Subansiri	-200	PF 20% release	37.51	1856.86	1858.91	205	3.14	11.96
Subansiri	-300	PF 20% release	37.51	1854.56	1856.6	204	3.13	11.99
Subansiri	-400	PF 20% release	37.51	1852.26	1854.28	202	3.14	11.96
Subansiri	-500	PF 20% release	37.51	1849.1	1851.16	206	3.17	11.59
Subansiri	-600	PF 20% release	37.51	1845.93	1847.97	204	3.17	11.66
Subansiri	-700	PF 20% release	37.51	1842.77	1844.75	198	3.13	12.01
Subansiri	-800	PF 20% release	37.51	1839.1	1840.98	188	3.01	13.72
Subansiri	0 (dam site)	PF 30% release	56.27	1860	1862.82	282	2.06	21.69
Subansiri	-100	PF 30% release	56.27	1859.16	1861.56	240	3.4	14.1
Subansiri	-200	PF 30% release	56.27	1856.86	1859.26	240	3.39	14.2
Subansiri	-300	PF 30% release	56.27	1854.56	1856.96	240	3.38	14.27
Subansiri	-400	PF 30% release	56.27	1852.26	1854.64	238	3.39	14.23
Subansiri	-500	PF 30% release	56.27	1849.1	1851.54	244	3.35	14.89
Subansiri	-600	PF 30% release	56.27	1845.93	1848.37	244	3.27	15.84
Subansiri	-700	PF 30% release	56.27	1842.77	1845.19	242	3.1	18.6
Subansiri	-800	PF 30% release	56.27	1839.1	1841.31	221	3.2	16.84
Subansiri	0 (dam site)	PF 40% release	75.02	1860	1863.11	311	2.23	22.65
Subansiri	-100	PF 40% release	75.02	1859.16	1861.84	268	3.6	15.87
Subansiri	-200	PF 40% release	75.02	1856.86	1859.55	269	3.58	16.14
Subansiri	-300	PF 40% release	75.02	1854.56	1857.25	269	3.55	16.52
Subansiri	-400	PF 40% release	75.02	1852.26	1854.94	268	3.52	17.03
Subansiri	-500	PF 40% release	75.02	1849.1	1851.85	275	3.42	18.58
Subansiri	-600	PF 40% release	75.02	1845.93	1848.66	273	3.36	19.85
Subansiri	-700	PF 40% release	75.02	1842.77	1845.43	266	3.23	22.09
Subansiri	-800	PF 40% release	75.02	1839.1	1841.56	246	3.39	19.07
Subansiri	0 (dam site)	PF 50% release	93.78	1860	1863.36	336	2.38	23.49
Subansiri	-100	PF 50% release	93.78	1859.16	1862.09	293	3.77	17.4

River	Ch d/s of Oju-I Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-200	PF 50% release	93.78	1856.86	1859.79	293	3.75	17.78
Subansiri	-300	PF 50% release	93.78	1854.56	1857.48	292	3.72	18.31
Subansiri	-400	PF 50% release	93.78	1852.26	1855.18	292	3.67	18.84
Subansiri	-500	PF 50% release	93.78	1849.1	1852.07	297	3.55	21.04
Subansiri	-600	PF 50% release	93.78	1845.93	1848.89	296	3.44	22.77
Subansiri	-700	PF 50% release	93.78	1842.77	1845.64	287	3.35	24.51
Subansiri	-800	PF 50% release	93.78	1839.1	1841.78	268	3.56	20.68
Subansiri	0 (dam site)	PF 100% release	187.55	1860	1864.31	431	2.96	26.71
Subansiri	-100	PF 100% release	187.55	1859.16	1863.01	385	4.28	23.89
Subansiri	-200	PF 100% release	187.55	1856.86	1860.71	385	4.22	24.95
Subansiri	-300	PF 100% release	187.55	1854.56	1858.38	382	4.16	25.86
Subansiri	-400	PF 100% release	187.55	1852.26	1856.03	377	4.23	24.95
Subansiri	-500	PF 100% release	187.55	1849.1	1852.86	376	4.13	26.27
Subansiri	-600	PF 100% release	187.55	1845.93	1849.63	370	4.1	27.04
Subansiri	-700	PF 100% release	187.55	1842.77	1846.34	357	4.08	27.31
Subansiri	-800	PF 100% release	187.55	1839.1	1842.6	350	3.93	30.93

Oju-II HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	5.38	1596.84	1597.75	91	1.68	7.04
Subansiri	-100	PF 10% release	5.38	1595.78	1596.63	85	1.38	9.11
Subansiri	-200	PF 10% release	5.38	1594.72	1595.34	62	1.5	11.53
Subansiri	-300	PF 10% release	5.38	1593.28	1593.89	61	1.27	13.85
Subansiri	-400	PF 10% release	5.38	1591.84	1592.36	52	1.38	15.16
Subansiri	-500	PF 10% release	5.38	1590.6	1591.19	59	1.01	18.17
Subansiri	-600	PF 10% release	5.38	1589.36	1589.74	38	1.38	20.35
Subansiri	-700	PF 10% release	5.38	1583.72	1584.49	77	1.98	7.05
Subansiri	-800	PF 10% release	5.38	1578.08	1578.46	38	1.39	20.71
Subansiri	-900	PF 10% release	5.38	1572.3	1572.85	55	1.68	11.62
Subansiri	-1000	PF 10% release	5.38	1566.51	1567.09	58	1.7	10.94
Subansiri	-1100	PF 10% release	5.38	1561.7	1562.4	70	1.89	8.09
Subansiri	-1200	PF 10% release	5.38	1556.88	1557.69	81	2	6.67
Subansiri	-1300	PF 10% release	5.38	1551.78	1552.53	75	1.96	7.27
Subansiri	-1400	PF 10% release	5.38	1546.67	1547.36	69	1.24	12.57
Subansiri	-1500	PF 10% release	5.38	1545.26	1545.75	49	1.55	14.26
Subansiri	-1600	PF 10% release	5.38	1543.85	1544.38	53	0.45	30.69
Subansiri	-1700	PF 10% release	5.38	1543.06	1544.07	101	1.26	8.4
Subansiri	-1800	PF 10% release	5.38	1542.26	1542.85	59	1.73	10.49
Subansiri	-1900	PF 10% release	5.38	1537.6	1538.19	59	1.73	10.51
Subansiri	-2000	PF 10% release	5.38	1532.93	1533.61	68	1.3	12.11
Subansiri	0	PF 15% release	8.07	1596.84	1597.9	106	1.84	8.25
Subansiri	-100	PF 15% release	8.07	1595.78	1596.76	98	1.57	10.47
Subansiri	-200	PF 15% release	8.07	1594.72	1595.45	73	1.64	13.54
Subansiri	-300	PF 15% release	8.07	1593.28	1593.98	70	1.44	15.94
Subansiri	-400	PF 15% release	8.07	1591.84	1592.45	61	1.49	17.83
Subansiri	-500	PF 15% release	8.07	1590.6	1591.28	68	1.13	20.98
Subansiri	-600	PF 15% release	8.07	1589.36	1589.81	45	1.5	23.91
Subansiri	-700	PF 15% release	8.07	1583.72	1584.63	91	2.14	8.3

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-800	PF 15% release	8.07	1578.08	1578.53	45	1.46	24.71
Subansiri	-900	PF 15% release	8.07	1572.3	1572.95	65	1.81	13.67
Subansiri	-1000	PF 15% release	8.07	1566.51	1567.19	68	1.85	12.85
Subansiri	-1100	PF 15% release	8.07	1561.7	1562.53	83	2.03	9.54
Subansiri	-1200	PF 15% release	8.07	1556.88	1557.83	95	2.18	7.83
Subansiri	-1300	PF 15% release	8.07	1551.78	1552.67	89	2.12	8.55
Subansiri	-1400	PF 15% release	8.07	1546.67	1547.46	79	1.4	14.51
Subansiri	-1500	PF 15% release	8.07	1545.26	1545.83	57	1.7	16.69
Subansiri	-1600	PF 15% release	8.07	1543.85	1544.52	67	0.49	31.65
Subansiri	-1700	PF 15% release	8.07	1543.06	1544.22	116	1.44	9.62
Subansiri	-1800	PF 15% release	8.07	1542.26	1542.96	70	1.87	12.37
Subansiri	-1900	PF 15% release	8.07	1537.6	1538.29	69	1.87	12.37
Subansiri	-2000	PF 15% release	8.07	1532.93	1533.73	80	1.43	14.15
Subansiri	0	PF 20% release	10.77	1596.84	1598.03	119	1.96	9.23
Subansiri	-100	PF 20% release	10.77	1595.78	1596.86	108	1.72	11.55
Subansiri	-200	PF 20% release	10.77	1594.72	1595.54	82	1.74	15.17
Subansiri	-300	PF 20% release	10.77	1593.28	1594.06	78	1.57	17.62
Subansiri	-400	PF 20% release	10.77	1591.84	1592.52	68	1.58	20.04
Subansiri	-500	PF 20% release	10.77	1590.6	1591.35	75	1.24	23.22
Subansiri	-600	PF 20% release	10.77	1589.36	1589.86	50	1.6	26.77
Subansiri	-700	PF 20% release	10.77	1583.72	1584.75	103	2.24	9.37
Subansiri	-800	PF 20% release	10.77	1578.08	1578.58	50	1.58	27.44
Subansiri	-900	PF 20% release	10.77	1572.3	1573.03	73	1.92	15.36
Subansiri	-1000	PF 20% release	10.77	1566.51	1567.28	77	1.94	14.49
Subansiri	-1100	PF 20% release	10.77	1561.7	1562.63	93	2.16	10.69
Subansiri	-1200	PF 20% release	10.77	1556.88	1557.95	107	2.29	8.82
Subansiri	-1300	PF 20% release	10.77	1551.78	1552.77	99	2.24	9.6
Subansiri	-1400	PF 20% release	10.77	1546.67	1547.55	88	1.54	16
Subansiri	-1500	PF 20% release	10.77	1545.26	1545.9	64	1.79	18.81
Subansiri	-1600	PF 20% release	10.77	1543.85	1544.65	80	0.52	32.47
Subansiri	-1700	PF 20% release	10.77	1543.06	1544.34	128	1.58	10.6
Subansiri	-1800	PF 20% release	10.77	1542.26	1543.04	78	1.99	13.86
Subansiri	-1900	PF 20% release	10.77	1537.6	1538.38	78	1.99	13.86
Subansiri	-2000	PF 20% release	10.77	1532.93	1533.82	89	1.53	15.8
Subansiri	0	PF 30% release	16.15	1596.84	1598.23	139	2.16	10.78
Subansiri	-100	PF 30% release	16.15	1595.78	1597.02	124	1.96	13.25
Subansiri	-200	PF 30% release	16.15	1594.72	1595.68	96	1.89	17.8
Subansiri	-300	PF 30% release	16.15	1593.28	1594.17	89	1.78	20.26
Subansiri	-400	PF 30% release	16.15	1591.84	1592.64	80	1.71	23.59
Subansiri	-500	PF 30% release	16.15	1590.6	1591.47	87	1.4	26.75
Subansiri	-600	PF 30% release	16.15	1589.36	1589.95	59	1.77	29.97
Subansiri	-700	PF 30% release	16.15	1583.72	1584.93	121	2.43	11.02
Subansiri	-800	PF 30% release	16.15	1578.08	1578.66	58	1.76	30.12
Subansiri	-900	PF 30% release	16.15	1572.3	1573.16	86	2.06	18.15
Subansiri	-1000	PF 30% release	16.15	1566.51	1567.41	90	2.12	16.96
Subansiri	-1100	PF 30% release	16.15	1561.7	1562.79	109	2.35	12.57
Subansiri	-1200	PF 30% release	16.15	1556.88	1558.13	125	2.48	10.37
Subansiri	-1300	PF 30% release	16.15	1551.78	1552.95	117	2.42	11.31
Subansiri	-1400	PF 30% release	16.15	1546.67	1547.68	101	1.73	18.45
Subansiri	-1500	PF 30% release	16.15	1545.26	1546.01	75	1.95	22.04
Subansiri	-1600	PF 30% release	16.15	1543.85	1544.86	101	0.58	33.86



River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-1700	PF 30% release	16.15	1543.06	1544.52	146	1.83	12.07
Subansiri	-1800	PF 30% release	16.15	1542.26	1543.18	92	2.13	16.38
Subansiri	-1900	PF 30% release	16.15	1537.6	1538.52	92	2.14	16.38
Subansiri	-2000	PF 30% release	16.15	1532.93	1533.97	104	1.68	18.48
Subansiri	0	PF 40% release	21.53	1596.84	1598.39	155	2.3	12.04
Subansiri	-100	PF 40% release	21.53	1595.78	1597.14	136	2.17	14.56
Subansiri	-200	PF 40% release	21.53	1594.72	1595.8	108	2	20
Subansiri	-300	PF 40% release	21.53	1593.28	1594.26	98	1.97	22.26
Subansiri	-400	PF 40% release	21.53	1591.84	1592.75	91	1.79	26.64
Subansiri	-500	PF 40% release	21.53	1590.6	1591.55	95	1.54	29.38
Subansiri	-600	PF 40% release	21.53	1589.36	1590.02	66	1.91	30.54
Subansiri	-700	PF 40% release	21.53	1583.72	1585.07	135	2.58	12.36
Subansiri	-800	PF 40% release	21.53	1578.08	1578.73	65	1.88	30.68
Subansiri	-900	PF 40% release	21.53	1572.3	1573.26	96	2.2	20.27
Subansiri	-1000	PF 40% release	21.53	1566.51	1567.52	101	2.25	19.04
Subansiri	-1100	PF 40% release	21.53	1561.7	1562.93	123	2.48	14.11
Subansiri	-1200	PF 40% release	21.53	1556.88	1558.28	140	2.65	11.6
Subansiri	-1300	PF 40% release	21.53	1551.78	1553.1	132	2.57	12.68
Subansiri	-1400	PF 40% release	21.53	1546.67	1547.78	111	1.91	20.27
Subansiri	-1500	PF 40% release	21.53	1545.26	1546.11	85	2.04	24.86
Subansiri	-1600	PF 40% release	21.53	1543.85	1545.04	119	0.64	35.02
Subansiri	-1700	PF 40% release	21.53	1543.06	1544.66	160	2.02	13.25
Subansiri	-1800	PF 40% release	21.53	1542.26	1543.3	104	2.26	18.38
Subansiri	-1900	PF 40% release	21.53	1537.6	1538.63	103	2.26	18.39
Subansiri	-2000	PF 40% release	21.53	1532.93	1534.1	117	1.79	20.67
Subansiri	0	PF 50% release	26.91	1596.84	1598.53	169	2.44	13.09
Subansiri	-100	PF 50% release	26.91	1595.78	1597.25	147	2.32	15.72
Subansiri	-200	PF 50% release	26.91	1594.72	1595.89	117	2.11	21.78
Subansiri	-300	PF 50% release	26.91	1593.28	1594.34	106	2.1	24.09
Subansiri	-400	PF 50% release	26.91	1591.84	1592.83	99	1.88	29.05
Subansiri	-500	PF 50% release	26.91	1590.6	1591.62	102	1.68	30.39
Subansiri	-600	PF 50% release	26.91	1589.36	1590.08	72	2.05	31.02
Subansiri	-700	PF 50% release	26.91	1583.72	1585.2	148	2.7	13.51
Subansiri	-800	PF 50% release	26.91	1578.08	1578.78	70	2.06	31.07
Subansiri	-900	PF 50% release	26.91	1572.3	1573.35	105	2.3	22.16
Subansiri	-1000	PF 50% release	26.91	1566.51	1567.62	111	2.33	20.9
Subansiri	-1100	PF 50% release	26.91	1561.7	1563.04	134	2.58	15.49
Subansiri	-1200	PF 50% release	26.91	1556.88	1558.42	154	2.75	12.72
Subansiri	-1300	PF 50% release	26.91	1551.78	1553.22	144	2.67	13.92
Subansiri	-1400	PF 50% release	26.91	1546.67	1547.87	120	2.04	21.96
Subansiri	-1500	PF 50% release	26.91	1545.26	1546.18	92	2.16	27.03
Subansiri	-1600	PF 50% release	26.91	1543.85	1545.2	135	0.68	36.04
Subansiri	-1700	PF 50% release	26.91	1543.06	1544.79	173	2.18	14.27
Subansiri	-1800	PF 50% release	26.91	1542.26	1543.39	113	2.38	20.01
Subansiri	-1900	PF 50% release	26.91	1537.6	1538.73	113	2.36	20.09
Subansiri	-2000	PF 50% release	26.91	1532.93	1534.2	127	1.87	22.58
Subansiri	0	PF 100% release	53.83	1596.84	1599.03	219	2.89	17.01
Subansiri	-100	PF 100% release	53.83	1595.78	1597.64	186	2.93	19.81
Subansiri	-200	PF 100% release	53.83	1594.72	1596.25	153	2.47	28.49
Subansiri	-300	PF 100% release	53.83	1593.28	1594.64	136	2.59	30.72

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-400	PF 100% release	53.83	1591.84	1593.15	131	2.15	38.4
Subansiri	-500	PF 100% release	53.83	1590.6	1591.88	128	2.2	33.64
Subansiri	-600	PF 100% release	53.83	1589.36	1590.34	98	2.52	33.11
Subansiri	-700	PF 100% release	53.83	1583.72	1585.67	195	3.1	17.82
Subansiri	-800	PF 100% release	53.83	1578.08	1579.04	96	2.54	32.98
Subansiri	-900	PF 100% release	53.83	1572.3	1573.69	139	2.62	29.37
Subansiri	-1000	PF 100% release	53.83	1566.51	1567.96	145	2.7	27.48
Subansiri	-1100	PF 100% release	53.83	1561.7	1563.47	177	2.98	20.38
Subansiri	-1200	PF 100% release	53.83	1556.88	1558.91	203	3.16	16.78
Subansiri	-1300	PF 100% release	53.83	1551.78	1553.69	191	3.07	18.36
Subansiri	-1400	PF 100% release	53.83	1546.67	1548.18	151	2.59	27.55
Subansiri	-1500	PF 100% release	53.83	1545.26	1546.46	120	2.58	31.17
Subansiri	-1600	PF 100% release	53.83	1543.85	1545.79	194	0.87	39.92
Subansiri	-1700	PF 100% release	53.83	1543.06	1545.2	214	2.84	17.68
Subansiri	-1800	PF 100% release	53.83	1542.26	1543.75	149	2.72	26.49
Subansiri	-1900	PF 100% release	53.83	1537.6	1539.09	149	2.72	26.5
Subansiri	-2000	PF 100% release	53.83	1532.93	1534.6	167	2.17	29.68

Oju-II HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	47.64	1596.84	1598.94	210	2.79	16.28
Subansiri	-100	PF 10% release	47.64	1595.78	1597.56	178	2.83	18.97
Subansiri	-200	PF 10% release	47.64	1594.72	1596.19	147	2.38	27.29
Subansiri	-300	PF 10% release	47.64	1593.28	1594.57	129	2.52	29.28
Subansiri	-400	PF 10% release	47.64	1591.84	1593.08	124	2.1	36.5
Subansiri	-500	PF 10% release	47.64	1590.6	1591.83	123	2.1	32.98
Subansiri	-600	PF 10% release	47.64	1589.36	1590.28	92	2.43	32.68
Subansiri	-700	PF 10% release	47.64	1583.72	1585.57	185	3.04	16.93
Subansiri	-800	PF 10% release	47.64	1578.08	1578.99	91	2.44	32.59
Subansiri	-900	PF 10% release	47.64	1572.3	1573.62	132	2.57	27.89
Subansiri	-1000	PF 10% release	47.64	1566.51	1567.9	139	2.61	26.25
Subansiri	-1100	PF 10% release	47.64	1561.7	1563.39	169	2.89	19.46
Subansiri	-1200	PF 10% release	47.64	1556.88	1558.81	193	3.11	15.93
Subansiri	-1300	PF 10% release	47.64	1551.78	1553.59	181	3.01	17.42
Subansiri	-1400	PF 10% release	47.64	1546.67	1548.12	145	2.5	26.4
Subansiri	-1500	PF 10% release	47.64	1545.26	1546.41	115	2.48	30.81
Subansiri	-1600	PF 10% release	47.64	1543.85	1545.67	182	0.83	39.14
Subansiri	-1700	PF 10% release	47.64	1543.06	1545.12	206	2.7	17.04
Subansiri	-1800	PF 10% release	47.64	1542.26	1543.68	142	2.67	25.17
Subansiri	-1900	PF 10% release	47.64	1537.6	1539.02	142	2.67	25.17
Subansiri	-2000	PF 10% release	47.64	1532.93	1534.53	160	2.11	28.27
Subansiri	0	PF 15% release	71.46	1596.84	1599.27	243	3.13	18.82
Subansiri	-100	PF 15% release	71.46	1595.78	1597.84	206	3.16	21.97
Subansiri	-200	PF 15% release	71.46	1594.72	1596.41	169	2.7	31.34
Subansiri	-300	PF 15% release	71.46	1593.28	1594.8	152	2.73	34.44
Subansiri	-400	PF 15% release	71.46	1591.84	1593.3	146	2.27	43.07
Subansiri	-500	PF 15% release	71.46	1590.6	1592.03	143	2.43	35.39
Subansiri	-600	PF 15% release	71.46	1589.36	1590.47	111	2.75	34.22
Subansiri	-700	PF 15% release	71.46	1583.72	1585.9	218	3.3	19.89

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-800	PF 15% release	71.46	1578.08	1579.18	110	2.74	34.07
Subansiri	-900	PF 15% release	71.46	1572.3	1573.86	156	2.78	32.89
Subansiri	-1000	PF 15% release	71.46	1566.51	1568.14	163	2.84	30.87
Subansiri	-1100	PF 15% release	71.46	1561.7	1563.68	198	3.15	22.81
Subansiri	-1200	PF 15% release	71.46	1556.88	1559.15	227	3.37	18.73
Subansiri	-1300	PF 15% release	71.46	1551.78	1553.92	214	3.24	20.57
Subansiri	-1400	PF 15% release	71.46	1546.67	1548.33	166	2.86	30.23
Subansiri	-1500	PF 15% release	71.46	1545.26	1546.61	135	2.79	32.2
Subansiri	-1600	PF 15% release	71.46	1543.85	1546.09	224	0.96	41.89
Subansiri	-1700	PF 15% release	71.46	1543.06	1545.4	234	3.15	19.33
Subansiri	-1800	PF 15% release	71.46	1542.26	1543.93	167	2.89	29.59
Subansiri	-1900	PF 15% release	71.46	1537.6	1539.27	167	2.88	29.66
Subansiri	-2000	PF 15% release	71.46	1532.93	1534.81	188	2.29	33.24
Subansiri	0	PF 20% release	95.27	1596.84	1599.51	267	3.44	20.72
Subansiri	-100	PF 20% release	95.27	1595.78	1598.08	230	3.37	24.58
Subansiri	-200	PF 20% release	95.27	1594.72	1596.59	187	2.95	34.67
Subansiri	-300	PF 20% release	95.27	1593.28	1594.98	170	2.91	38.51
Subansiri	-400	PF 20% release	95.27	1591.84	1593.5	166	2.36	48.73
Subansiri	-500	PF 20% release	95.27	1590.6	1592.19	159	2.71	37.38
Subansiri	-600	PF 20% release	95.27	1589.36	1590.64	128	2.98	35.6
Subansiri	-700	PF 20% release	95.27	1583.72	1586.17	245	3.47	22.41
Subansiri	-800	PF 20% release	95.27	1578.08	1579.35	127	2.98	35.35
Subansiri	-900	PF 20% release	95.27	1572.3	1574.04	174	2.98	35.29
Subansiri	-1000	PF 20% release	95.27	1566.51	1568.34	183	3	34.68
Subansiri	-1100	PF 20% release	95.27	1561.7	1563.93	223	3.32	25.66
Subansiri	-1200	PF 20% release	95.27	1556.88	1559.43	255	3.54	21.1
Subansiri	-1300	PF 20% release	95.27	1551.78	1554.18	240	3.44	23.08
Subansiri	-1400	PF 20% release	95.27	1546.67	1548.52	185	3.06	33.35
Subansiri	-1500	PF 20% release	95.27	1545.26	1546.79	153	3.04	33.42
Subansiri	-1600	PF 20% release	95.27	1543.85	1546.45	260	1.06	44.19
Subansiri	-1700	PF 20% release	95.27	1543.06	1545.61	255	3.54	21.06
Subansiri	-1800	PF 20% release	95.27	1542.26	1544.14	188	3.05	33.29
Subansiri	-1900	PF 20% release	95.27	1537.6	1539.47	187	3.05	33.28
Subansiri	-2000	PF 20% release	95.27	1532.93	1535.03	210	2.44	36.19
Subansiri	0	PF 30% release	142.91	1596.84	1599.91	307	3.92	23.8
Subansiri	-100	PF 30% release	142.91	1595.78	1598.49	271	3.66	28.87
Subansiri	-200	PF 30% release	142.91	1594.72	1596.89	217	3.27	40.32
Subansiri	-300	PF 30% release	142.91	1593.28	1595.28	200	3.16	45.26
Subansiri	-400	PF 30% release	142.91	1591.84	1593.79	195	2.58	53.14
Subansiri	-500	PF 30% release	142.91	1590.6	1592.45	185	3.15	39.66
Subansiri	-600	PF 30% release	142.91	1589.36	1590.94	158	3.35	37.98
Subansiri	-700	PF 30% release	142.91	1583.72	1586.6	288	3.77	26.32
Subansiri	-800	PF 30% release	142.91	1578.08	1579.64	156	3.36	37.52
Subansiri	-900	PF 30% release	142.91	1572.3	1574.33	203	3.38	37.19
Subansiri	-1000	PF 30% release	142.91	1566.51	1568.66	215	3.26	40.73
Subansiri	-1100	PF 30% release	142.91	1561.7	1564.33	263	3.6	30.2
Subansiri	-1200	PF 30% release	142.91	1556.88	1559.88	300	3.85	24.77
Subansiri	-1300	PF 30% release	142.91	1551.78	1554.6	282	3.74	27.1
Subansiri	-1400	PF 30% release	142.91	1546.67	1548.83	216	3.4	35.9
Subansiri	-1500	PF 30% release	142.91	1545.26	1547.1	184	3.41	35.54
Subansiri	-1600	PF 30% release	142.91	1543.85	1547.01	316	1.24	47.85
Subansiri	-1700	PF 30% release	142.91	1543.06	1546.06	300	3.85	24.73

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-1800	PF 30% release	142.91	1542.26	1544.46	220	3.36	37.14
Subansiri	-1900	PF 30% release	142.91	1537.6	1539.79	219	3.36	37.15
Subansiri	-2000	PF 30% release	142.91	1532.93	1535.39	246	2.71	39.76
Subansiri	0	PF 40% release	190.55	1596.84	1600.29	345	4.14	26.73
Subansiri	-100	PF 40% release	190.55	1595.78	1598.82	304	3.88	32.39
Subansiri	-200	PF 40% release	190.55	1594.72	1597.16	244	3.46	45.24
Subansiri	-300	PF 40% release	190.55	1593.28	1595.52	224	3.34	50.37
Subansiri	-400	PF 40% release	190.55	1591.84	1594.06	222	2.72	56.96
Subansiri	-500	PF 40% release	190.55	1590.6	1592.66	206	3.52	41.18
Subansiri	-600	PF 40% release	190.55	1589.36	1591.19	183	3.62	40.05
Subansiri	-700	PF 40% release	190.55	1583.72	1586.95	323	4	29.53
Subansiri	-800	PF 40% release	190.55	1578.08	1579.9	182	3.63	39.45
Subansiri	-900	PF 40% release	190.55	1572.3	1574.59	229	3.64	38.93
Subansiri	-1000	PF 40% release	190.55	1566.51	1568.92	241	3.47	45.56
Subansiri	-1100	PF 40% release	190.55	1561.7	1564.65	295	3.81	33.87
Subansiri	-1200	PF 40% release	190.55	1556.88	1560.24	336	4.08	27.8
Subansiri	-1300	PF 40% release	190.55	1551.78	1554.94	316	3.96	30.4
Subansiri	-1400	PF 40% release	190.55	1546.67	1549.09	242	3.69	37.99
Subansiri	-1500	PF 40% release	190.55	1545.26	1547.36	210	3.7	37.34
Subansiri	-1600	PF 40% release	190.55	1543.85	1547.47	362	1.38	50.83
Subansiri	-1700	PF 40% release	190.55	1543.06	1546.42	336	4.08	27.74
Subansiri	-1800	PF 40% release	190.55	1542.26	1544.72	246	3.62	39.71
Subansiri	-1900	PF 40% release	190.55	1537.6	1540.05	245	3.62	39.71
Subansiri	-2000	PF 40% release	190.55	1532.93	1535.69	276	2.92	42.7
Subansiri	0	PF 50% release	238.19	1596.84	1600.61	377	4.32	29.25
Subansiri	-100	PF 50% release	238.19	1595.78	1599.1	332	4.06	35.38
Subansiri	-200	PF 50% release	238.19	1594.72	1597.38	266	3.62	49.42
Subansiri	-300	PF 50% release	238.19	1593.28	1595.72	244	3.53	54.2
Subansiri	-400	PF 50% release	238.19	1591.84	1594.29	245	2.85	60.03
Subansiri	-500	PF 50% release	238.19	1590.6	1592.87	227	3.8	42.63
Subansiri	-600	PF 50% release	238.19	1589.36	1591.42	206	3.84	41.9
Subansiri	-700	PF 50% release	238.19	1583.72	1587.25	353	4.18	32.28
Subansiri	-800	PF 50% release	238.19	1578.08	1580.13	205	3.86	41.17
Subansiri	-900	PF 50% release	238.19	1572.3	1574.82	252	3.88	40.45
Subansiri	-1000	PF 50% release	238.19	1566.51	1569.16	265	3.6	50
Subansiri	-1100	PF 50% release	238.19	1561.7	1564.92	322	3.99	37
Subansiri	-1200	PF 50% release	238.19	1556.88	1560.55	367	4.27	30.38
Subansiri	-1300	PF 50% release	238.19	1551.78	1555.24	346	4.14	33.26
Subansiri	-1400	PF 50% release	238.19	1546.67	1549.34	267	3.89	39.96
Subansiri	-1500	PF 50% release	238.19	1545.26	1547.64	238	3.82	39.31
Subansiri	-1600	PF 50% release	238.19	1543.85	1547.86	401	1.5	53.37
Subansiri	-1700	PF 50% release	238.19	1543.06	1546.73	367	4.27	30.33
Subansiri	-1800	PF 50% release	238.19	1542.26	1544.96	270	3.82	42.03
Subansiri	-1900	PF 50% release	238.19	1537.6	1540.29	269	3.82	42.03
Subansiri	-2000	PF 50% release	238.19	1532.93	1535.96	303	3.1	45.33
Subansiri	0	PF 100% release	476.37	1596.84	1601.81	497	4.96	38.6
Subansiri	-100	PF 100% release	476.37	1595.78	1600.12	434	4.76	44.27
Subansiri	-200	PF 100% release	476.37	1594.72	1598.21	349	4.25	61.75
Subansiri	-300	PF 100% release	476.37	1593.28	1596.5	322	4.19	64.03
Subansiri	-400	PF 100% release	476.37	1591.84	1595.24	340	3.26	71.7
Subansiri	-500	PF 100% release	476.37	1590.6	1593.78	318	4.57	49.05

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-600	PF 100% release	476.37	1589.36	1592.35	299	4.57	49.41
Subansiri	-700	PF 100% release	476.37	1583.72	1588.38	466	4.79	42.63
Subansiri	-800	PF 100% release	476.37	1578.08	1581.06	298	4.61	48.16
Subansiri	-900	PF 100% release	476.37	1572.3	1575.76	346	4.65	46.66
Subansiri	-1000	PF 100% release	476.37	1566.51	1569.96	345	4.32	58.75
Subansiri	-1100	PF 100% release	476.37	1561.7	1565.94	424	4.61	48.7
Subansiri	-1200	PF 100% release	476.37	1556.88	1561.73	485	4.91	40.07
Subansiri	-1300	PF 100% release	476.37	1551.78	1556.34	456	4.75	43.75
Subansiri	-1400	PF 100% release	476.37	1546.67	1550.29	362	4.63	47.63
Subansiri	-1500	PF 100% release	476.37	1545.26	1549.19	393	3.62	50.04
Subansiri	-1600	PF 100% release	476.37	1543.85	1549.31	546	1.96	62.13
Subansiri	-1700	PF 100% release	476.37	1543.06	1547.88	482	4.98	38.18
Subansiri	-1800	PF 100% release	476.37	1542.26	1545.88	362	4.52	51.12
Subansiri	-1900	PF 100% release	476.37	1537.6	1541.22	362	4.52	51.13
Subansiri	-2000	PF 100% release	476.37	1532.93	1537.01	408	3.67	55.58

**Oju-II HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	19.14	1596.84	1598.33	149	2.24	11.52
Subansiri	-100	PF 10% release	19.14	1595.78	1597.09	131	2.09	13.99
Subansiri	-200	PF 10% release	19.14	1594.72	1595.75	103	1.95	19.11
Subansiri	-300	PF 10% release	19.14	1593.28	1594.22	94	1.9	21.36
Subansiri	-400	PF 10% release	19.14	1591.84	1592.7	86	1.74	25.43
Subansiri	-500	PF 10% release	19.14	1590.6	1591.51	91	1.49	28.18
Subansiri	-600	PF 10% release	19.14	1589.36	1589.99	63	1.84	30.31
Subansiri	-700	PF 10% release	19.14	1583.72	1585.01	129	2.52	11.79
Subansiri	-800	PF 10% release	19.14	1578.08	1578.7	62	1.85	30.41
Subansiri	-900	PF 10% release	19.14	1572.3	1573.22	92	2.15	19.35
Subansiri	-1000	PF 10% release	19.14	1566.51	1567.47	96	2.18	18.23
Subansiri	-1100	PF 10% release	19.14	1561.7	1562.87	117	2.41	13.51
Subansiri	-1200	PF 10% release	19.14	1556.88	1558.22	134	2.57	11.1
Subansiri	-1300	PF 10% release	19.14	1551.78	1553.04	126	2.49	12.15
Subansiri	-1400	PF 10% release	19.14	1546.67	1547.74	107	1.83	19.55
Subansiri	-1500	PF 10% release	19.14	1545.26	1546.07	81	2.01	23.6
Subansiri	-1600	PF 10% release	19.14	1543.85	1544.96	111	0.61	34.53
Subansiri	-1700	PF 10% release	19.14	1543.06	1544.61	155	1.93	12.77
Subansiri	-1800	PF 10% release	19.14	1542.26	1543.25	99	2.22	17.48
Subansiri	-1900	PF 10% release	19.14	1537.6	1538.58	98	2.21	17.53
Subansiri	-2000	PF 10% release	19.14	1532.93	1534.04	111	1.74	19.74
Subansiri	0	PF 15% release	28.72	1596.84	1598.57	173	2.48	13.41
Subansiri	-100	PF 15% release	28.72	1595.78	1597.29	151	2.37	16.08
Subansiri	-200	PF 15% release	28.72	1594.72	1595.92	120	2.14	22.32
Subansiri	-300	PF 15% release	28.72	1593.28	1594.37	109	2.14	24.66
Subansiri	-400	PF 15% release	28.72	1591.84	1592.85	101	1.91	29.77
Subansiri	-500	PF 15% release	28.72	1590.6	1591.64	104	1.72	30.67
Subansiri	-600	PF 15% release	28.72	1589.36	1590.1	74	2.1	31.16
Subansiri	-700	PF 15% release	28.72	1583.72	1585.24	152	2.73	13.86
Subansiri	-800	PF 15% release	28.72	1578.08	1578.8	72	2.1	31.22
Subansiri	-900	PF 15% release	28.72	1572.3	1573.38	108	2.33	22.76

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-1000	PF 15% release	28.72	1566.51	1567.64	113	2.36	21.44
Subansiri	-1100	PF 15% release	28.72	1561.7	1563.08	138	2.61	15.9
Subansiri	-1200	PF 15% release	28.72	1556.88	1558.46	158	2.79	13.05
Subansiri	-1300	PF 15% release	28.72	1551.78	1553.26	148	2.7	14.28
Subansiri	-1400	PF 15% release	28.72	1546.67	1547.9	123	2.1	22.37
Subansiri	-1500	PF 15% release	28.72	1545.26	1546.21	95	2.17	27.85
Subansiri	-1600	PF 15% release	28.72	1543.85	1545.24	139	0.7	36.35
Subansiri	-1700	PF 15% release	28.72	1543.06	1544.82	176	2.23	14.56
Subansiri	-1800	PF 15% release	28.72	1542.26	1543.42	116	2.41	20.55
Subansiri	-1900	PF 15% release	28.72	1537.6	1538.75	115	2.41	20.55
Subansiri	-2000	PF 15% release	28.72	1532.93	1534.24	131	1.9	23.13
Subansiri	0	PF 20% release	38.29	1596.84	1598.77	193	2.65	14.97
Subansiri	-100	PF 20% release	38.29	1595.78	1597.44	166	2.62	17.67
Subansiri	-200	PF 20% release	38.29	1594.72	1596.07	135	2.28	25
Subansiri	-300	PF 20% release	38.29	1593.28	1594.48	120	2.34	27.23
Subansiri	-400	PF 20% release	38.29	1591.84	1592.97	113	2.02	33.38
Subansiri	-500	PF 20% release	38.29	1590.6	1591.75	115	1.92	31.93
Subansiri	-600	PF 20% release	38.29	1589.36	1590.19	83	2.29	31.95
Subansiri	-700	PF 20% release	38.29	1583.72	1585.42	170	2.9	15.53
Subansiri	-800	PF 20% release	38.29	1578.08	1578.9	82	2.3	31.94
Subansiri	-900	PF 20% release	38.29	1572.3	1573.51	121	2.46	25.55
Subansiri	-1000	PF 20% release	38.29	1566.51	1567.78	127	2.5	24.06
Subansiri	-1100	PF 20% release	38.29	1561.7	1563.25	155	2.76	17.84
Subansiri	-1200	PF 20% release	38.29	1556.88	1558.65	177	2.96	14.63
Subansiri	-1300	PF 20% release	38.29	1551.78	1553.44	166	2.88	15.98
Subansiri	-1400	PF 20% release	38.29	1546.67	1548.02	135	2.3	24.68
Subansiri	-1500	PF 20% release	38.29	1545.26	1546.32	106	2.34	30.16
Subansiri	-1600	PF 20% release	38.29	1543.85	1545.47	162	0.77	37.85
Subansiri	-1700	PF 20% release	38.29	1543.06	1544.98	192	2.5	15.88
Subansiri	-1800	PF 20% release	38.29	1542.26	1543.57	131	2.53	23.14
Subansiri	-1900	PF 20% release	38.29	1537.6	1538.9	130	2.55	23.06
Subansiri	-2000	PF 20% release	38.29	1532.93	1534.39	146	2.02	25.93
Subansiri	0	PF 30% release	57.43	1596.84	1599.08	224	2.94	17.41
Subansiri	-100	PF 30% release	57.43	1595.78	1597.68	190	2.98	20.3
Subansiri	-200	PF 30% release	57.43	1594.72	1596.29	157	2.52	29.1
Subansiri	-300	PF 30% release	57.43	1593.28	1594.67	139	2.61	31.56
Subansiri	-400	PF 30% release	57.43	1591.84	1593.18	134	2.18	39.35
Subansiri	-500	PF 30% release	57.43	1590.6	1591.92	132	2.24	34.05
Subansiri	-600	PF 30% release	57.43	1589.36	1590.36	100	2.58	33.32
Subansiri	-700	PF 30% release	57.43	1583.72	1585.72	200	3.14	18.3
Subansiri	-800	PF 30% release	57.43	1578.08	1579.07	99	2.58	33.22
Subansiri	-900	PF 30% release	57.43	1572.3	1573.73	143	2.66	30.14
Subansiri	-1000	PF 30% release	57.43	1566.51	1568.01	150	2.71	28.29
Subansiri	-1100	PF 30% release	57.43	1561.7	1563.52	182	3	20.97
Subansiri	-1200	PF 30% release	57.43	1556.88	1558.96	208	3.2	17.23
Subansiri	-1300	PF 30% release	57.43	1551.78	1553.73	195	3.13	18.79
Subansiri	-1400	PF 30% release	57.43	1546.67	1548.21	154	2.64	28.18
Subansiri	-1500	PF 30% release	57.43	1545.26	1546.49	123	2.64	31.37
Subansiri	-1600	PF 30% release	57.43	1543.85	1545.86	201	0.89	40.34
Subansiri	-1700	PF 30% release	57.43	1543.06	1545.24	218	2.92	18.02
Subansiri	-1800	PF 30% release	57.43	1542.26	1543.8	154	2.75	27.23
Subansiri	-1900	PF 30% release	57.43	1537.6	1539.13	153	2.75	27.22

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-2000	PF 30% release	57.43	1532.93	1534.65	172	2.2	30.46
Subansiri	0	PF 40% release	76.58	1596.84	1599.33	249	3.2	19.28
Subansiri	-100	PF 40% release	76.58	1595.78	1597.89	211	3.22	22.52
Subansiri	-200	PF 40% release	76.58	1594.72	1596.45	173	2.76	32.09
Subansiri	-300	PF 40% release	76.58	1593.28	1594.84	156	2.77	35.39
Subansiri	-400	PF 40% release	76.58	1591.84	1593.35	151	2.28	44.41
Subansiri	-500	PF 40% release	76.58	1590.6	1592.06	146	2.5	35.84
Subansiri	-600	PF 40% release	76.58	1589.36	1590.51	115	2.8	34.54
Subansiri	-700	PF 40% release	76.58	1583.72	1585.97	225	3.32	20.53
Subansiri	-800	PF 40% release	76.58	1578.08	1579.22	114	2.81	34.32
Subansiri	-900	PF 40% release	76.58	1572.3	1573.9	160	2.82	33.75
Subansiri	-1000	PF 40% release	76.58	1566.51	1568.18	167	2.9	31.62
Subansiri	-1100	PF 40% release	76.58	1561.7	1563.74	204	3.18	23.51
Subansiri	-1200	PF 40% release	76.58	1556.88	1559.22	234	3.39	19.34
Subansiri	-1300	PF 40% release	76.58	1551.78	1553.98	220	3.29	21.15
Subansiri	-1400	PF 40% release	76.58	1546.67	1548.37	170	2.89	31.1
Subansiri	-1500	PF 40% release	76.58	1545.26	1546.65	139	2.85	32.47
Subansiri	-1600	PF 40% release	76.58	1543.85	1546.17	232	0.98	42.42
Subansiri	-1700	PF 40% release	76.58	1543.06	1545.44	238	3.25	19.7
Subansiri	-1800	PF 40% release	76.58	1542.26	1543.98	172	2.91	30.53
Subansiri	-1900	PF 40% release	76.58	1537.6	1539.32	172	2.91	30.53
Subansiri	-2000	PF 40% release	76.58	1532.93	1534.86	193	2.32	34.19
Subansiri	0	PF 50% release	95.72	1596.84	1599.52	268	3.45	20.75
Subansiri	-100	PF 50% release	95.72	1595.78	1598.09	231	3.37	24.63
Subansiri	-200	PF 50% release	95.72	1594.72	1596.59	187	2.95	34.72
Subansiri	-300	PF 50% release	95.72	1593.28	1594.98	170	2.92	38.58
Subansiri	-400	PF 50% release	95.72	1591.84	1593.5	166	2.36	48.82
Subansiri	-500	PF 50% release	95.72	1590.6	1592.19	159	2.71	37.42
Subansiri	-600	PF 50% release	95.72	1589.36	1590.65	129	2.99	35.62
Subansiri	-700	PF 50% release	95.72	1583.72	1586.18	246	3.47	22.45
Subansiri	-800	PF 50% release	95.72	1578.08	1579.35	127	2.99	35.34
Subansiri	-900	PF 50% release	95.72	1572.3	1574.04	174	2.99	35.31
Subansiri	-1000	PF 50% release	95.72	1566.51	1568.35	184	3.01	34.7
Subansiri	-1100	PF 50% release	95.72	1561.7	1563.93	223	3.34	25.64
Subansiri	-1200	PF 50% release	95.72	1556.88	1559.44	256	3.54	21.14
Subansiri	-1300	PF 50% release	95.72	1551.78	1554.18	240	3.44	23.12
Subansiri	-1400	PF 50% release	95.72	1546.67	1548.52	185	3.06	33.38
Subansiri	-1500	PF 50% release	95.72	1545.26	1546.79	153	3.06	33.4
Subansiri	-1600	PF 50% release	95.72	1543.85	1546.45	260	1.06	44.23
Subansiri	-1700	PF 50% release	95.72	1543.06	1545.61	255	3.55	21.09
Subansiri	-1800	PF 50% release	95.72	1542.26	1544.14	188	3.05	33.35
Subansiri	-1900	PF 50% release	95.72	1537.6	1539.48	188	3.05	33.34
Subansiri	-2000	PF 50% release	95.72	1532.93	1535.03	210	2.45	36.22
Subansiri	0	PF 100% release	191.45	1596.84	1600.29	345	4.14	26.78
Subansiri	-100	PF 100% release	191.45	1595.78	1598.82	304	3.88	32.45
Subansiri	-200	PF 100% release	191.45	1594.72	1597.16	244	3.46	45.33
Subansiri	-300	PF 100% release	191.45	1593.28	1595.53	225	3.35	50.46
Subansiri	-400	PF 100% release	191.45	1591.84	1594.06	222	2.72	57.03
Subansiri	-500	PF 100% release	191.45	1590.6	1592.67	207	3.53	41.21
Subansiri	-600	PF 100% release	191.45	1589.36	1591.2	184	3.62	40.09
Subansiri	-700	PF 100% release	191.45	1583.72	1586.96	324	4	29.59

River	Ch d/s of Oju-II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-800	PF 100% release	191.45	1578.08	1579.91	183	3.64	39.49
Subansiri	-900	PF 100% release	191.45	1572.3	1574.59	229	3.66	38.92
Subansiri	-1000	PF 100% release	191.45	1566.51	1568.93	242	3.47	45.66
Subansiri	-1100	PF 100% release	191.45	1561.7	1564.65	295	3.82	33.94
Subansiri	-1200	PF 100% release	191.45	1556.88	1560.25	337	4.08	27.85
Subansiri	-1300	PF 100% release	191.45	1551.78	1554.95	317	3.96	30.46
Subansiri	-1400	PF 100% release	191.45	1546.67	1549.1	243	3.69	38.03
Subansiri	-1500	PF 100% release	191.45	1545.26	1547.36	210	3.71	37.37
Subansiri	-1600	PF 100% release	191.45	1543.85	1547.47	362	1.38	50.88
Subansiri	-1700	PF 100% release	191.45	1543.06	1546.43	337	4.08	27.8
Subansiri	-1800	PF 100% release	191.45	1542.26	1544.72	246	3.63	39.75
Subansiri	-1900	PF 100% release	191.45	1537.6	1540.06	246	3.63	39.75
Subansiri	-2000	PF 100% release	191.45	1532.93	1535.7	277	2.93	42.76

Niare HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	6.15	1207.58	1208.85	127	1.74	5.57
Subansiri	-100	PF 10% release	6.15	1206.84	1208.15	131	1.34	7.01
Subansiri	-200	PF 10% release	6.15	1206.09	1206.99	90	2.12	6.46
Subansiri	-300	PF 10% release	6.15	1203.58	1204.29	71	1.89	9.19
Subansiri	-400	PF 10% release	6.15	1201.06	1201.59	53	1.34	9.79
Subansiri	-500	PF 10% release	6.15	1199.26	1200.35	109	2.01	5.59
Subansiri	-600	PF 10% release	6.15	1197.45	1198.44	99	2.21	5.64
Subansiri	-700	PF 10% release	6.15	1195.32	1196.25	93	2.15	6.12
Subansiri	-800	PF 10% release	6.15	1193.19	1194.06	87	2.07	6.81
Subansiri	-900	PF 10% release	6.15	1191.05	1191.83	78	1.96	8.04
Subansiri	0 (dam site)	PF 15% release	9.22	1207.58	1209.06	148	1.91	6.51
Subansiri	-100	PF 15% release	9.22	1206.84	1208.35	151	1.51	8.06
Subansiri	-200	PF 15% release	9.22	1206.09	1207.14	105	2.3	7.6
Subansiri	-300	PF 15% release	9.22	1203.58	1204.4	82	2.09	9.94
Subansiri	-400	PF 15% release	9.22	1201.06	1201.74	68	1.5	10.16
Subansiri	-500	PF 15% release	9.22	1199.26	1200.52	126	2.26	6.46
Subansiri	-600	PF 15% release	9.22	1197.45	1198.61	116	2.41	6.61
Subansiri	-700	PF 15% release	9.22	1195.32	1196.42	110	2.33	7.2
Subansiri	-800	PF 15% release	9.22	1193.19	1194.21	102	2.24	8.01
Subansiri	-900	PF 15% release	9.22	1191.05	1191.97	92	2.13	9.45
Subansiri	0 (dam site)	PF 20% release	12.29	1207.58	1209.24	166	2.04	7.27
Subansiri	-100	PF 20% release	12.29	1206.84	1208.5	166	1.66	8.87
Subansiri	-200	PF 20% release	12.29	1206.09	1207.28	119	2.42	8.57
Subansiri	-300	PF 20% release	12.29	1203.58	1204.5	92	2.28	10.2
Subansiri	-400	PF 20% release	12.29	1201.06	1201.89	83	1.61	10.5
Subansiri	-500	PF 20% release	12.29	1199.26	1200.65	139	2.49	7.11
Subansiri	-600	PF 20% release	12.29	1197.45	1198.75	130	2.53	7.45
Subansiri	-700	PF 20% release	12.29	1195.32	1196.55	123	2.47	8.07
Subansiri	-800	PF 20% release	12.29	1193.19	1194.34	115	2.38	8.98
Subansiri	-900	PF 20% release	12.29	1191.05	1192.08	103	2.24	10.62
Subansiri	0 (dam site)	PF 30% release	18.44	1207.58	1209.51	193	2.26	8.47
Subansiri	-100	PF 30% release	18.44	1206.84	1208.75	191	1.89	10.2



River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-200	PF 30% release	18.44	1206.09	1207.49	140	2.62	10.08
Subansiri	-300	PF 30% release	18.44	1203.58	1204.67	109	2.57	10.66
Subansiri	-400	PF 30% release	18.44	1201.06	1202.13	107	1.8	11.08
Subansiri	-500	PF 30% release	18.44	1199.26	1200.86	160	2.81	8.19
Subansiri	-600	PF 30% release	18.44	1197.45	1198.98	153	2.75	8.76
Subansiri	-700	PF 30% release	18.44	1195.32	1196.76	144	2.7	9.46
Subansiri	-800	PF 30% release	18.44	1193.19	1194.54	135	2.58	10.57
Subansiri	-900	PF 30% release	18.44	1191.05	1192.26	121	2.44	12.46
Subansiri	0 (dam site)	PF 40% release	24.59	1207.58	1209.73	215	2.43	9.43
Subansiri	-100	PF 40% release	24.59	1206.84	1208.94	210	2.07	11.25
Subansiri	-200	PF 40% release	24.59	1206.09	1207.66	157	2.78	11.31
Subansiri	-300	PF 40% release	24.59	1203.58	1204.82	124	2.8	11.05
Subansiri	-400	PF 40% release	24.59	1201.06	1202.32	126	1.97	11.54
Subansiri	-500	PF 40% release	24.59	1199.26	1201.05	179	2.98	9.18
Subansiri	-600	PF 40% release	24.59	1197.45	1199.17	172	2.92	9.81
Subansiri	-700	PF 40% release	24.59	1195.32	1196.95	163	2.84	10.65
Subansiri	-800	PF 40% release	24.59	1193.19	1194.7	151	2.73	11.85
Subansiri	-900	PF 40% release	24.59	1191.05	1192.41	136	2.6	13.94
Subansiri	0 (dam site)	PF 50% release	30.73	1207.58	1209.92	234	2.57	10.24
Subansiri	-100	PF 50% release	30.73	1206.84	1209.11	227	2.23	12.13
Subansiri	-200	PF 50% release	30.73	1206.09	1207.8	171	2.9	12.36
Subansiri	-300	PF 50% release	30.73	1203.58	1204.96	138	2.98	11.41
Subansiri	-400	PF 50% release	30.73	1201.06	1202.49	143	2.13	11.94
Subansiri	-500	PF 50% release	30.73	1199.26	1201.22	196	3.11	10.06
Subansiri	-600	PF 50% release	30.73	1197.45	1199.33	188	3.04	10.74
Subansiri	-700	PF 50% release	30.73	1195.32	1197.1	178	2.96	11.65
Subansiri	-800	PF 50% release	30.73	1193.19	1194.84	165	2.88	12.91
Subansiri	-900	PF 50% release	30.73	1191.05	1192.54	149	2.7	15.3
Subansiri	0 (dam site)	PF 100% release	61.47	1207.58	1210.59	301	3.09	13.21
Subansiri	-100	PF 100% release	61.47	1206.84	1209.71	287	2.8	15.31
Subansiri	-200	PF 100% release	61.47	1206.09	1208.35	226	3.34	16.3
Subansiri	-300	PF 100% release	61.47	1203.58	1205.51	193	3.61	12.88
Subansiri	-400	PF 100% release	61.47	1201.06	1203.15	209	2.7	13.5
Subansiri	-500	PF 100% release	61.47	1199.26	1201.85	259	3.58	13.25
Subansiri	-600	PF 100% release	61.47	1197.45	1199.93	248	3.49	14.17
Subansiri	-700	PF 100% release	61.47	1195.32	1197.67	235	3.41	15.36
Subansiri	-800	PF 100% release	61.47	1193.19	1195.37	218	3.31	17.04
Subansiri	-900	PF 100% release	61.47	1191.05	1193.01	196	3.11	20.19

Niare HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width(m)
Subansiri	0 (dam site)	PF 10% release	54.4	1207.58	1210.46	288	2.99	12.63
Subansiri	-100	PF 10% release	54.4	1206.84	1209.6	276	2.68	14.72
Subansiri	-200	PF 10% release	54.4	1206.09	1208.24	215	3.27	15.48
Subansiri	-300	PF 10% release	54.4	1203.58	1205.4	182	3.49	12.58
Subansiri	-400	PF 10% release	54.4	1201.06	1203.02	196	2.59	13.19
Subansiri	-500	PF 10% release	54.4	1199.26	1201.72	246	3.49	12.63

River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width(m)
Subansiri	-600	PF 10% release	54.4	1197.45	1199.81	236	3.44	13.45
Subansiri	-700	PF 10% release	54.4	1195.32	1197.56	224	3.32	14.65
Subansiri	-800	PF 10% release	54.4	1193.19	1195.27	208	3.2	16.29
Subansiri	-900	PF 10% release	54.4	1191.05	1192.92	187	3.03	19.22
Subansiri	0 (dam site)	PF 15% release	81.6	1207.58	1210.91	333	3.35	14.63
Subansiri	-100	PF 15% release	81.6	1206.84	1209.99	315	3.07	16.84
Subansiri	-200	PF 15% release	81.6	1206.09	1208.61	252	3.56	18.2
Subansiri	-300	PF 15% release	81.6	1203.58	1205.81	223	3.88	13.67
Subansiri	-400	PF 15% release	81.6	1201.06	1203.47	241	3	14.26
Subansiri	-500	PF 15% release	81.6	1199.26	1202.16	290	3.78	14.86
Subansiri	-600	PF 15% release	81.6	1197.45	1200.23	278	3.7	15.86
Subansiri	-700	PF 15% release	81.6	1195.32	1197.95	263	3.6	17.22
Subansiri	-800	PF 15% release	81.6	1193.19	1195.64	245	3.47	19.16
Subansiri	-900	PF 15% release	81.6	1191.05	1193.25	220	3.29	22.6
Subansiri	0 (dam site)	PF 20% release	108.8	1207.58	1211.28	370	3.62	16.24
Subansiri	-100	PF 20% release	108.8	1206.84	1210.29	345	3.41	18.45
Subansiri	-200	PF 20% release	108.8	1206.09	1208.93	284	3.75	20.47
Subansiri	-300	PF 20% release	108.8	1203.58	1206.15	257	4.2	14.59
Subansiri	-400	PF 20% release	108.8	1201.06	1203.83	277	3.34	15.13
Subansiri	-500	PF 20% release	108.8	1199.26	1202.5	324	4.04	16.34
Subansiri	-600	PF 20% release	108.8	1197.45	1200.57	312	3.93	17.78
Subansiri	-700	PF 20% release	108.8	1195.32	1198.27	295	3.82	19.3
Subansiri	-800	PF 20% release	108.8	1193.19	1195.93	274	3.69	21.46
Subansiri	-900	PF 20% release	108.8	1191.05	1193.52	247	3.48	25.36
Subansiri	0 (dam site)	PF 30% release	163.2	1207.58	1211.87	429	4.05	18.8
Subansiri	-100	PF 30% release	163.2	1206.84	1210.76	392	3.97	20.94
Subansiri	-200	PF 30% release	163.2	1206.09	1209.43	334	4.06	24.08
Subansiri	-300	PF 30% release	163.2	1203.58	1206.77	319	4.62	16.21
Subansiri	-400	PF 30% release	163.2	1201.06	1204.4	334	3.92	16.49
Subansiri	-500	PF 30% release	163.2	1199.26	1203.06	380	4.46	18.21
Subansiri	-600	PF 30% release	163.2	1197.45	1201.11	366	4.26	20.91
Subansiri	-700	PF 30% release	163.2	1195.32	1198.79	347	4.14	22.7
Subansiri	-800	PF 30% release	163.2	1193.19	1196.42	323	4	25.25
Subansiri	-900	PF 30% release	163.2	1191.05	1193.95	290	3.79	29.79
Subansiri	0 (dam site)	PF 40% release	217.6	1207.58	1212.35	477	4.37	20.9
Subansiri	-100	PF 40% release	217.6	1206.84	1211.13	429	4.42	22.92
Subansiri	-200	PF 40% release	217.6	1206.09	1209.83	374	4.31	27
Subansiri	-300	PF 40% release	217.6	1203.58	1207.27	369	4.96	17.55
Subansiri	-400	PF 40% release	217.6	1201.06	1204.85	379	4.42	17.56
Subansiri	-500	PF 40% release	217.6	1199.26	1203.54	428	4.76	19.81
Subansiri	-600	PF 40% release	217.6	1197.45	1201.56	411	4.52	23.45
Subansiri	-700	PF 40% release	217.6	1195.32	1199.21	389	4.39	25.46
Subansiri	-800	PF 40% release	217.6	1193.19	1196.81	362	4.24	28.31
Subansiri	-900	PF 40% release	217.6	1191.05	1194.3	325	4.01	33.42
Subansiri	0 (dam site)	PF 50% release	272	1207.58	1212.77	519	4.61	22.76
Subansiri	-100	PF 50% release	272	1206.84	1211.45	461	4.79	24.61
Subansiri	-200	PF 50% release	272	1206.09	1210.19	410	4.49	29.56
Subansiri	-300	PF 50% release	272	1203.58	1207.72	414	5.23	18.75
Subansiri	-400	PF 50% release	272	1201.06	1205.22	416	4.87	18.44

River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width(m)
Subansiri	-500	PF 50% release	272	1199.26	1203.95	469	5.02	21.2
Subansiri	-600	PF 50% release	272	1197.45	1201.94	449	4.72	25.64
Subansiri	-700	PF 50% release	272	1195.32	1199.58	426	4.58	27.87
Subansiri	-800	PF 50% release	272	1193.19	1197.15	396	4.43	30.96
Subansiri	-900	PF 50% release	272	1191.05	1194.6	355	4.19	36.54
Subansiri	0 (dam site)	PF 100% release	544.01	1207.58	1214.18	660	5.7	28.93
Subansiri	-100	PF 100% release	544.01	1206.84	1212.92	608	5.5	32.47
Subansiri	-200	PF 100% release	544.01	1206.09	1211.42	533	5.38	34.83
Subansiri	-300	PF 100% release	544.01	1203.58	1209.46	588	6.14	23.37
Subansiri	-400	PF 100% release	544.01	1201.06	1206.76	570	6.24	22.11
Subansiri	-500	PF 100% release	544.01	1199.26	1205.55	629	5.89	26.55
Subansiri	-600	PF 100% release	544.01	1197.45	1203.39	594	5.41	33.88
Subansiri	-700	PF 100% release	544.01	1195.32	1200.92	560	5.29	36.68
Subansiri	-800	PF 100% release	544.01	1193.19	1198.42	523	5.08	40.88
Subansiri	-900	PF 100% release	544.01	1191.05	1195.74	469	4.82	48.22

**Niare HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	21.86	1207.58	1209.64	206	2.36	9.02
Subansiri	-100	PF 10% release	21.86	1206.84	1208.86	202	2	10.81
Subansiri	-200	PF 10% release	21.86	1206.09	1207.58	149	2.71	10.78
Subansiri	-300	PF 10% release	21.86	1203.58	1204.76	118	2.7	10.88
Subansiri	-400	PF 10% release	21.86	1201.06	1202.24	118	1.89	11.35
Subansiri	-500	PF 10% release	21.86	1199.26	1200.96	170	2.93	8.74
Subansiri	-600	PF 10% release	21.86	1197.45	1199.09	164	2.84	9.37
Subansiri	-700	PF 10% release	21.86	1195.32	1196.87	155	2.76	10.17
Subansiri	-800	PF 10% release	21.86	1193.19	1194.63	144	2.67	11.31
Subansiri	-900	PF 10% release	21.86	1191.05	1192.35	130	2.53	13.34
Subansiri	0 (dam site)	PF 15% release	32.79	1207.58	1209.97	239	2.62	10.48
Subansiri	-100	PF 15% release	32.79	1206.84	1209.16	232	2.27	12.4
Subansiri	-200	PF 15% release	32.79	1206.09	1207.85	176	2.94	12.68
Subansiri	-300	PF 15% release	32.79	1203.58	1204.99	141	3.06	11.51
Subansiri	-400	PF 15% release	32.79	1201.06	1202.55	149	2.17	12.07
Subansiri	-500	PF 15% release	32.79	1199.26	1201.27	201	3.16	10.31
Subansiri	-600	PF 15% release	32.79	1197.45	1199.38	193	3.09	11
Subansiri	-700	PF 15% release	32.79	1195.32	1197.15	183	3	11.96
Subansiri	-800	PF 15% release	32.79	1193.19	1194.89	170	2.9	13.28
Subansiri	-900	PF 15% release	32.79	1191.05	1192.58	153	2.74	15.7
Subansiri	0 (dam site)	PF 20% release	43.73	1207.58	1210.24	266	2.82	11.66
Subansiri	-100	PF 20% release	43.73	1206.84	1209.4	256	2.49	13.68
Subansiri	-200	PF 20% release	43.73	1206.09	1208.06	197	3.13	14.21
Subansiri	-300	PF 20% release	43.73	1203.58	1205.21	163	3.29	12.09
Subansiri	-400	PF 20% release	43.73	1201.06	1202.8	174	2.4	12.68
Subansiri	-500	PF 20% release	43.73	1199.26	1201.52	226	3.34	11.58
Subansiri	-600	PF 20% release	43.73	1197.45	1199.62	217	3.26	12.37
Subansiri	-700	PF 20% release	43.73	1195.32	1197.37	205	3.18	13.42

River	Ch d/s of Niare Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-800	PF 20% release	43.73	1193.19	1195.09	190	3.08	14.9
Subansiri	-900	PF 20% release	43.73	1191.05	1192.76	171	2.9	17.62
Subansiri	0 (dam site)	PF 30% release	65.59	1207.58	1210.66	308	3.15	13.52
Subansiri	-100	PF 30% release	65.59	1206.84	1209.77	293	2.86	15.63
Subansiri	-200	PF 30% release	65.59	1206.09	1208.41	232	3.38	16.74
Subansiri	-300	PF 30% release	65.59	1203.58	1205.57	199	3.68	13.04
Subansiri	-400	PF 30% release	65.59	1201.06	1203.22	216	2.76	13.67
Subansiri	-500	PF 30% release	65.59	1199.26	1201.91	265	3.63	13.6
Subansiri	-600	PF 30% release	65.59	1197.45	1200	255	3.55	14.52
Subansiri	-700	PF 30% release	65.59	1195.32	1197.73	241	3.44	15.79
Subansiri	-800	PF 30% release	65.59	1193.19	1195.43	224	3.32	17.55
Subansiri	-900	PF 30% release	65.59	1191.05	1193.06	201	3.16	20.68
Subansiri	0 (dam site)	PF 40% release	87.45	1207.58	1211	342	3.41	15
Subansiri	-100	PF 40% release	87.45	1206.84	1210.06	322	3.16	17.18
Subansiri	-200	PF 40% release	87.45	1206.09	1208.69	260	3.58	18.78
Subansiri	-300	PF 40% release	87.45	1203.58	1205.88	230	3.98	13.86
Subansiri	-400	PF 40% release	87.45	1201.06	1203.55	249	3.08	14.46
Subansiri	-500	PF 40% release	87.45	1199.26	1202.24	298	3.83	15.28
Subansiri	-600	PF 40% release	87.45	1197.45	1200.31	286	3.76	16.3
Subansiri	-700	PF 40% release	87.45	1195.32	1198.02	270	3.66	17.68
Subansiri	-800	PF 40% release	87.45	1193.19	1195.71	252	3.52	19.69
Subansiri	-900	PF 40% release	87.45	1191.05	1193.3	225	3.36	23.15
Subansiri	0 (dam site)	PF 50% release	109.32	1207.58	1211.29	371	3.63	16.26
Subansiri	-100	PF 50% release	109.32	1206.84	1210.3	346	3.42	18.48
Subansiri	-200	PF 50% release	109.32	1206.09	1208.93	284	3.75	20.51
Subansiri	-300	PF 50% release	109.32	1203.58	1206.16	258	4.21	14.61
Subansiri	-400	PF 50% release	109.32	1201.06	1203.84	278	3.35	15.14
Subansiri	-500	PF 50% release	109.32	1199.26	1202.51	325	4.05	16.36
Subansiri	-600	PF 50% release	109.32	1197.45	1200.57	312	3.93	17.82
Subansiri	-700	PF 50% release	109.32	1195.32	1198.28	296	3.82	19.34
Subansiri	-800	PF 50% release	109.32	1193.19	1195.94	275	3.69	21.5
Subansiri	-900	PF 50% release	109.32	1191.05	1193.52	247	3.48	25.41
Subansiri	0 (dam site)	PF 100% release	218.63	1207.58	1212.35	477	4.37	20.94
Subansiri	-100	PF 100% release	218.63	1206.84	1211.14	430	4.43	22.95
Subansiri	-200	PF 100% release	218.63	1206.09	1209.84	375	4.31	27.05
Subansiri	-300	PF 100% release	218.63	1203.58	1207.28	370	4.97	17.58
Subansiri	-400	PF 100% release	218.63	1201.06	1204.87	381	4.41	17.6
Subansiri	-500	PF 100% release	218.63	1199.26	1203.54	428	4.79	19.81
Subansiri	-600	PF 100% release	218.63	1197.45	1201.58	413	4.5	23.55
Subansiri	-700	PF 100% release	218.63	1195.32	1199.22	390	4.4	25.51
Subansiri	-800	PF 100% release	218.63	1193.19	1196.82	363	4.25	28.36
Subansiri	-900	PF 100% release	218.63	1191.05	1194.31	326	4.01	33.48

Nalo HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	6.85	636.59	637.25	66	1.82	11.3
Subansiri	-100	PF 10% release	6.85	633.86	634.57	71	1.88	10.31

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-200	PF 10% release	6.85	631.13	631.87	74	1.93	9.57
Subansiri	-300	PF 10% release	6.85	627.84	628.57	73	1.9	9.91
Subansiri	-400	PF 10% release	6.85	624.55	625.38	83	1.16	14.17
Subansiri	-500	PF 10% release	6.85	623.87	624.73	86	1.11	14.24
Subansiri	-600	PF 10% release	6.85	623.19	624.02	83	1.23	13.4
Subansiri	-700	PF 10% release	6.85	622.51	623.42	91	1.03	14.5
Subansiri	-800	PF 10% release	6.85	621.83	622.59	76	1.52	11.89
Subansiri	-900	PF 10% release	6.85	619.97	620.79	82	2	8.38
Subansiri	-1000	PF 10% release	6.85	618.11	619.18	107	1.46	8.76
Subansiri	-1100	PF 10% release	6.85	617.34	618.39	105	1.4	9.38
Subansiri	-1200	PF 10% release	6.85	616.58	617.56	98	1.43	9.75
Subansiri	-1300	PF 10% release	6.85	615.81	616.79	98	1.28	10.93
Subansiri	-1400	PF 10% release	6.85	615.04	615.9	86	1.46	10.96
Subansiri	-1500	PF 10% release	6.85	614.28	615.19	91	1.09	13.77
Subansiri	-1600	PF 10% release	6.85	613.51	614.18	67	1.65	12.43
Subansiri	-1700	PF 10% release	6.85	611.21	612.07	86	2.06	7.74
Subansiri	-1800	PF 10% release	6.85	608.9	609.97	107	2.01	6.36
Subansiri	-1900	PF 10% release	6.85	607.1	608.1	100	2.19	6.24
Subansiri	-2000	PF 10% release	6.85	605.3	606.33	103	1.95	6.79
Subansiri	-2100	PF 10% release	6.85	603.49	604.45	96	2.17	6.63
Subansiri	-2200	PF 10% release	6.85	601.69	602.84	115	1.41	8.46
Subansiri	-2300	PF 10% release	6.85	601.18	602.34	116	1.1	10.76
Subansiri	-2400	PF 10% release	6.85	600.66	601.4	74	1.9	9.78
Subansiri	0	PF 15% release	10.28	636.59	637.37	78	1.98	13.29
Subansiri	-100	PF 15% release	10.28	633.86	634.69	83	2.04	12.11
Subansiri	-200	PF 15% release	10.28	631.13	632.01	88	2.08	11.3
Subansiri	-300	PF 15% release	10.28	627.84	628.69	85	2.07	11.65
Subansiri	-400	PF 15% release	10.28	624.55	625.53	98	1.27	16.57
Subansiri	-500	PF 15% release	10.28	623.87	624.87	100	1.25	16.5
Subansiri	-600	PF 15% release	10.28	623.19	624.16	97	1.35	15.69
Subansiri	-700	PF 15% release	10.28	622.51	623.57	106	1.15	16.86
Subansiri	-800	PF 15% release	10.28	621.83	622.71	88	1.69	13.81
Subansiri	-900	PF 15% release	10.28	619.97	620.93	96	2.17	9.86
Subansiri	-1000	PF 15% release	10.28	618.11	619.36	125	1.62	10.19
Subansiri	-1100	PF 15% release	10.28	617.34	618.56	122	1.56	10.88
Subansiri	-1200	PF 15% release	10.28	616.58	617.72	114	1.58	11.38
Subansiri	-1300	PF 15% release	10.28	615.81	616.94	113	1.44	12.64
Subansiri	-1400	PF 15% release	10.28	615.04	616.05	101	1.6	12.83
Subansiri	-1500	PF 15% release	10.28	614.28	615.34	106	1.22	15.95
Subansiri	-1600	PF 15% release	10.28	613.51	614.29	78	1.83	14.46
Subansiri	-1700	PF 15% release	10.28	611.21	612.22	101	2.23	9.1
Subansiri	-1800	PF 15% release	10.28	608.9	610.14	124	2.26	7.35
Subansiri	-1900	PF 15% release	10.28	607.1	608.27	117	2.39	7.33
Subansiri	-2000	PF 15% release	10.28	605.3	606.49	119	2.2	7.83
Subansiri	-2100	PF 15% release	10.28	603.49	604.61	112	2.35	7.8
Subansiri	-2200	PF 15% release	10.28	601.69	603.03	134	1.56	9.86
Subansiri	-2300	PF 15% release	10.28	601.18	602.51	133	1.24	12.38
Subansiri	-2400	PF 15% release	10.28	600.66	601.52	86	2.07	11.47
Subansiri	0	PF 20% release	13.71	636.59	637.47	88	2.08	14.98
Subansiri	-100	PF 20% release	13.71	633.86	634.8	94	2.15	13.64
Subansiri	-200	PF 20% release	13.71	631.13	632.11	98	2.2	12.68
Subansiri	-300	PF 20% release	13.71	627.84	628.8	96	2.17	13.13

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-400	PF 20% release	13.71	624.55	625.64	109	1.37	18.47
Subansiri	-500	PF 20% release	13.71	623.87	624.98	111	1.34	18.35
Subansiri	-600	PF 20% release	13.71	623.19	624.28	109	1.43	17.55
Subansiri	-700	PF 20% release	13.71	622.51	623.69	118	1.24	18.73
Subansiri	-800	PF 20% release	13.71	621.83	622.81	98	1.82	15.38
Subansiri	-900	PF 20% release	13.71	619.97	621.05	108	2.3	11.06
Subansiri	-1000	PF 20% release	13.71	618.11	619.5	139	1.74	11.36
Subansiri	-1100	PF 20% release	13.71	617.34	618.69	135	1.69	12.07
Subansiri	-1200	PF 20% release	13.71	616.58	617.85	127	1.69	12.69
Subansiri	-1300	PF 20% release	13.71	615.81	617.06	125	1.56	14.02
Subansiri	-1400	PF 20% release	13.71	615.04	616.16	112	1.71	14.33
Subansiri	-1500	PF 20% release	13.71	614.28	615.45	117	1.32	17.69
Subansiri	-1600	PF 20% release	13.71	613.51	614.38	87	1.97	16.12
Subansiri	-1700	PF 20% release	13.71	611.21	612.34	113	2.36	10.21
Subansiri	-1800	PF 20% release	13.71	608.9	610.27	137	2.46	8.14
Subansiri	-1900	PF 20% release	13.71	607.1	608.41	131	2.54	8.21
Subansiri	-2000	PF 20% release	13.71	605.3	606.61	131	2.4	8.66
Subansiri	-2100	PF 20% release	13.71	603.49	604.75	126	2.49	8.74
Subansiri	-2200	PF 20% release	13.71	601.69	603.18	149	1.67	10.99
Subansiri	-2300	PF 20% release	13.71	601.18	602.65	147	1.36	13.64
Subansiri	-2400	PF 20% release	13.71	600.66	601.63	97	2.19	12.9
Subansiri	0	PF 30% release	20.56	636.59	637.63	104	2.26	17.61
Subansiri	-100	PF 30% release	20.56	633.86	634.96	110	2.33	16.04
Subansiri	-200	PF 30% release	20.56	631.13	632.29	116	2.39	14.9
Subansiri	-300	PF 30% release	20.56	627.84	628.97	113	2.36	15.44
Subansiri	-400	PF 30% release	20.56	624.55	625.82	127	1.5	21.55
Subansiri	-500	PF 30% release	20.56	623.87	625.16	129	1.49	21.31
Subansiri	-600	PF 30% release	20.56	623.19	624.47	128	1.57	20.56
Subansiri	-700	PF 30% release	20.56	622.51	623.88	137	1.38	21.76
Subansiri	-800	PF 30% release	20.56	621.83	622.97	114	2.01	17.9
Subansiri	-900	PF 30% release	20.56	619.97	621.24	127	2.5	13
Subansiri	-1000	PF 30% release	20.56	618.11	619.73	162	1.93	13.2
Subansiri	-1100	PF 30% release	20.56	617.34	618.91	157	1.88	14.01
Subansiri	-1200	PF 30% release	20.56	616.58	618.06	148	1.88	14.76
Subansiri	-1300	PF 30% release	20.56	615.81	617.26	145	1.75	16.21
Subansiri	-1400	PF 30% release	20.56	615.04	616.35	131	1.88	16.74
Subansiri	-1500	PF 30% release	20.56	614.28	615.63	135	1.48	20.45
Subansiri	-1600	PF 30% release	20.56	613.51	614.52	101	2.16	18.81
Subansiri	-1700	PF 30% release	20.56	611.21	612.54	133	2.56	12.01
Subansiri	-1800	PF 30% release	20.56	608.9	610.48	158	2.77	9.39
Subansiri	-1900	PF 30% release	20.56	607.1	608.64	154	2.76	9.63
Subansiri	-2000	PF 30% release	20.56	605.3	606.82	152	2.7	10.01
Subansiri	-2100	PF 30% release	20.56	603.49	604.97	148	2.72	10.24
Subansiri	-2200	PF 30% release	20.56	601.69	603.42	173	1.86	12.76
Subansiri	-2300	PF 30% release	20.56	601.18	602.87	169	1.55	15.65
Subansiri	-2400	PF 30% release	20.56	600.66	601.8	114	2.37	15.18
Subansiri	0	PF 40% release	27.41	636.59	637.75	116	2.39	19.76
Subansiri	-100	PF 40% release	27.41	633.86	635.09	123	2.48	17.92
Subansiri	-200	PF 40% release	27.41	631.13	632.42	129	2.54	16.68
Subansiri	-300	PF 40% release	27.41	627.84	629.11	127	2.5	17.31
Subansiri	-400	PF 40% release	27.41	624.55	625.96	141	1.61	24.04
Subansiri	-500	PF 40% release	27.41	623.87	625.31	144	1.61	23.71

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-600	PF 40% release	27.41	623.19	624.62	143	1.67	22.98
Subansiri	-700	PF 40% release	27.41	622.51	624.03	152	1.49	24.16
Subansiri	-800	PF 40% release	27.41	621.83	623.1	127	2.16	19.97
Subansiri	-900	PF 40% release	27.41	619.97	621.39	142	2.65	14.57
Subansiri	-1000	PF 40% release	27.41	618.11	619.91	180	2.08	14.69
Subansiri	-1100	PF 40% release	27.41	617.34	619.08	174	2.03	15.57
Subansiri	-1200	PF 40% release	27.41	616.58	618.23	165	2.02	16.44
Subansiri	-1300	PF 40% release	27.41	615.81	617.42	161	1.9	17.98
Subansiri	-1400	PF 40% release	27.41	615.04	616.5	146	2.01	18.68
Subansiri	-1500	PF 40% release	27.41	614.28	615.78	150	1.61	22.66
Subansiri	-1600	PF 40% release	27.41	613.51	614.64	113	2.31	21.03
Subansiri	-1700	PF 40% release	27.41	611.21	612.7	149	2.71	13.48
Subansiri	-1800	PF 40% release	27.41	608.9	610.67	177	2.95	10.5
Subansiri	-1900	PF 40% release	27.41	607.1	608.83	173	2.92	10.82
Subansiri	-2000	PF 40% release	27.41	605.3	606.99	169	2.89	11.16
Subansiri	-2100	PF 40% release	27.41	603.49	605.15	166	2.86	11.53
Subansiri	-2200	PF 40% release	27.41	601.69	603.61	192	2.01	14.18
Subansiri	-2300	PF 40% release	27.41	601.18	603.04	186	1.71	17.25
Subansiri	-2400	PF 40% release	27.41	600.66	601.94	128	2.51	17.03
Subansiri	0	PF 50% release	34.26	636.59	637.86	127	2.5	21.6
Subansiri	-100	PF 50% release	34.26	633.86	635.21	135	2.58	19.66
Subansiri	-200	PF 50% release	34.26	631.13	632.54	141	2.66	18.22
Subansiri	-300	PF 50% release	34.26	627.84	629.23	139	2.61	18.94
Subansiri	-400	PF 50% release	34.26	624.55	626.09	154	1.7	26.16
Subansiri	-500	PF 50% release	34.26	623.87	625.43	156	1.7	25.76
Subansiri	-600	PF 50% release	34.26	623.19	624.74	155	1.76	25.04
Subansiri	-700	PF 50% release	34.26	622.51	624.16	165	1.58	26.2
Subansiri	-800	PF 50% release	34.26	621.83	623.21	138	2.28	21.73
Subansiri	-900	PF 50% release	34.26	619.97	621.52	155	2.77	15.95
Subansiri	-1000	PF 50% release	34.26	618.11	620.06	195	2.2	15.95
Subansiri	-1100	PF 50% release	34.26	617.34	619.23	189	2.15	16.9
Subansiri	-1200	PF 50% release	34.26	616.58	618.37	179	2.13	17.87
Subansiri	-1300	PF 50% release	34.26	615.81	617.55	174	2.02	19.47
Subansiri	-1400	PF 50% release	34.26	615.04	616.63	159	2.12	20.35
Subansiri	-1500	PF 50% release	34.26	614.28	615.9	162	1.72	24.47
Subansiri	-1600	PF 50% release	34.26	613.51	614.74	123	2.41	23
Subansiri	-1700	PF 50% release	34.26	611.21	612.84	163	2.85	14.71
Subansiri	-1800	PF 50% release	34.26	608.9	610.83	193	3.11	11.43
Subansiri	-1900	PF 50% release	34.26	607.1	608.99	189	3.07	11.79
Subansiri	-2000	PF 50% release	34.26	605.3	607.15	185	3.02	12.21
Subansiri	-2100	PF 50% release	34.26	603.49	605.31	182	2.99	12.62
Subansiri	-2200	PF 50% release	34.26	601.69	603.78	209	2.14	15.37
Subansiri	-2300	PF 50% release	34.26	601.18	603.18	200	1.84	18.59
Subansiri	-2400	PF 50% release	34.26	600.66	602.06	140	2.63	18.61
Subansiri	0	PF 100% release	68.53	636.59	638.27	168	2.87	28.52
Subansiri	-100	PF 100% release	68.53	633.86	635.64	178	2.96	25.97
Subansiri	-200	PF 100% release	68.53	631.13	633	187	3.03	24.13
Subansiri	-300	PF 100% release	68.53	627.84	629.67	183	3	25
Subansiri	-400	PF 100% release	68.53	624.55	626.55	200	2.01	34.03
Subansiri	-500	PF 100% release	68.53	623.87	625.89	202	2.03	33.37
Subansiri	-600	PF 100% release	68.53	623.19	625.22	203	2.06	32.72
Subansiri	-700	PF 100% release	68.53	622.51	624.64	213	1.91	33.72

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-800	PF 100% release	68.53	621.83	623.64	181	2.66	28.44
Subansiri	-900	PF 100% release	68.53	619.97	622.02	205	3.18	21.02
Subansiri	-1000	PF 100% release	68.53	618.11	620.63	252	2.64	20.59
Subansiri	-1100	PF 100% release	68.53	617.34	619.77	243	2.59	21.78
Subansiri	-1200	PF 100% release	68.53	616.58	618.9	232	2.55	23.11
Subansiri	-1300	PF 100% release	68.53	615.81	618.04	223	2.46	24.95
Subansiri	-1400	PF 100% release	68.53	615.04	617.11	207	2.51	26.44
Subansiri	-1500	PF 100% release	68.53	614.28	616.34	206	2.13	31.09
Subansiri	-1600	PF 100% release	68.53	613.51	615.14	163	2.77	30.38
Subansiri	-1700	PF 100% release	68.53	611.21	613.37	216	3.26	19.44
Subansiri	-1800	PF 100% release	68.53	608.9	611.45	255	3.55	15.13
Subansiri	-1900	PF 100% release	68.53	607.1	609.6	250	3.51	15.61
Subansiri	-2000	PF 100% release	68.53	605.3	607.75	245	3.47	16.1
Subansiri	-2100	PF 100% release	68.53	603.49	605.89	240	3.45	16.62
Subansiri	-2200	PF 100% release	68.53	601.69	604.36	267	2.6	19.71
Subansiri	-2300	PF 100% release	68.53	601.18	603.7	252	2.32	23.4
Subansiri	-2400	PF 100% release	68.53	600.66	602.51	185	3.02	24.57

Nalo HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	60.65	636.59	638.18	159	2.82	27.04
Subansiri	-100	PF 10% release	60.65	633.86	635.56	170	2.89	24.73
Subansiri	-200	PF 10% release	60.65	631.13	632.91	178	2.96	22.98
Subansiri	-300	PF 10% release	60.65	627.84	629.58	174	2.94	23.73
Subansiri	-400	PF 10% release	60.65	624.55	626.46	191	1.95	32.49
Subansiri	-500	PF 10% release	60.65	623.87	625.8	193	1.97	31.88
Subansiri	-600	PF 10% release	60.65	623.19	625.13	194	2.01	31.22
Subansiri	-700	PF 10% release	60.65	622.51	624.55	204	1.85	32.29
Subansiri	-800	PF 10% release	60.65	621.83	623.55	172	2.6	27.08
Subansiri	-900	PF 10% release	60.65	619.97	621.92	195	3.1	20.05
Subansiri	-1000	PF 10% release	60.65	618.11	620.52	241	2.56	19.69
Subansiri	-1100	PF 10% release	60.65	617.34	619.67	233	2.51	20.83
Subansiri	-1200	PF 10% release	60.65	616.58	618.8	222	2.47	22.09
Subansiri	-1300	PF 10% release	60.65	615.81	617.95	214	2.38	23.9
Subansiri	-1400	PF 10% release	60.65	615.04	617.02	198	2.44	25.25
Subansiri	-1500	PF 10% release	60.65	614.28	616.26	198	2.05	29.83
Subansiri	-1600	PF 10% release	60.65	613.51	615.06	155	2.71	28.88
Subansiri	-1700	PF 10% release	60.65	611.21	613.26	205	3.18	18.52
Subansiri	-1800	PF 10% release	60.65	608.9	611.33	243	3.46	14.43
Subansiri	-1900	PF 10% release	60.65	607.1	609.48	238	3.42	14.86
Subansiri	-2000	PF 10% release	60.65	605.3	607.63	233	3.39	15.34
Subansiri	-2100	PF 10% release	60.65	603.49	605.78	229	3.35	15.86
Subansiri	-2200	PF 10% release	60.65	601.69	604.25	256	2.51	18.88
Subansiri	-2300	PF 10% release	60.65	601.18	603.61	243	2.21	22.53
Subansiri	-2400	PF 10% release	60.65	600.66	602.41	175	2.97	23.3
Subansiri	0	PF 15% release	90.97	636.59	638.47	188	3.04	31.93
Subansiri	-100	PF 15% release	90.97	633.86	635.86	200	3.13	29.09
Subansiri	-200	PF 15% release	90.97	631.13	633.23	210	3.21	27.02
Subansiri	-300	PF 15% release	90.97	627.84	629.89	205	3.18	27.96
Subansiri	-400	PF 15% release	90.97	624.55	626.78	223	2.16	37.87



River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-500	PF 15% release	90.97	623.87	626.12	225	2.18	37.12
Subansiri	-600	PF 15% release	90.97	623.19	625.45	226	2.2	36.48
Subansiri	-700	PF 15% release	90.97	622.51	624.87	236	2.06	37.39
Subansiri	-800	PF 15% release	90.97	621.83	623.85	202	2.83	31.78
Subansiri	-900	PF 15% release	90.97	619.97	622.27	230	3.36	23.57
Subansiri	-1000	PF 15% release	90.97	618.11	620.91	280	2.85	22.83
Subansiri	-1100	PF 15% release	90.97	617.34	620.04	270	2.8	24.15
Subansiri	-1200	PF 15% release	90.97	616.58	619.15	257	2.75	25.64
Subansiri	-1300	PF 15% release	90.97	615.81	618.28	247	2.67	27.62
Subansiri	-1400	PF 15% release	90.97	615.04	617.34	230	2.69	29.41
Subansiri	-1500	PF 15% release	90.97	614.28	616.55	227	2.35	34.17
Subansiri	-1600	PF 15% release	90.97	613.51	615.35	184	2.9	34.21
Subansiri	-1700	PF 15% release	90.97	611.21	613.63	242	3.45	21.78
Subansiri	-1800	PF 15% release	90.97	608.9	611.76	286	3.75	16.96
Subansiri	-1900	PF 15% release	90.97	607.1	609.9	280	3.73	17.45
Subansiri	-2000	PF 15% release	90.97	605.3	608.04	274	3.68	18.01
Subansiri	-2100	PF 15% release	90.97	603.49	606.17	268	3.64	18.63
Subansiri	-2200	PF 15% release	90.97	601.69	604.65	296	2.82	21.79
Subansiri	-2300	PF 15% release	90.97	601.18	603.95	277	2.54	25.74
Subansiri	-2400	PF 15% release	90.97	600.66	602.72	206	3.22	27.41
Subansiri	0	PF 20% release	121.3	636.59	638.68	209	3.27	34.15
Subansiri	-100	PF 20% release	121.3	633.86	636.09	223	3.35	31.86
Subansiri	-200	PF 20% release	121.3	631.13	633.48	235	3.4	30.32
Subansiri	-300	PF 20% release	121.3	627.84	630.14	230	3.36	31.41
Subansiri	-400	PF 20% release	121.3	624.55	627.03	248	2.33	41.22
Subansiri	-500	PF 20% release	121.3	623.87	626.38	251	2.34	41.37
Subansiri	-600	PF 20% release	121.3	623.19	625.72	253	2.36	40.72
Subansiri	-700	PF 20% release	121.3	622.51	625.12	261	2.24	41.45
Subansiri	-800	PF 20% release	121.3	621.83	624.11	228	2.98	35.73
Subansiri	-900	PF 20% release	121.3	619.97	622.54	257	3.57	26.4
Subansiri	-1000	PF 20% release	121.3	618.11	621.22	311	3.08	25.36
Subansiri	-1100	PF 20% release	121.3	617.34	620.33	299	3.03	26.81
Subansiri	-1200	PF 20% release	121.3	616.58	619.44	286	2.97	28.49
Subansiri	-1300	PF 20% release	121.3	615.81	618.55	274	2.9	30.6
Subansiri	-1400	PF 20% release	121.3	615.04	617.61	257	2.89	32.79
Subansiri	-1500	PF 20% release	121.3	614.28	616.76	248	2.61	37.44
Subansiri	-1600	PF 20% release	121.3	613.51	615.59	208	3	38.84
Subansiri	-1700	PF 20% release	121.3	611.21	613.92	271	3.66	24.4
Subansiri	-1800	PF 20% release	121.3	608.9	612.11	321	3.98	19.02
Subansiri	-1900	PF 20% release	121.3	607.1	610.23	313	3.96	19.54
Subansiri	-2000	PF 20% release	121.3	605.3	608.36	306	3.92	20.16
Subansiri	-2100	PF 20% release	121.3	603.49	606.5	301	3.86	20.89
Subansiri	-2200	PF 20% release	121.3	601.69	604.96	327	3.08	24.11
Subansiri	-2300	PF 20% release	121.3	601.18	604.22	304	2.82	28.21
Subansiri	-2400	PF 20% release	121.3	600.66	602.98	232	3.38	30.87
Subansiri	0	PF 30% release	181.95	636.59	639.03	244	3.67	36.3
Subansiri	-100	PF 30% release	181.95	633.86	636.46	260	3.75	34.23
Subansiri	-200	PF 30% release	181.95	631.13	633.87	274	3.77	33.7
Subansiri	-300	PF 30% release	181.95	627.84	630.51	267	3.75	34.12
Subansiri	-400	PF 30% release	181.95	624.55	627.41	286	2.67	43.82
Subansiri	-500	PF 30% release	181.95	623.87	626.76	289	2.66	44.47
Subansiri	-600	PF 30% release	181.95	623.19	626.12	293	2.65	45.23

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-700	PF 30% release	181.95	622.51	625.52	301	2.53	46.66
Subansiri	-800	PF 30% release	181.95	621.83	624.52	269	3.21	42.22
Subansiri	-900	PF 30% release	181.95	619.97	623	303	3.87	31.07
Subansiri	-1000	PF 30% release	181.95	618.11	621.71	360	3.44	29.4
Subansiri	-1100	PF 30% release	181.95	617.34	620.81	347	3.38	31.07
Subansiri	-1200	PF 30% release	181.95	616.58	619.9	332	3.32	33.02
Subansiri	-1300	PF 30% release	181.95	615.81	618.97	316	3.25	35.39
Subansiri	-1400	PF 30% release	181.95	615.04	618.02	298	3.21	38.05
Subansiri	-1500	PF 30% release	181.95	614.28	617.07	279	3.1	40.83
Subansiri	-1600	PF 30% release	181.95	613.51	616	249	3.16	44.67
Subansiri	-1700	PF 30% release	181.95	611.21	614.39	318	3.99	28.62
Subansiri	-1800	PF 30% release	181.95	608.9	612.67	377	4.32	22.35
Subansiri	-1900	PF 30% release	181.95	607.1	610.79	369	4.28	23.02
Subansiri	-2000	PF 30% release	181.95	605.3	608.91	361	4.25	23.72
Subansiri	-2100	PF 30% release	181.95	603.49	607.03	354	4.18	24.57
Subansiri	-2200	PF 30% release	181.95	601.69	605.46	377	3.48	27.78
Subansiri	-2300	PF 30% release	181.95	601.18	604.64	346	3.27	32.12
Subansiri	-2400	PF 30% release	181.95	600.66	603.39	273	3.68	36.26
Subansiri	0	PF 40% release	242.6	636.59	639.33	274	3.99	38.12
Subansiri	-100	PF 40% release	242.6	633.86	636.79	293	4.04	36.24
Subansiri	-200	PF 40% release	242.6	631.13	634.21	308	4.04	36.29
Subansiri	-300	PF 40% release	242.6	627.84	630.83	299	4.07	35.61
Subansiri	-400	PF 40% release	242.6	624.55	627.73	318	2.94	46.03
Subansiri	-500	PF 40% release	242.6	623.87	627.08	321	2.92	46.92
Subansiri	-600	PF 40% release	242.6	623.19	626.44	325	2.9	48.05
Subansiri	-700	PF 40% release	242.6	622.51	625.84	333	2.79	49.95
Subansiri	-800	PF 40% release	242.6	621.83	624.87	304	3.35	47.72
Subansiri	-900	PF 40% release	242.6	619.97	623.36	339	4.11	34.82
Subansiri	-1000	PF 40% release	242.6	618.11	622.11	400	3.72	32.64
Subansiri	-1100	PF 40% release	242.6	617.34	621.19	385	3.66	34.47
Subansiri	-1200	PF 40% release	242.6	616.58	620.25	367	3.61	36.34
Subansiri	-1300	PF 40% release	242.6	615.81	619.3	349	3.58	37.97
Subansiri	-1400	PF 40% release	242.6	615.04	618.33	329	3.52	39.96
Subansiri	-1500	PF 40% release	242.6	614.28	617.32	304	3.51	42.53
Subansiri	-1600	PF 40% release	242.6	613.51	616.33	282	3.34	47.46
Subansiri	-1700	PF 40% release	242.6	611.21	614.78	357	4.21	32.19
Subansiri	-1800	PF 40% release	242.6	608.9	613.13	423	4.57	25.09
Subansiri	-1900	PF 40% release	242.6	607.1	611.24	414	4.53	25.84
Subansiri	-2000	PF 40% release	242.6	605.3	609.35	405	4.48	26.67
Subansiri	-2100	PF 40% release	242.6	603.49	607.46	397	4.43	27.57
Subansiri	-2200	PF 40% release	242.6	601.69	605.86	417	3.79	30.7
Subansiri	-2300	PF 40% release	242.6	601.18	604.97	379	3.64	35.14
Subansiri	-2400	PF 40% release	242.6	600.66	603.72	306	3.91	40.31
Subansiri	0	PF 50% release	303.24	636.59	639.62	303	4.22	39.85
Subansiri	-100	PF 50% release	303.24	633.86	637.08	322	4.29	38
Subansiri	-200	PF 50% release	303.24	631.13	634.5	337	4.28	38.53
Subansiri	-300	PF 50% release	303.24	627.84	631.12	328	4.33	36.95
Subansiri	-400	PF 50% release	303.24	624.55	628.01	346	3.16	47.98
Subansiri	-500	PF 50% release	303.24	623.87	627.36	349	3.14	49.08
Subansiri	-600	PF 50% release	303.24	623.19	626.72	353	3.11	50.43
Subansiri	-700	PF 50% release	303.24	622.51	626.1	359	3.02	52.43
Subansiri	-800	PF 50% release	303.24	621.83	625.16	333	3.48	51.6

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-900	PF 50% release	303.24	619.97	623.68	371	4.28	38.13
Subansiri	-1000	PF 50% release	303.24	618.11	622.44	433	3.96	35.35
Subansiri	-1100	PF 50% release	303.24	617.34	621.5	416	3.92	36.8
Subansiri	-1200	PF 50% release	303.24	616.58	620.54	396	3.89	38.2
Subansiri	-1300	PF 50% release	303.24	615.81	619.57	376	3.86	39.65
Subansiri	-1400	PF 50% release	303.24	615.04	618.62	358	3.77	41.72
Subansiri	-1500	PF 50% release	303.24	614.28	617.54	326	3.85	44.06
Subansiri	-1600	PF 50% release	303.24	613.51	616.63	312	3.47	50.04
Subansiri	-1700	PF 50% release	303.24	611.21	615.12	391	4.4	35.2
Subansiri	-1800	PF 50% release	303.24	608.9	613.52	462	4.79	27.42
Subansiri	-1900	PF 50% release	303.24	607.1	611.63	453	4.73	28.28
Subansiri	-2000	PF 50% release	303.24	605.3	609.74	444	4.68	29.18
Subansiri	-2100	PF 50% release	303.24	603.49	607.84	435	4.63	30.17
Subansiri	-2200	PF 50% release	303.24	601.69	606.2	451	4.05	33.21
Subansiri	-2300	PF 50% release	303.24	601.18	605.23	405	3.98	37.71
Subansiri	-2400	PF 50% release	303.24	600.66	604.01	335	4.09	43.82
Subansiri	0	PF 100% release	606.49	636.59	640.74	415	5.05	46.64
Subansiri	-100	PF 100% release	606.49	633.86	638.24	438	5.1	45.15
Subansiri	-200	PF 100% release	606.49	631.13	635.66	453	5.02	47.5
Subansiri	-300	PF 100% release	606.49	627.84	632.29	445	5.21	42.43
Subansiri	-400	PF 100% release	606.49	624.55	629.11	456	3.97	55.57
Subansiri	-500	PF 100% release	606.49	623.87	628.44	457	3.94	57.24
Subansiri	-600	PF 100% release	606.49	623.19	627.77	458	3.91	59.23
Subansiri	-700	PF 100% release	606.49	622.51	627.08	457	3.87	61.58
Subansiri	-800	PF 100% release	606.49	621.83	626.32	449	3.93	63.86
Subansiri	-900	PF 100% release	606.49	619.97	624.86	489	4.95	49.26
Subansiri	-1000	PF 100% release	606.49	618.11	623.8	569	4.47	51.87
Subansiri	-1100	PF 100% release	606.49	617.34	622.72	538	4.72	47.02
Subansiri	-1200	PF 100% release	606.49	616.58	621.7	512	4.77	46.18
Subansiri	-1300	PF 100% release	606.49	615.81	620.66	485	4.84	46.48
Subansiri	-1400	PF 100% release	606.49	615.04	619.7	466	4.69	48.52
Subansiri	-1500	PF 100% release	606.49	614.28	618.48	420	4.93	50.47
Subansiri	-1600	PF 100% release	606.49	613.51	617.83	432	3.95	60.29
Subansiri	-1700	PF 100% release	606.49	611.21	616.41	520	5.01	43.87
Subansiri	-1800	PF 100% release	606.49	608.9	615.01	611	5.48	36.26
Subansiri	-1900	PF 100% release	606.49	607.1	613.08	598	5.43	37.33
Subansiri	-2000	PF 100% release	606.49	605.3	611.15	585	5.39	38.46
Subansiri	-2100	PF 100% release	606.49	603.49	609.21	572	5.34	39.72
Subansiri	-2200	PF 100% release	606.49	601.69	607.45	576	4.93	45.96
Subansiri	-2300	PF 100% release	606.49	601.18	606.31	513	4.86	52.25
Subansiri	-2400	PF 100% release	606.49	600.66	605.09	443	4.72	56.95

**Nalo HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	24.37	636.59	637.7	-1.11	2.34	18.85
Subansiri	-100	PF 10% release	24.37	633.86	635.04	-1.18	2.41	17.17
Subansiri	-200	PF 10% release	24.37	631.13	632.37	-1.24	2.47	15.95
Subansiri	-300	PF 10% release	24.37	627.84	629.05	-1.21	2.44	16.51
Subansiri	-400	PF 10% release	24.37	624.55	625.9	-1.35	1.57	22.99

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-500	PF 10% release	24.37	623.87	625.25	-1.38	1.56	22.7
Subansiri	-600	PF 10% release	24.37	623.19	624.55	-1.36	1.63	21.95
Subansiri	-700	PF 10% release	24.37	622.51	623.97	-1.46	1.44	23.15
Subansiri	-800	PF 10% release	24.37	621.83	623.05	-1.22	2.1	19.09
Subansiri	-900	PF 10% release	24.37	619.97	621.33	-1.36	2.58	13.91
Subansiri	-1000	PF 10% release	24.37	618.11	619.83	-1.72	2.01	14.06
Subansiri	-1100	PF 10% release	24.37	617.34	619.01	-1.67	1.97	14.91
Subansiri	-1200	PF 10% release	24.37	616.58	618.16	-1.58	1.96	15.74
Subansiri	-1300	PF 10% release	24.37	615.81	617.35	-1.54	1.84	17.23
Subansiri	-1400	PF 10% release	24.37	615.04	616.44	-1.4	1.96	17.86
Subansiri	-1500	PF 10% release	24.37	614.28	615.72	-1.44	1.55	21.73
Subansiri	-1600	PF 10% release	24.37	613.51	614.59	-1.08	2.25	20.08
Subansiri	-1700	PF 10% release	24.37	611.21	612.64	-1.43	2.65	12.86
Subansiri	-1800	PF 10% release	24.37	608.9	610.58	-1.68	2.91	9.98
Subansiri	-1900	PF 10% release	24.37	607.1	608.75	-1.65	2.86	10.31
Subansiri	-2000	PF 10% release	24.37	605.3	606.92	-1.62	2.83	10.65
Subansiri	-2100	PF 10% release	24.37	603.49	605.08	-1.59	2.79	11.01
Subansiri	-2200	PF 10% release	24.37	601.69	603.53	-1.84	1.95	13.58
Subansiri	-2300	PF 10% release	24.37	601.18	602.97	-1.79	1.64	16.58
Subansiri	-2400	PF 10% release	24.37	600.66	601.88	-1.22	2.45	16.24
Subansiri	0	PF 15% release	36.56	636.59	637.89	-1.3	2.53	22.18
Subansiri	-100	PF 15% release	36.56	633.86	635.24	-1.38	2.63	20.13
Subansiri	-200	PF 15% release	36.56	631.13	632.58	-1.45	2.7	18.68
Subansiri	-300	PF 15% release	36.56	627.84	629.26	-1.42	2.65	19.41
Subansiri	-400	PF 15% release	36.56	624.55	626.13	-1.58	1.73	26.82
Subansiri	-500	PF 15% release	36.56	623.87	625.47	-1.6	1.73	26.38
Subansiri	-600	PF 15% release	36.56	623.19	624.78	-1.59	1.79	25.67
Subansiri	-700	PF 15% release	36.56	622.51	624.2	-1.69	1.61	26.84
Subansiri	-800	PF 15% release	36.56	621.83	623.25	-1.42	2.32	22.26
Subansiri	-900	PF 15% release	36.56	619.97	621.57	-1.6	2.8	16.37
Subansiri	-1000	PF 15% release	36.56	618.11	620.11	-2	2.24	16.33
Subansiri	-1100	PF 15% release	36.56	617.34	619.27	-1.93	2.19	17.3
Subansiri	-1200	PF 15% release	36.56	616.58	618.42	-1.84	2.17	18.31
Subansiri	-1300	PF 15% release	36.56	615.81	617.59	-1.78	2.06	19.93
Subansiri	-1400	PF 15% release	36.56	615.04	616.67	-1.63	2.15	20.85
Subansiri	-1500	PF 15% release	36.56	614.28	615.94	-1.66	1.75	25.05
Subansiri	-1600	PF 15% release	36.56	613.51	614.77	-1.26	2.45	23.57
Subansiri	-1700	PF 15% release	36.56	611.21	612.89	-1.68	2.88	15.11
Subansiri	-1800	PF 15% release	36.56	608.9	610.88	-1.98	3.15	11.74
Subansiri	-1900	PF 15% release	36.56	607.1	609.05	-1.95	3.09	12.14
Subansiri	-2000	PF 15% release	36.56	605.3	607.2	-1.9	3.06	12.53
Subansiri	-2100	PF 15% release	36.56	603.49	605.36	-1.87	3.03	12.95
Subansiri	-2200	PF 15% release	36.56	601.69	603.83	-2.14	2.18	15.74
Subansiri	-2300	PF 15% release	36.56	601.18	603.23	-2.05	1.88	18.99
Subansiri	-2400	PF 15% release	36.56	600.66	602.1	-1.44	2.66	19.1
Subansiri	0	PF 20% release	48.75	636.59	638.05	-1.46	2.68	24.88
Subansiri	-100	PF 20% release	48.75	633.86	635.42	-1.56	2.77	22.65
Subansiri	-200	PF 20% release	48.75	631.13	632.76	-1.63	2.84	21.04
Subansiri	-300	PF 20% release	48.75	627.84	629.44	-1.6	2.8	21.82
Subansiri	-400	PF 20% release	48.75	624.55	626.31	-1.76	1.85	29.92
Subansiri	-500	PF 20% release	48.75	623.87	625.65	-1.78	1.86	29.39
Subansiri	-600	PF 20% release	48.75	623.19	624.97	-1.78	1.91	28.69

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-700	PF 20% release	48.75	622.51	624.39	-1.88	1.74	29.82
Subansiri	-800	PF 20% release	48.75	621.83	623.41	-1.58	2.48	24.87
Subansiri	-900	PF 20% release	48.75	619.97	621.76	-1.79	2.97	18.37
Subansiri	-1000	PF 20% release	48.75	618.11	620.33	-2.22	2.41	18.16
Subansiri	-1100	PF 20% release	48.75	617.34	619.49	-2.15	2.37	19.22
Subansiri	-1200	PF 20% release	48.75	616.58	618.62	-2.04	2.34	20.38
Subansiri	-1300	PF 20% release	48.75	615.81	617.79	-1.98	2.24	22.09
Subansiri	-1400	PF 20% release	48.75	615.04	616.86	-1.82	2.3	23.27
Subansiri	-1500	PF 20% release	48.75	614.28	616.11	-1.83	1.92	27.63
Subansiri	-1600	PF 20% release	48.75	613.51	614.93	-1.42	2.58	26.53
Subansiri	-1700	PF 20% release	48.75	611.21	613.09	-1.88	3.07	16.9
Subansiri	-1800	PF 20% release	48.75	608.9	611.13	-2.23	3.31	13.22
Subansiri	-1900	PF 20% release	48.75	607.1	609.28	-2.18	3.28	13.62
Subansiri	-2000	PF 20% release	48.75	605.3	607.43	-2.13	3.25	14.03
Subansiri	-2100	PF 20% release	48.75	603.49	605.58	-2.09	3.21	14.53
Subansiri	-2200	PF 20% release	48.75	601.69	604.06	-2.37	2.36	17.46
Subansiri	-2300	PF 20% release	48.75	601.18	603.43	-2.25	2.07	20.91
Subansiri	-2400	PF 20% release	48.75	600.66	602.27	-1.61	2.82	21.44
Subansiri	0	PF 30% release	73.12	636.59	638.31	-1.72	2.91	29.25
Subansiri	-100	PF 30% release	73.12	633.86	635.69	-1.83	3	26.64
Subansiri	-200	PF 30% release	73.12	631.13	633.05	-1.92	3.07	24.77
Subansiri	-300	PF 30% release	73.12	627.84	629.72	-1.88	3.04	25.65
Subansiri	-400	PF 30% release	73.12	624.55	626.6	-2.05	2.04	34.87
Subansiri	-500	PF 30% release	73.12	623.87	625.94	-2.07	2.06	34.2
Subansiri	-600	PF 30% release	73.12	623.19	625.27	-2.08	2.09	33.55
Subansiri	-700	PF 30% release	73.12	622.51	624.69	-2.18	1.94	34.54
Subansiri	-800	PF 30% release	73.12	621.83	623.69	-1.86	2.71	29.14
Subansiri	-900	PF 30% release	73.12	619.97	622.07	-2.1	3.22	21.61
Subansiri	-1000	PF 30% release	73.12	618.11	620.69	-2.58	2.69	21.08
Subansiri	-1100	PF 30% release	73.12	617.34	619.83	-2.49	2.64	22.3
Subansiri	-1200	PF 30% release	73.12	616.58	618.96	-2.38	2.6	23.67
Subansiri	-1300	PF 30% release	73.12	615.81	618.09	-2.28	2.51	25.54
Subansiri	-1400	PF 30% release	73.12	615.04	617.16	-2.12	2.55	27.1
Subansiri	-1500	PF 30% release	73.12	614.28	616.39	-2.11	2.18	31.76
Subansiri	-1600	PF 30% release	73.12	613.51	615.19	-1.68	2.79	31.23
Subansiri	-1700	PF 30% release	73.12	611.21	613.42	-2.21	3.31	19.94
Subansiri	-1800	PF 30% release	73.12	608.9	611.52	-2.62	3.6	15.53
Subansiri	-1900	PF 30% release	73.12	607.1	609.67	-2.57	3.56	16.01
Subansiri	-2000	PF 30% release	73.12	605.3	607.81	-2.51	3.53	16.5
Subansiri	-2100	PF 30% release	73.12	603.49	605.95	-2.46	3.49	17.07
Subansiri	-2200	PF 30% release	73.12	601.69	604.43	-2.74	2.65	20.17
Subansiri	-2300	PF 30% release	73.12	601.18	603.76	-2.58	2.37	23.91
Subansiri	-2400	PF 30% release	73.12	600.66	602.56	-1.9	3.05	25.22
Subansiri	0	PF 40% release	97.5	636.59	638.52	-1.93	3.09	32.8
Subansiri	-100	PF 40% release	97.5	633.86	635.91	-2.05	3.18	29.88
Subansiri	-200	PF 40% release	97.5	631.13	633.29	-2.16	3.26	27.78
Subansiri	-300	PF 40% release	97.5	627.84	629.95	-2.11	3.22	28.78
Subansiri	-400	PF 40% release	97.5	624.55	626.84	-2.29	2.19	38.87
Subansiri	-500	PF 40% release	97.5	623.87	626.18	-2.31	2.22	38.1
Subansiri	-600	PF 40% release	97.5	623.19	625.51	-2.32	2.24	37.46
Subansiri	-700	PF 40% release	97.5	622.51	624.93	-2.42	2.1	38.34
Subansiri	-800	PF 40% release	97.5	621.83	623.91	-2.08	2.87	32.66

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-900	PF 40% release	97.5	619.97	622.33	-2.36	3.41	24.23
Subansiri	-1000	PF 40% release	97.5	618.11	620.98	-2.87	2.9	23.42
Subansiri	-1100	PF 40% release	97.5	617.34	620.1	-2.76	2.85	24.77
Subansiri	-1200	PF 40% release	97.5	616.58	619.22	-2.64	2.81	26.3
Subansiri	-1300	PF 40% release	97.5	615.81	618.34	-2.53	2.72	28.31
Subansiri	-1400	PF 40% release	97.5	615.04	617.4	-2.36	2.74	30.19
Subansiri	-1500	PF 40% release	97.5	614.28	616.6	-2.32	2.4	34.94
Subansiri	-1600	PF 40% release	97.5	613.51	615.4	-1.89	2.92	35.26
Subansiri	-1700	PF 40% release	97.5	611.21	613.69	-2.48	3.5	22.39
Subansiri	-1800	PF 40% release	97.5	608.9	611.83	-2.93	3.82	17.4
Subansiri	-1900	PF 40% release	97.5	607.1	609.97	-2.87	3.79	17.91
Subansiri	-2000	PF 40% release	97.5	605.3	608.12	-2.82	3.73	18.53
Subansiri	-2100	PF 40% release	97.5	603.49	606.25	-2.76	3.69	19.15
Subansiri	-2200	PF 40% release	97.5	601.69	604.72	-3.03	2.88	22.33
Subansiri	-2300	PF 40% release	97.5	601.18	604.01	-2.83	2.62	26.28
Subansiri	-2400	PF 40% release	97.5	600.66	602.79	-2.13	3.24	28.29
Subansiri	0	PF 50% release	121.87	636.59	638.68	-2.09	3.27	34.17
Subansiri	-100	PF 50% release	121.87	633.86	636.1	-2.24	3.35	31.88
Subansiri	-200	PF 50% release	121.87	631.13	633.49	-2.36	3.41	30.37
Subansiri	-300	PF 50% release	121.87	627.84	630.14	-2.3	3.36	31.47
Subansiri	-400	PF 50% release	121.87	624.55	627.03	-2.48	2.33	41.25
Subansiri	-500	PF 50% release	121.87	623.87	626.38	-2.51	2.34	41.44
Subansiri	-600	PF 50% release	121.87	623.19	625.72	-2.53	2.36	40.79
Subansiri	-700	PF 50% release	121.87	622.51	625.13	-2.62	2.24	41.52
Subansiri	-800	PF 50% release	121.87	621.83	624.11	-2.28	2.99	35.81
Subansiri	-900	PF 50% release	121.87	619.97	622.55	-2.58	3.58	26.45
Subansiri	-1000	PF 50% release	121.87	618.11	621.22	-3.11	3.08	25.41
Subansiri	-1100	PF 50% release	121.87	617.34	620.34	-3	3.03	26.86
Subansiri	-1200	PF 50% release	121.87	616.58	619.44	-2.86	2.98	28.54
Subansiri	-1300	PF 50% release	121.87	615.81	618.55	-2.74	2.9	30.66
Subansiri	-1400	PF 50% release	121.87	615.04	617.61	-2.57	2.89	32.84
Subansiri	-1500	PF 50% release	121.87	614.28	616.77	-2.49	2.61	37.5
Subansiri	-1600	PF 50% release	121.87	613.51	615.6	-2.09	3	38.92
Subansiri	-1700	PF 50% release	121.87	611.21	613.92	-2.71	3.67	24.44
Subansiri	-1800	PF 50% release	121.87	608.9	612.11	-3.21	3.98	19.05
Subansiri	-1900	PF 50% release	121.87	607.1	610.24	-3.14	3.97	19.58
Subansiri	-2000	PF 50% release	121.87	605.3	608.37	-3.07	3.92	20.22
Subansiri	-2100	PF 50% release	121.87	603.49	606.51	-3.02	3.86	20.93
Subansiri	-2200	PF 50% release	121.87	601.69	604.97	-3.28	3.08	24.15
Subansiri	-2300	PF 50% release	121.87	601.18	604.23	-3.05	2.83	28.25
Subansiri	-2400	PF 50% release	121.87	600.66	602.99	-2.33	3.38	30.93
Subansiri	0	PF 100% release	243.74	636.59	639.34	-2.75	3.99	38.18
Subansiri	-100	PF 100% release	243.74	633.86	636.8	-2.94	4.05	36.27
Subansiri	-200	PF 100% release	243.74	631.13	634.21	-3.08	4.05	36.33
Subansiri	-300	PF 100% release	243.74	627.84	630.84	-3	4.08	35.64
Subansiri	-400	PF 100% release	243.74	624.55	627.73	-3.18	2.94	46.06
Subansiri	-500	PF 100% release	243.74	623.87	627.09	-3.22	2.93	46.97
Subansiri	-600	PF 100% release	243.74	623.19	626.44	-3.25	2.9	48.1
Subansiri	-700	PF 100% release	243.74	622.51	625.84	-3.33	2.79	50
Subansiri	-800	PF 100% release	243.74	621.83	624.87	-3.04	3.35	47.82
Subansiri	-900	PF 100% release	243.74	619.97	623.37	-3.4	4.11	34.89
Subansiri	-1000	PF 100% release	243.74	618.11	622.11	-4	3.72	32.69

River	Ch d/s of Nalo Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-1100	PF 100% release	243.74	617.34	621.19	-3.85	3.67	34.53
Subansiri	-1200	PF 100% release	243.74	616.58	620.26	-3.68	3.62	36.38
Subansiri	-1300	PF 100% release	243.74	615.81	619.3	-3.49	3.58	38
Subansiri	-1400	PF 100% release	243.74	615.04	618.34	-3.3	3.53	39.99
Subansiri	-1500	PF 100% release	243.74	614.28	617.33	-3.05	3.52	42.56
Subansiri	-1600	PF 100% release	243.74	613.51	616.33	-2.82	3.34	47.51
Subansiri	-1700	PF 100% release	243.74	611.21	614.79	-3.58	4.22	32.25
Subansiri	-1800	PF 100% release	243.74	608.9	613.14	-4.24	4.57	25.16
Subansiri	-1900	PF 100% release	243.74	607.1	611.25	-4.15	4.53	25.89
Subansiri	-2000	PF 100% release	243.74	605.3	609.36	-4.06	4.49	26.72
Subansiri	-2100	PF 100% release	243.74	603.49	607.47	-3.98	4.44	27.62
Subansiri	-2200	PF 100% release	243.74	601.69	605.86	-4.17	3.8	30.75
Subansiri	-2300	PF 100% release	243.74	601.18	604.98	-3.8	3.64	35.19
Subansiri	-2400	PF 100% release	243.74	600.66	603.72	-3.06	3.92	40.37

Dengser HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	7.17	543.01	543.62	61	1.27	18.6
Subansiri	-100	PF 10% release	7.17	541.23	541.83	60	1.73	13.85
Subansiri	-200	PF 10% release	7.17	539.45	540.2	75	1.33	14.37
Subansiri	-300	PF 10% release	7.17	537.99	538.75	76	1.76	10.71
Subansiri	-400	PF 10% release	7.17	536.53	537.44	91	1.47	10.69
Subansiri	-500	PF 10% release	7.17	535.06	535.89	83	2.02	8.61
Subansiri	-600	PF 10% release	7.17	533.6	534.66	106	1.34	10.13
Subansiri	-700	PF 10% release	7.17	532.95	533.96	101	1.31	10.76
Subansiri	-800	PF 10% release	7.17	532.29	533.26	97	1.28	11.52
Subansiri	-900	PF 10% release	7.17	531.64	532.56	92	1.25	12.52
Subansiri	-1000	PF 10% release	7.17	530.99	531.84	85	1.21	13.87
Subansiri	-1100	PF 10% release	7.17	530.33	531.11	78	1.14	16.18
Subansiri	-1200	PF 10% release	7.17	529.68	530.31	63	1.08	21.17
Subansiri	-1300	PF 10% release	7.17	528.63	529.3	67	1.26	17.05
Subansiri	0	PF 15% release	10.75	543.01	543.71	70	1.42	21.58
Subansiri	-100	PF 15% release	10.75	541.23	541.93	70	1.88	16.26
Subansiri	-200	PF 15% release	10.75	539.45	540.32	87	1.48	16.68
Subansiri	-300	PF 15% release	10.75	537.99	538.88	89	1.91	12.58
Subansiri	-400	PF 15% release	10.75	536.53	537.58	105	1.65	12.39
Subansiri	-500	PF 15% release	10.75	535.06	536.03	97	2.19	10.12
Subansiri	-600	PF 15% release	10.75	533.6	534.83	123	1.49	11.78
Subansiri	-700	PF 15% release	10.75	532.95	534.13	118	1.46	12.49
Subansiri	-800	PF 15% release	10.75	532.29	533.42	113	1.42	13.39
Subansiri	-900	PF 15% release	10.75	531.64	532.71	107	1.39	14.53
Subansiri	-1000	PF 15% release	10.75	530.99	531.98	99	1.34	16.15
Subansiri	-1100	PF 15% release	10.75	530.33	531.23	90	1.29	18.6
Subansiri	-1200	PF 15% release	10.75	529.68	530.41	73	1.18	24.79
Subansiri	-1300	PF 15% release	10.75	528.63	529.4	77	1.41	19.79
Subansiri	0	PF 20% release	14.34	543.01	543.79	78	1.54	23.87
Subansiri	-100	PF 20% release	14.34	541.23	542.02	79	1.97	18.33
Subansiri	-200	PF 20% release	14.34	539.45	540.42	97	1.59	18.59
Subansiri	-300	PF 20% release	14.34	537.99	538.99	100	2.04	14.08

River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-400	PF 20% release	14.34	536.53	537.7	117	1.77	13.8
Subansiri	-500	PF 20% release	14.34	535.06	536.15	109	2.34	11.31
Subansiri	-600	PF 20% release	14.34	533.6	534.97	137	1.6	13.1
Subansiri	-700	PF 20% release	14.34	532.95	534.26	131	1.57	13.9
Subansiri	-800	PF 20% release	14.34	532.29	533.55	126	1.53	14.9
Subansiri	-900	PF 20% release	14.34	531.64	532.83	119	1.5	16.14
Subansiri	-1000	PF 20% release	14.34	530.99	532.1	111	1.44	17.99
Subansiri	-1100	PF 20% release	14.34	530.33	531.32	99	1.42	20.55
Subansiri	-1200	PF 20% release	14.34	529.68	530.5	82	1.26	27.72
Subansiri	-1300	PF 20% release	14.34	528.63	529.49	86	1.51	22.03
Subansiri	0	PF 30% release	21.51	543.01	543.91	90	1.72	27.7
Subansiri	-100	PF 30% release	21.51	541.23	542.16	93	2.14	21.55
Subansiri	-200	PF 30% release	21.51	539.45	540.58	113	1.76	21.64
Subansiri	-300	PF 30% release	21.51	537.99	539.16	117	2.22	16.53
Subansiri	-400	PF 30% release	21.51	536.53	537.89	136	1.97	16.01
Subansiri	-500	PF 30% release	21.51	535.06	536.34	128	2.53	13.3
Subansiri	-600	PF 30% release	21.51	533.6	535.19	159	1.78	15.21
Subansiri	-700	PF 30% release	21.51	532.95	534.47	152	1.75	16.13
Subansiri	-800	PF 30% release	21.51	532.29	533.75	146	1.71	17.3
Subansiri	-900	PF 30% release	21.51	531.64	533.01	137	1.68	18.7
Subansiri	-1000	PF 30% release	21.51	530.99	532.28	129	1.59	20.92
Subansiri	-1100	PF 30% release	21.51	530.33	531.47	114	1.61	23.62
Subansiri	-1200	PF 30% release	21.51	529.68	530.64	96	1.38	32.46
Subansiri	-1300	PF 30% release	21.51	528.63	529.63	100	1.68	25.59
Subansiri	0	PF 40% release	28.67	543.01	544.02	101	1.84	30.87
Subansiri	-100	PF 40% release	28.67	541.23	542.27	104	2.29	24.07
Subansiri	-200	PF 40% release	28.67	539.45	540.71	126	1.89	24.1
Subansiri	-300	PF 40% release	28.67	537.99	539.3	131	2.35	18.54
Subansiri	-400	PF 40% release	28.67	536.53	538.04	151	2.13	17.77
Subansiri	-500	PF 40% release	28.67	535.06	536.49	143	2.68	14.92
Subansiri	-600	PF 40% release	28.67	533.6	535.36	176	1.92	16.91
Subansiri	-700	PF 40% release	28.67	532.95	534.64	169	1.89	17.93
Subansiri	-800	PF 40% release	28.67	532.29	533.91	162	1.84	19.22
Subansiri	-900	PF 40% release	28.67	531.64	533.16	152	1.81	20.76
Subansiri	-1000	PF 40% release	28.67	530.99	532.42	143	1.72	23.25
Subansiri	-1100	PF 40% release	28.67	530.33	531.58	125	1.78	25.24
Subansiri	-1200	PF 40% release	28.67	529.68	530.76	108	1.47	36.36
Subansiri	-1300	PF 40% release	28.67	528.63	529.74	111	1.82	28.42
Subansiri	0	PF 50% release	35.84	543.01	544.1	109	1.98	32.91
Subansiri	-100	PF 50% release	35.84	541.23	542.37	114	2.37	26.43
Subansiri	-200	PF 50% release	35.84	539.45	540.82	137	2.01	26.17
Subansiri	-300	PF 50% release	35.84	537.99	539.43	144	2.45	20.31
Subansiri	-400	PF 50% release	35.84	536.53	538.16	163	2.28	19.22
Subansiri	-500	PF 50% release	35.84	535.06	536.64	158	2.78	16.38
Subansiri	-600	PF 50% release	35.84	533.6	535.51	191	2.04	18.36
Subansiri	-700	PF 50% release	35.84	532.95	534.78	183	2.01	19.46
Subansiri	-800	PF 50% release	35.84	532.29	534.05	176	1.95	20.87
Subansiri	-900	PF 50% release	35.84	531.64	533.29	165	1.93	22.49
Subansiri	-1000	PF 50% release	35.84	530.99	532.55	156	1.81	25.31
Subansiri	-1100	PF 50% release	35.84	530.33	531.67	134	1.95	26.55
Subansiri	-1200	PF 50% release	35.84	529.68	530.84	116	1.57	37.52



River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-1300	PF 50% release	35.84	528.63	529.83	120	1.93	30.85
Subansiri	0	PF 100% release	71.68	543.01	544.38	137	2.59	34.8
Subansiri	-100	PF 100% release	71.68	541.23	542.72	149	2.83	31.05
Subansiri	-200	PF 100% release	71.68	539.45	541.22	177	2.39	32.92
Subansiri	-300	PF 100% release	71.68	537.99	539.88	189	2.83	26.75
Subansiri	-400	PF 100% release	71.68	536.53	538.64	211	2.74	24.8
Subansiri	-500	PF 100% release	71.68	535.06	537.14	208	3.19	21.62
Subansiri	-600	PF 100% release	71.68	533.6	536.07	247	2.45	23.66
Subansiri	-700	PF 100% release	71.68	532.95	535.31	236	2.41	25.08
Subansiri	-800	PF 100% release	71.68	532.29	534.56	227	2.36	26.88
Subansiri	-900	PF 100% release	71.68	531.64	533.75	211	2.36	28.79
Subansiri	-1000	PF 100% release	71.68	530.99	533.01	202	2.19	31.14
Subansiri	-1100	PF 100% release	71.68	530.33	532.01	168	2.51	31.56
Subansiri	-1200	PF 100% release	71.68	529.68	531.19	151	1.95	41.7
Subansiri	-1300	PF 100% release	71.68	528.63	530.18	155	2.32	39.83

Dengser HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	63.44	543.01	544.32	131	2.47	34.42
Subansiri	-100	PF 10% release	63.44	541.23	542.65	142	2.74	30.57
Subansiri	-200	PF 10% release	63.44	539.45	541.15	170	2.29	32.56
Subansiri	-300	PF 10% release	63.44	537.99	539.79	180	2.76	25.48
Subansiri	-400	PF 10% release	63.44	536.53	538.54	201	2.65	23.71
Subansiri	-500	PF 10% release	63.44	535.06	537.04	198	3.12	20.59
Subansiri	-600	PF 10% release	63.44	533.6	535.96	236	2.38	22.63
Subansiri	-700	PF 10% release	63.44	532.95	535.21	226	2.33	23.99
Subansiri	-800	PF 10% release	63.44	532.29	534.46	217	2.28	25.71
Subansiri	-900	PF 10% release	63.44	531.64	533.66	202	2.28	27.56
Subansiri	-1000	PF 10% release	63.44	530.99	532.92	193	2.11	30.2
Subansiri	-1100	PF 10% release	63.44	530.33	531.94	161	2.41	30.55
Subansiri	-1200	PF 10% release	63.44	529.68	531.12	144	1.88	40.87
Subansiri	-1300	PF 10% release	63.44	528.63	530.11	148	2.25	38.04
Subansiri	0	PF 15% release	95.16	543.01	544.53	152	2.9	35.79
Subansiri	-100	PF 15% release	95.16	541.23	542.9	167	3.07	32.31
Subansiri	-200	PF 15% release	95.16	539.45	541.4	195	2.64	33.8
Subansiri	-300	PF 15% release	95.16	537.99	540.1	211	3.02	29.23
Subansiri	-400	PF 15% release	95.16	536.53	538.87	234	2.95	27.54
Subansiri	-500	PF 15% release	95.16	535.06	537.39	233	3.38	24.21
Subansiri	-600	PF 15% release	95.16	533.6	536.34	274	2.65	26.23
Subansiri	-700	PF 15% release	95.16	532.95	535.57	262	2.61	27.8
Subansiri	-800	PF 15% release	95.16	532.29	534.8	251	2.55	29.77
Subansiri	-900	PF 15% release	95.16	531.64	533.98	234	2.55	31.84
Subansiri	-1000	PF 15% release	95.16	530.99	533.23	224	2.38	33.54
Subansiri	-1100	PF 15% release	95.16	530.33	532.19	186	2.77	34.15
Subansiri	-1200	PF 15% release	95.16	529.68	531.37	169	2.15	43.85
Subansiri	-1300	PF 15% release	95.16	528.63	530.36	173	2.49	44.23
Subansiri	0	PF 20% release	126.88	543.01	544.7	169	3.23	36.99
Subansiri	-100	PF 20% release	126.88	541.23	543.12	189	3.33	33.84
Subansiri	-200	PF 20% release	126.88	539.45	541.62	217	2.91	34.85

Subansiri	-300	PF 20% release	126.88	537.99	540.35	236	3.26	31.54
Subansiri	-400	PF 20% release	126.88	536.53	539.14	261	3.17	30.67
Subansiri	-500	PF 20% release	126.88	535.06	537.67	261	3.59	27.15
Subansiri	-600	PF 20% release	126.88	533.6	536.64	304	2.87	29.13
Subansiri	-700	PF 20% release	126.88	532.95	535.86	291	2.82	30.87
Subansiri	-800	PF 20% release	126.88	532.29	535.07	278	2.78	32.94
Subansiri	-900	PF 20% release	126.88	531.64	534.24	260	2.78	34.04
Subansiri	-1000	PF 20% release	126.88	530.99	533.49	250	2.59	36.27
Subansiri	-1100	PF 20% release	126.88	530.33	532.4	207	3.04	37.14
Subansiri	-1200	PF 20% release	126.88	529.68	531.58	190	2.36	46.36
Subansiri	-1300	PF 20% release	126.88	528.63	530.54	191	2.71	48.98
Subansiri	0	PF 30% release	190.33	543.01	545.05	204	3.62	39.32
Subansiri	-100	PF 30% release	190.33	541.23	543.49	226	3.72	36.47
Subansiri	-200	PF 30% release	190.33	539.45	542	255	3.33	36.66
Subansiri	-300	PF 30% release	190.33	537.99	540.75	276	3.64	35.31
Subansiri	-400	PF 30% release	190.33	536.53	539.54	301	3.58	33.95
Subansiri	-500	PF 30% release	190.33	535.06	538.13	307	3.9	31.9
Subansiri	-600	PF 30% release	190.33	533.6	537.12	352	3.21	33.74
Subansiri	-700	PF 30% release	190.33	532.95	536.31	336	3.17	35.65
Subansiri	-800	PF 30% release	190.33	532.29	535.49	320	3.14	36.78
Subansiri	-900	PF 30% release	190.33	531.64	534.65	301	3.14	37.68
Subansiri	-1000	PF 30% release	190.33	530.99	533.9	291	2.93	40.71
Subansiri	-1100	PF 30% release	190.33	530.33	532.74	241	3.45	42.04
Subansiri	-1200	PF 30% release	190.33	529.68	531.94	226	2.68	50.6
Subansiri	-1300	PF 30% release	190.33	528.63	530.8	217	3.17	52.27
Subansiri	0	PF 40% release	253.77	543.01	545.35	234	3.92	41.37
Subansiri	-100	PF 40% release	253.77	541.23	543.81	258	4.01	38.74
Subansiri	-200	PF 40% release	253.77	539.45	542.3	285	3.7	38.11
Subansiri	-300	PF 40% release	253.77	537.99	541.09	310	3.89	38.51
Subansiri	-400	PF 40% release	253.77	536.53	539.86	333	3.94	36.25
Subansiri	-500	PF 40% release	253.77	535.06	538.49	343	4.14	35.65
Subansiri	-600	PF 40% release	253.77	533.6	537.5	390	3.49	37.36
Subansiri	-700	PF 40% release	253.77	532.95	536.67	372	3.46	38.62
Subansiri	-800	PF 40% release	253.77	532.29	535.84	355	3.43	39.37
Subansiri	-900	PF 40% release	253.77	531.64	535	336	3.42	40.68
Subansiri	-1000	PF 40% release	253.77	530.99	534.24	325	3.2	44.32
Subansiri	-1100	PF 40% release	253.77	530.33	533.02	269	3.76	46.05
Subansiri	-1200	PF 40% release	253.77	529.68	532.25	257	2.91	54.29
Subansiri	-1300	PF 40% release	253.77	528.63	531.01	238	3.57	54.78
Subansiri	0	PF 50% release	317.21	543.01	545.62	261	4.16	43.2
Subansiri	-100	PF 50% release	317.21	541.23	544.09	286	4.25	40.74
Subansiri	-200	PF 50% release	317.21	539.45	542.55	310	4.07	39.28
Subansiri	-300	PF 50% release	317.21	537.99	541.4	341	4.12	40.02
Subansiri	-400	PF 50% release	317.21	536.53	540.13	360	4.26	38.17
Subansiri	-500	PF 50% release	317.21	535.06	538.8	374	4.38	37.53
Subansiri	-600	PF 50% release	317.21	533.6	537.81	421	3.73	40.04
Subansiri	-700	PF 50% release	317.21	532.95	536.98	403	3.71	40.6
Subansiri	-800	PF 50% release	317.21	532.29	536.15	386	3.68	41.63
Subansiri	-900	PF 50% release	317.21	531.64	535.29	365	3.67	43.26
Subansiri	-1000	PF 50% release	317.21	530.99	534.52	353	3.45	47.25
Subansiri	-1100	PF 50% release	317.21	530.33	533.28	295	3.97	49.79
Subansiri	-1200	PF 50% release	317.21	529.68	532.49	281	3.14	57.23
Subansiri	-1300	PF 50% release	317.21	528.63	531.23	260	3.81	57.46
Subansiri	0	PF 100% release	634.42	543.01	546.71	370	4.99	50.52

Subansiri	-100	PF 100% release	634.42	541.23	545.22	399	5.12	47.01
Subansiri	-200	PF 100% release	634.42	539.45	543.65	420	5.12	44.52
Subansiri	-300	PF 100% release	634.42	537.99	542.46	447	5.18	45.34
Subansiri	-400	PF 100% release	634.42	536.53	541.28	475	5.16	45.86
Subansiri	-500	PF 100% release	634.42	535.06	539.99	493	5.21	44.92
Subansiri	-600	PF 100% release	634.42	533.6	539.01	541	4.63	46.82
Subansiri	-700	PF 100% release	634.42	532.95	538.16	521	4.6	48.2
Subansiri	-800	PF 100% release	634.42	532.29	537.29	500	4.57	50.16
Subansiri	-900	PF 100% release	634.42	531.64	536.39	475	4.55	52.87
Subansiri	-1000	PF 100% release	634.42	530.99	535.49	450	4.44	57.6
Subansiri	-1100	PF 100% release	634.42	530.33	534.27	394	4.72	59.85
Subansiri	-1200	PF 100% release	634.42	529.68	533.44	376	3.95	68.54
Subansiri	-1300	PF 100% release	634.42	528.63	532.11	348	4.65	62.32

Dengser HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition

River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	25.5	543.01	543.97	96	1.79	29.54
Subansiri	-100	PF 10% release	25.5	541.23	542.22	99	2.23	23
Subansiri	-200	PF 10% release	25.5	539.45	540.65	120	1.85	23.01
Subansiri	-300	PF 10% release	25.5	537.99	539.25	126	2.28	17.74
Subansiri	-400	PF 10% release	25.5	536.53	537.97	144	2.08	16.97
Subansiri	-500	PF 10% release	25.5	535.06	536.44	138	2.6	14.3
Subansiri	-600	PF 10% release	25.5	533.6	535.29	169	1.86	16.2
Subansiri	-700	PF 10% release	25.5	532.95	534.57	162	1.83	17.18
Subansiri	-800	PF 10% release	25.5	532.29	533.84	155	1.79	18.41
Subansiri	-900	PF 10% release	25.5	531.64	533.1	146	1.75	19.9
Subansiri	-1000	PF 10% release	25.5	530.99	532.36	137	1.67	22.26
Subansiri	-1100	PF 10% release	25.5	530.33	531.53	120	1.71	24.58
Subansiri	-1200	PF 10% release	25.5	529.68	530.71	103	1.43	34.71
Subansiri	-1300	PF 10% release	25.5	528.63	529.69	106	1.76	27.22
Subansiri	0	PF 15% release	38.24	543.01	544.12	111	2.02	33.07
Subansiri	-100	PF 15% release	38.24	541.23	542.4	117	2.42	27.03
Subansiri	-200	PF 15% release	38.24	539.45	540.85	140	2.04	26.82
Subansiri	-300	PF 15% release	38.24	537.99	539.47	148	2.48	20.84
Subansiri	-400	PF 15% release	38.24	536.53	538.2	167	2.32	19.68
Subansiri	-500	PF 15% release	38.24	535.06	536.68	162	2.82	16.81
Subansiri	-600	PF 15% release	38.24	533.6	535.56	196	2.07	18.8
Subansiri	-700	PF 15% release	38.24	532.95	534.83	188	2.04	19.93
Subansiri	-800	PF 15% release	38.24	532.29	534.09	180	1.99	21.36
Subansiri	-900	PF 15% release	38.24	531.64	533.33	169	1.97	23.02
Subansiri	-1000	PF 15% release	38.24	530.99	532.59	160	1.84	25.95
Subansiri	-1100	PF 15% release	38.24	530.33	531.69	136	2	26.95
Subansiri	-1200	PF 15% release	38.24	529.68	530.87	119	1.6	37.86
Subansiri	-1300	PF 15% release	38.24	528.63	529.86	123	1.97	31.58
Subansiri	0	PF 20% release	50.99	543.01	544.23	122	2.27	33.79
Subansiri	-100	PF 20% release	50.99	541.23	542.54	131	2.56	29.8
Subansiri	-200	PF 20% release	50.99	539.45	541.01	156	2.18	29.93
Subansiri	-300	PF 20% release	50.99	537.99	539.64	165	2.63	23.37
Subansiri	-400	PF 20% release	50.99	536.53	538.39	186	2.5	21.87
Subansiri	-500	PF 20% release	50.99	535.06	536.87	181	2.99	18.86
Subansiri	-600	PF 20% release	50.99	533.6	535.78	218	2.24	20.9
Subansiri	-700	PF 20% release	50.99	532.95	535.04	209	2.2	22.14
Subansiri	-800	PF 20% release	50.99	532.29	534.29	200	2.15	23.74

River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-900	PF 20% release	50.99	531.64	533.51	187	2.13	25.51
Subansiri	-1000	PF 20% release	50.99	530.99	532.77	178	1.98	28.63
Subansiri	-1100	PF 20% release	50.99	530.33	531.83	150	2.23	28.88
Subansiri	-1200	PF 20% release	50.99	529.68	531.01	133	1.75	39.47
Subansiri	-1300	PF 20% release	50.99	528.63	530	137	2.12	35.11
Subansiri	0	PF 30% release	76.49	543.01	544.41	140	2.66	35.01
Subansiri	-100	PF 30% release	76.49	541.23	542.76	153	2.88	31.33
Subansiri	-200	PF 30% release	76.49	539.45	541.26	181	2.44	33.11
Subansiri	-300	PF 30% release	76.49	537.99	539.93	194	2.86	27.44
Subansiri	-400	PF 30% release	76.49	536.53	538.69	216	2.78	25.41
Subansiri	-500	PF 30% release	76.49	535.06	537.19	213	3.24	22.18
Subansiri	-600	PF 30% release	76.49	533.6	536.13	253	2.5	24.23
Subansiri	-700	PF 30% release	76.49	532.95	535.37	242	2.46	25.68
Subansiri	-800	PF 30% release	76.49	532.29	534.61	232	2.4	27.52
Subansiri	-900	PF 30% release	76.49	531.64	533.8	216	2.4	29.47
Subansiri	-1000	PF 30% release	76.49	530.99	533.05	206	2.23	31.67
Subansiri	-1100	PF 30% release	76.49	530.33	532.05	172	2.57	32.12
Subansiri	-1200	PF 30% release	76.49	529.68	531.23	155	2	42.17
Subansiri	-1300	PF 30% release	76.49	528.63	530.22	159	2.35	40.8
Subansiri	0	PF 40% release	101.99	543.01	544.57	156	2.98	36.06
Subansiri	-100	PF 40% release	101.99	541.23	542.95	172	3.13	32.66
Subansiri	-200	PF 40% release	101.99	539.45	541.45	200	2.7	34.04
Subansiri	-300	PF 40% release	101.99	537.99	540.16	217	3.08	29.75
Subansiri	-400	PF 40% release	101.99	536.53	538.93	240	3	28.28
Subansiri	-500	PF 40% release	101.99	535.06	537.45	239	3.43	24.88
Subansiri	-600	PF 40% release	101.99	533.6	536.41	281	2.7	26.9
Subansiri	-700	PF 40% release	101.99	532.95	535.64	269	2.66	28.52
Subansiri	-800	PF 40% release	101.99	532.29	534.86	257	2.61	30.49
Subansiri	-900	PF 40% release	101.99	531.64	534.04	240	2.6	32.34
Subansiri	-1000	PF 40% release	101.99	530.99	533.29	230	2.43	34.17
Subansiri	-1100	PF 40% release	101.99	530.33	532.24	191	2.83	34.83
Subansiri	-1200	PF 40% release	101.99	529.68	531.42	174	2.19	44.43
Subansiri	-1300	PF 40% release	101.99	528.63	530.4	177	2.54	45.34
Subansiri	0	PF 50% release	127.48	543.01	544.71	170	3.23	37.01
Subansiri	-100	PF 50% release	127.48	541.23	543.12	189	3.33	33.87
Subansiri	-200	PF 50% release	127.48	539.45	541.63	218	2.91	34.86
Subansiri	-300	PF 50% release	127.48	537.99	540.35	236	3.26	31.58
Subansiri	-400	PF 50% release	127.48	536.53	539.14	261	3.17	30.72
Subansiri	-500	PF 50% release	127.48	535.06	537.67	261	3.59	27.2
Subansiri	-600	PF 50% release	127.48	533.6	536.64	304	2.87	29.18
Subansiri	-700	PF 50% release	127.48	532.95	535.87	292	2.82	30.93
Subansiri	-800	PF 50% release	127.48	532.29	535.07	278	2.78	33
Subansiri	-900	PF 50% release	127.48	531.64	534.24	260	2.78	34.08
Subansiri	-1000	PF 50% release	127.48	530.99	533.49	250	2.59	36.32
Subansiri	-1100	PF 50% release	127.48	530.33	532.4	207	3.04	37.19
Subansiri	-1200	PF 50% release	127.48	529.68	531.59	191	2.36	46.41
Subansiri	-1300	PF 50% release	127.48	528.63	530.54	191	2.72	49.04
Subansiri	0	PF 100% release	254.97	543.01	545.36	235	3.93	41.4
Subansiri	-100	PF 100% release	254.97	541.23	543.82	259	4.01	38.78
Subansiri	-200	PF 100% release	254.97	539.45	542.31	286	3.71	38.13

River	Ch d/s of Dengser Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-300	PF 100% release	254.97	537.99	541.1	311	3.9	38.54
Subansiri	-400	PF 100% release	254.97	536.53	539.86	333	3.95	36.28
Subansiri	-500	PF 100% release	254.97	535.06	538.5	344	4.14	35.69
Subansiri	-600	PF 100% release	254.97	533.6	537.5	390	3.49	37.42
Subansiri	-700	PF 100% release	254.97	532.95	536.68	373	3.46	38.66
Subansiri	-800	PF 100% release	254.97	532.29	535.85	356	3.44	39.42
Subansiri	-900	PF 100% release	254.97	531.64	535	336	3.43	40.73
Subansiri	-1000	PF 100% release	254.97	530.99	534.25	326	3.2	44.38
Subansiri	-1100	PF 100% release	254.97	530.33	533.02	269	3.77	46.12
Subansiri	-1200	PF 100% release	254.97	529.68	532.25	257	2.91	54.35
Subansiri	-1300	PF 100% release	254.97	528.63	531.01	238	3.58	54.84

Subansiri Upper HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Distance d/s of Subansiri upper dam site (m)	Profile	Total Discharge (m <sup>3</sup> /s)	Min Bed Elevation (m)	Water Surface Elevation (m)	Flow Depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0	PF 10% release	8.69	257.68	258.68	100	0.61	42.04
Subansiri	-100	PF 10% release	8.69	257.2	258.33	113	0.84	28.98
Subansiri	-200	PF 10% release	8.69	256.73	257.86	113	1.11	13.82
Subansiri	-300	PF 10% release	8.69	256.25	257.43	118	1.14	12.94
Subansiri	-400	PF 10% release	8.69	255.78	257.01	123	1.16	12.19
Subansiri	-500	PF 10% release	8.69	255.3	256.55	125	1.24	11.21
Subansiri	-600	PF 10% release	8.69	254.84	256.07	123	1.23	11.45
Subansiri	-700	PF 10% release	8.69	254.38	255.58	120	1.24	11.67
Subansiri	-800	PF 10% release	8.69	253.92	255.09	117	1.21	12.13
Subansiri	-900	PF 10% release	8.69	253.46	254.54	108	1.3	12.2
Subansiri	-1000	PF 10% release	8.69	253	254.27	127	0.84	14.42
Subansiri	-1100	PF 10% release	8.69	252.72	254.04	132	0.91	16.36
Subansiri	-1200	PF 10% release	8.69	252.44	253.73	129	1	14.44
Subansiri	-1300	PF 10% release	8.69	252.16	253.39	123	1.04	13.48
Subansiri	-1400	PF 10% release	8.69	251.88	253.05	117	1.07	12.79
Subansiri	-1500	PF 10% release	8.69	251.6	252.7	110	1.09	12.05
Subansiri	-1600	PF 10% release	8.69	251.13	252.37	124	1.02	14.09
Subansiri	-1700	PF 10% release	8.69	250.67	252.01	134	1.05	14.21
Subansiri	-1800	PF 10% release	8.69	250.2	251.59	139	1.17	11.84
Subansiri	0	PF 15% release	13.04	257.68	258.78	110	0.7	42.91
Subansiri	-100	PF 15% release	13.04	257.2	258.49	129	0.84	33.31
Subansiri	-200	PF 15% release	13.04	256.73	258.1	137	1.05	24.72
Subansiri	-300	PF 15% release	13.04	256.25	257.64	139	1.23	15.93
Subansiri	-400	PF 15% release	13.04	255.78	257.22	144	1.27	14.36
Subansiri	-500	PF 15% release	13.04	255.3	256.75	145	1.37	13.05
Subansiri	-600	PF 15% release	13.04	254.84	256.27	143	1.37	13.43
Subansiri	-700	PF 15% release	13.04	254.38	255.78	140	1.36	13.87
Subansiri	-800	PF 15% release	13.04	253.92	255.28	136	1.35	14.38
Subansiri	-900	PF 15% release	13.04	253.46	254.76	130	1.33	15.4
Subansiri	-1000	PF 15% release	13.04	253	254.48	148	0.95	17.34
Subansiri	-1100	PF 15% release	13.04	252.72	254.25	153	0.98	19.9
Subansiri	-1200	PF 15% release	13.04	252.44	253.94	150	1.09	17.94
Subansiri	-1300	PF 15% release	13.04	252.16	253.6	144	1.16	15.5
Subansiri	-1400	PF 15% release	13.04	251.88	253.25	137	1.19	14.53
Subansiri	-1500	PF 15% release	13.04	251.6	252.9	130	1.24	13.57

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
Subansiri	-1600	PF 15% release	13.04	251.13	252.57	144	1.12	16.56
Subansiri	-1700	PF 15% release	13.04	250.67	252.23	156	1.09	18.6
Subansiri	-1800	PF 15% release	13.04	250.2	251.81	161	1.26	15.61
Subansiri	0	PF 20% release	17.39	257.68	258.88	120	0.76	43.53
Subansiri	-100	PF 20% release	17.39	257.2	258.6	140	0.91	36.09
Subansiri	-200	PF 20% release	17.39	256.73	258.25	152	1.07	27.61
Subansiri	-300	PF 20% release	17.39	256.25	257.82	157	1.25	20.59
Subansiri	-400	PF 20% release	17.39	255.78	257.39	161	1.35	16.53
Subansiri	-500	PF 20% release	17.39	255.3	256.92	162	1.48	14.5
Subansiri	-600	PF 20% release	17.39	254.84	256.43	159	1.47	15.03
Subansiri	-700	PF 20% release	17.39	254.38	255.95	157	1.44	15.72
Subansiri	-800	PF 20% release	17.39	253.92	255.44	152	1.43	17.52
Subansiri	-900	PF 20% release	17.39	253.46	254.93	147	1.38	17.3
Subansiri	-1000	PF 20% release	17.39	253	254.65	165	1.04	19.77
Subansiri	-1100	PF 20% release	17.39	252.72	254.4	168	1.05	21.89
Subansiri	-1200	PF 20% release	17.39	252.44	254.1	166	1.15	20.52
Subansiri	-1300	PF 20% release	17.39	252.16	253.76	160	1.24	17.14
Subansiri	-1400	PF 20% release	17.39	251.88	253.42	154	1.29	15.86
Subansiri	-1500	PF 20% release	17.39	251.6	253.06	146	1.36	14.66
Subansiri	-1600	PF 20% release	17.39	251.13	252.73	160	1.21	18.39
Subansiri	-1700	PF 20% release	17.39	250.67	252.41	174	1.12	22.15
Subansiri	-1800	PF 20% release	17.39	250.2	251.99	179	1.26	22.05
Subansiri	0	PF 30% release	26.08	257.68	259.04	136	0.87	44.6
Subansiri	-100	PF 30% release	26.08	257.2	258.79	159	0.98	41.27
Subansiri	-200	PF 30% release	26.08	256.73	258.46	173	1.15	31.81
Subansiri	-300	PF 30% release	26.08	256.25	258.08	183	1.3	25.6
Subansiri	-400	PF 30% release	26.08	255.78	257.66	188	1.44	20.68
Subansiri	-500	PF 30% release	26.08	255.3	257.19	189	1.63	17.29
Subansiri	-600	PF 30% release	26.08	254.84	256.71	187	1.59	18.21
Subansiri	-700	PF 30% release	26.08	254.38	256.21	183	1.56	20.87
Subansiri	-800	PF 30% release	26.08	253.92	255.67	175	1.56	20.64
Subansiri	-900	PF 30% release	26.08	253.46	255.2	174	1.48	20.73
Subansiri	-1000	PF 30% release	26.08	253	254.9	190	1.17	23.89
Subansiri	-1100	PF 30% release	26.08	252.72	254.65	193	1.16	24.87
Subansiri	-1200	PF 30% release	26.08	252.44	254.37	193	1.23	24.16
Subansiri	-1300	PF 30% release	26.08	252.16	254.04	188	1.36	20.78
Subansiri	-1400	PF 30% release	26.08	251.88	253.69	181	1.45	17.64
Subansiri	-1500	PF 30% release	26.08	251.6	253.31	171	1.57	16.05
Subansiri	-1600	PF 30% release	26.08	251.13	252.96	183	1.38	20.59
Subansiri	-1700	PF 30% release	26.08	250.67	252.64	197	1.24	26.04
Subansiri	-1800	PF 30% release	26.08	250.2	252.23	203	1.3	31.31
Subansiri	0	PF 40% release	34.78	257.68	259.18	150	0.96	45.49
Subansiri	-100	PF 40% release	34.78	257.2	258.94	174	1.06	42.65
Subansiri	-200	PF 40% release	34.78	256.73	258.64	191	1.21	35.25
Subansiri	-300	PF 40% release	34.78	256.25	258.28	203	1.37	28.67
Subansiri	-400	PF 40% release	34.78	255.78	257.88	210	1.52	23.84
Subansiri	-500	PF 40% release	34.78	255.3	257.41	211	1.72	19.78
Subansiri	-600	PF 40% release	34.78	254.84	256.92	208	1.68	22.79
Subansiri	-700	PF 40% release	34.78	254.38	256.39	201	1.67	23.28
Subansiri	-800	PF 40% release	34.78	253.92	255.87	195	1.67	23.03
Subansiri	-900	PF 40% release	34.78	253.46	255.4	194	1.58	23.44
Subansiri	-1000	PF 40% release	34.78	253	255.1	210	1.27	26.39

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
Subansiri	-1100	PF 40% release	34.78	252.72	254.85	213	1.26	26.55
Subansiri	-1200	PF 40% release	34.78	252.44	254.58	214	1.31	26.05
Subansiri	-1300	PF 40% release	34.78	252.16	254.27	211	1.43	23.4
Subansiri	-1400	PF 40% release	34.78	251.88	253.92	204	1.57	19.19
Subansiri	-1500	PF 40% release	34.78	251.6	253.51	191	1.75	17.17
Subansiri	-1600	PF 40% release	34.78	251.13	253.14	201	1.52	22.3
Subansiri	-1700	PF 40% release	34.78	250.67	252.8	213	1.36	28.77
Subansiri	-1800	PF 40% release	34.78	250.2	252.39	219	1.36	36.51
Subansiri	0	PF 50% release	43.47	257.68	259.31	163	1.03	46.31
Subansiri	-100	PF 50% release	43.47	257.2	259.08	188	1.12	43.58
Subansiri	-200	PF 50% release	43.47	256.73	258.8	207	1.26	38.48
Subansiri	-300	PF 50% release	43.47	256.25	258.46	221	1.41	31.75
Subansiri	-400	PF 50% release	43.47	255.78	258.09	231	1.55	27.59
Subansiri	-500	PF 50% release	43.47	255.3	257.6	230	1.8	23.41
Subansiri	-600	PF 50% release	43.47	254.84	257.08	224	1.77	25.47
Subansiri	-700	PF 50% release	43.47	254.38	256.55	217	1.77	25.35
Subansiri	-800	PF 50% release	43.47	253.92	256.03	211	1.75	25.12
Subansiri	-900	PF 50% release	43.47	253.46	255.57	211	1.66	25.73
Subansiri	-1000	PF 50% release	43.47	253	255.27	227	1.36	27.96
Subansiri	-1100	PF 50% release	43.47	252.72	255.03	231	1.35	27.98
Subansiri	-1200	PF 50% release	43.47	252.44	254.77	233	1.38	27.47
Subansiri	-1300	PF 50% release	43.47	252.16	254.47	231	1.48	25.6
Subansiri	-1400	PF 50% release	43.47	251.88	254.12	224	1.66	21.75
Subansiri	-1500	PF 50% release	43.47	251.6	253.68	208	1.9	18.11
Subansiri	-1600	PF 50% release	43.47	251.13	253.29	216	1.65	23.72
Subansiri	-1700	PF 50% release	43.47	250.67	252.93	226	1.48	30.94
Subansiri	-1800	PF 50% release	43.47	250.2	252.52	232	1.43	38.85
Subansiri	0	PF 100% release	86.94	257.68	259.83	215	1.3	49.68
Subansiri	-100	PF 100% release	86.94	257.2	259.62	242	1.37	47.48
Subansiri	-200	PF 100% release	86.94	256.73	259.38	265	1.46	45.68
Subansiri	-300	PF 100% release	86.94	256.25	259.08	283	1.6	44.23
Subansiri	-400	PF 100% release	86.94	255.78	258.71	293	1.77	39.16
Subansiri	-500	PF 100% release	86.94	255.3	258.21	291	2.02	36.28
Subansiri	-600	PF 100% release	86.94	254.84	257.66	282	2.07	34.43
Subansiri	-700	PF 100% release	86.94	254.38	257.13	275	2.09	32.76
Subansiri	-800	PF 100% release	86.94	253.92	256.63	271	2.07	31.94
Subansiri	-900	PF 100% release	86.94	253.46	256.22	276	1.92	32.27
Subansiri	-1000	PF 100% release	86.94	253	255.95	295	1.64	34.1
Subansiri	-1100	PF 100% release	86.94	252.72	255.71	299	1.63	33.78
Subansiri	-1200	PF 100% release	86.94	252.44	255.47	303	1.65	33.24
Subansiri	-1300	PF 100% release	86.94	252.16	255.21	305	1.72	32.08
Subansiri	-1400	PF 100% release	86.94	251.88	254.88	300	1.89	29.9
Subansiri	-1500	PF 100% release	86.94	251.6	254.34	274	2.37	24.41
Subansiri	-1600	PF 100% release	86.94	251.13	253.89	276	2.04	32.38
Subansiri	-1700	PF 100% release	86.94	250.67	253.47	280	1.79	42.66
Subansiri	-1800	PF 100% release	86.94	250.2	253.09	289	1.5	59.92

**Subansiri Upper HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition**

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	0	PF 10% release	76.95	257.68	259.72	204	1.24	48.99
Subansiri	-100	PF 10% release	76.95	257.2	259.51	231	1.32	46.67
Subansiri	-200	PF 10% release	76.95	256.73	259.27	254	1.41	44.67
Subansiri	-300	PF 10% release	76.95	256.25	258.97	272	1.55	42.08
Subansiri	-400	PF 10% release	76.95	255.78	258.6	282	1.7	37.9
Subansiri	-500	PF 10% release	76.95	255.3	258.1	280	1.96	35.25
Subansiri	-600	PF 10% release	76.95	254.84	257.55	271	2.01	32.95
Subansiri	-700	PF 10% release	76.95	254.38	257.01	263	2.03	31.42
Subansiri	-800	PF 10% release	76.95	253.92	256.51	259	2.01	30.72
Subansiri	-900	PF 10% release	76.95	253.46	256.09	263	1.87	31.03
Subansiri	-1000	PF 10% release	76.95	253	255.82	282	1.59	32.87
Subansiri	-1100	PF 10% release	76.95	252.72	255.58	286	1.57	32.62
Subansiri	-1200	PF 10% release	76.95	252.44	255.33	289	1.59	32.1
Subansiri	-1300	PF 10% release	76.95	252.16	255.06	290	1.67	30.93
Subansiri	-1400	PF 10% release	76.95	251.88	254.73	285	1.85	28.47
Subansiri	-1500	PF 10% release	76.95	251.6	254.21	261	2.3	22.63
Subansiri	-1600	PF 10% release	76.95	251.13	253.77	264	1.98	29.92
Subansiri	-1700	PF 10% release	76.95	250.67	253.37	270	1.72	39.87
Subansiri	-1800	PF 10% release	76.95	250.2	252.98	278	1.5	56.43
Subansiri	0	PF 15% release	115.42	257.68	260.1	242	1.43	51.42
Subansiri	-100	PF 15% release	115.42	257.2	259.89	269	1.51	49.52
Subansiri	-200	PF 15% release	115.42	256.73	259.64	291	1.61	48.12
Subansiri	-300	PF 15% release	115.42	256.25	259.35	310	1.74	46.36
Subansiri	-400	PF 15% release	115.42	255.78	258.97	319	1.93	42.47
Subansiri	-500	PF 15% release	115.42	255.3	258.46	316	2.19	38.86
Subansiri	-600	PF 15% release	115.42	254.84	257.93	309	2.23	37.09
Subansiri	-700	PF 15% release	115.42	254.38	257.42	304	2.24	35.74
Subansiri	-800	PF 15% release	115.42	253.92	256.94	302	2.2	35.06
Subansiri	-900	PF 15% release	115.42	253.46	256.55	309	2.04	35.53
Subansiri	-1000	PF 15% release	115.42	253	256.3	330	1.77	37.3
Subansiri	-1100	PF 15% release	115.42	252.72	256.06	334	1.76	36.74
Subansiri	-1200	PF 15% release	115.42	252.44	255.82	338	1.78	36.05
Subansiri	-1300	PF 15% release	115.42	252.16	255.55	339	1.86	34.93
Subansiri	-1400	PF 15% release	115.42	251.88	255.22	334	2.03	32.71
Subansiri	-1500	PF 15% release	115.42	251.6	254.64	304	2.6	27.48
Subansiri	-1600	PF 15% release	115.42	251.13	254.15	302	2.23	36.63
Subansiri	-1700	PF 15% release	115.42	250.67	253.71	304	1.93	49.19
Subansiri	-1800	PF 15% release	115.42	250.2	253.39	319	1.51	66.89
Subansiri	0	PF 20% release	153.89	257.68	260.41	273	1.58	53.46
Subansiri	-100	PF 20% release	153.89	257.2	260.2	300	1.67	51.87
Subansiri	-200	PF 20% release	153.89	256.73	259.95	322	1.77	50.45
Subansiri	-300	PF 20% release	153.89	256.25	259.65	340	1.91	47.78
Subansiri	-400	PF 20% release	153.89	255.78	259.27	349	2.1	45.51
Subansiri	-500	PF 20% release	153.89	255.3	258.77	347	2.37	41.9
Subansiri	-600	PF 20% release	153.89	254.84	258.25	341	2.4	40.17
Subansiri	-700	PF 20% release	153.89	254.38	257.75	337	2.4	39.06
Subansiri	-800	PF 20% release	153.89	253.92	257.3	338	2.34	38.65
Subansiri	-900	PF 20% release	153.89	253.46	256.94	348	2.17	39.24



River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	-1000	PF 20% release	153.89	253	256.69	369	1.9	41
Subansiri	-1100	PF 20% release	153.89	252.72	256.45	373	1.9	40.29
Subansiri	-1200	PF 20% release	153.89	252.44	256.21	377	1.93	39.28
Subansiri	-1300	PF 20% release	153.89	252.16	255.94	378	2.02	38.05
Subansiri	-1400	PF 20% release	153.89	251.88	255.6	372	2.21	35.94
Subansiri	-1500	PF 20% release	153.89	251.6	254.96	336	2.88	30.53
Subansiri	-1600	PF 20% release	153.89	251.13	254.43	330	2.46	40.82
Subansiri	-1700	PF 20% release	153.89	250.67	254.01	334	2.05	54.21
Subansiri	-1800	PF 20% release	153.89	250.2	253.76	356	1.49	76.07
Subansiri	0	PF 30% release	230.84	257.68	260.93	325	1.83	56.84
Subansiri	-100	PF 30% release	230.84	257.2	260.71	351	1.93	54.88
Subansiri	-200	PF 30% release	230.84	256.73	260.45	372	2.05	52.2
Subansiri	-300	PF 30% release	230.84	256.25	260.15	390	2.19	50.03
Subansiri	-400	PF 30% release	230.84	255.78	259.78	400	2.38	48.36
Subansiri	-500	PF 30% release	230.84	255.3	259.29	399	2.62	47.43
Subansiri	-600	PF 30% release	230.84	254.84	258.79	395	2.65	45.73
Subansiri	-700	PF 30% release	230.84	254.38	258.32	394	2.63	44.71
Subansiri	-800	PF 30% release	230.84	253.92	257.9	398	2.54	44.38
Subansiri	-900	PF 30% release	230.84	253.46	257.57	411	2.37	44.91
Subansiri	-1000	PF 30% release	230.84	253	257.33	433	2.12	46.52
Subansiri	-1100	PF 30% release	230.84	252.72	257.09	437	2.14	45.36
Subansiri	-1200	PF 30% release	230.84	252.44	256.84	440	2.18	44.09
Subansiri	-1300	PF 30% release	230.84	252.16	256.55	439	2.28	42.38
Subansiri	-1400	PF 30% release	230.84	251.88	256.2	432	2.49	40.62
Subansiri	-1500	PF 30% release	230.84	251.6	255.43	383	3.34	34.72
Subansiri	-1600	PF 30% release	230.84	251.13	254.91	378	2.77	46.59
Subansiri	-1700	PF 30% release	230.84	250.67	254.57	390	2.13	62.7
Subansiri	-1800	PF 30% release	230.84	250.2	254.43	423	1.44	92.5
Subansiri	0	PF 40% release	307.78	257.68	261.39	371	2.02	59.4
Subansiri	-100	PF 40% release	307.78	257.2	261.16	396	2.13	56.85
Subansiri	-200	PF 40% release	307.78	256.73	260.89	416	2.26	54.61
Subansiri	-300	PF 40% release	307.78	256.25	260.58	433	2.42	52.72
Subansiri	-400	PF 40% release	307.78	255.78	260.2	442	2.61	51.5
Subansiri	-500	PF 40% release	307.78	255.3	259.72	442	2.81	52.31
Subansiri	-600	PF 40% release	307.78	254.84	259.24	440	2.83	50.46
Subansiri	-700	PF 40% release	307.78	254.38	258.79	441	2.8	49.05
Subansiri	-800	PF 40% release	307.78	253.92	258.4	448	2.71	48.61
Subansiri	-900	PF 40% release	307.78	253.46	258.08	462	2.53	49.24
Subansiri	-1000	PF 40% release	307.78	253	257.85	485	2.3	50.68
Subansiri	-1100	PF 40% release	307.78	252.72	257.6	488	2.33	48.89
Subansiri	-1200	PF 40% release	307.78	252.44	257.34	490	2.39	47.6
Subansiri	-1300	PF 40% release	307.78	252.16	257.05	489	2.5	45.84
Subansiri	-1400	PF 40% release	307.78	251.88	256.67	479	2.73	43.21
Subansiri	-1500	PF 40% release	307.78	251.6	255.82	422	3.71	38.02
Subansiri	-1600	PF 40% release	307.78	251.13	255.34	421	2.94	51.22
Subansiri	-1700	PF 40% release	307.78	250.67	255.1	443	2.15	70.03
Subansiri	-1800	PF 40% release	307.78	250.2	255.01	481	1.41	105.86
Subansiri	0	PF 50% release	384.73	257.68	261.78	410	2.18	61.28
Subansiri	-100	PF 50% release	384.73	257.2	261.55	435	2.3	58.89

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	-200	PF 50% release	384.73	256.73	261.28	455	2.44	56.83
Subansiri	-300	PF 50% release	384.73	256.25	260.96	471	2.61	55.18
Subansiri	-400	PF 50% release	384.73	255.78	260.57	479	2.8	54.42
Subansiri	-500	PF 50% release	384.73	255.3	260.1	480	2.95	56.43
Subansiri	-600	PF 50% release	384.73	254.84	259.64	480	2.97	54.24
Subansiri	-700	PF 50% release	384.73	254.38	259.21	483	2.93	52.87
Subansiri	-800	PF 50% release	384.73	253.92	258.83	491	2.83	52.53
Subansiri	-900	PF 50% release	384.73	253.46	258.53	507	2.66	53.15
Subansiri	-1000	PF 50% release	384.73	253	258.3	530	2.44	53.89
Subansiri	-1100	PF 50% release	384.73	252.72	258.05	533	2.48	52.44
Subansiri	-1200	PF 50% release	384.73	252.44	257.79	535	2.55	50.59
Subansiri	-1300	PF 50% release	384.73	252.16	257.48	532	2.68	48.86
Subansiri	-1400	PF 50% release	384.73	251.88	257.09	521	2.94	46.06
Subansiri	-1500	PF 50% release	384.73	251.6	256.15	455	4	40.42
Subansiri	-1600	PF 50% release	384.73	251.13	255.78	465	3.01	54.85
Subansiri	-1700	PF 50% release	384.73	250.67	255.6	493	2.13	79.98
Subansiri	-1800	PF 50% release	384.73	250.2	255.54	534	1.38	131.1
Subansiri	0	PF 100% release	769.46	257.68	263.33	565	2.78	68.56
Subansiri	-100	PF 100% release	769.46	257.2	263.07	587	2.93	66.6
Subansiri	-200	PF 100% release	769.46	256.73	262.76	603	3.1	65.02
Subansiri	-300	PF 100% release	769.46	256.25	262.4	615	3.3	64.11
Subansiri	-400	PF 100% release	769.46	255.78	261.98	620	3.47	64.9
Subansiri	-500	PF 100% release	769.46	255.3	261.6	630	3.4	71.79
Subansiri	-600	PF 100% release	769.46	254.84	261.2	636	3.4	69.78
Subansiri	-700	PF 100% release	769.46	254.38	260.83	645	3.35	68.1
Subansiri	-800	PF 100% release	769.46	253.92	260.51	659	3.26	66.85
Subansiri	-900	PF 100% release	769.46	253.46	260.24	678	3.12	66.2
Subansiri	-1000	PF 100% release	769.46	253	260.02	702	2.95	65.86
Subansiri	-1100	PF 100% release	769.46	252.72	259.76	704	3.01	64.71
Subansiri	-1200	PF 100% release	769.46	252.44	259.48	704	3.11	63.22
Subansiri	-1300	PF 100% release	769.46	252.16	259.14	698	3.28	61.2
Subansiri	-1400	PF 100% release	769.46	251.88	258.69	681	3.58	58.15
Subansiri	-1500	PF 100% release	769.46	251.6	257.62	602	4.76	50.1
Subansiri	-1600	PF 100% release	769.46	251.13	257.57	644	3.14	76.63
Subansiri	-1700	PF 100% release	769.46	250.67	257.56	689	2.04	122.83
Subansiri	-1800	PF 100% release	769.46	250.2	257.57	737	1.27	174.09

**Subansiri Upper HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	0	PF 10% release	30.92	257.68	259.12	144	0.92	45.11
Subansiri	-100	PF 10% release	30.92	257.2	258.88	168	1.03	42.22
Subansiri	-200	PF 10% release	30.92	256.73	258.56	183	1.19	33.77
Subansiri	-300	PF 10% release	30.92	256.25	258.2	195	1.34	27.39
Subansiri	-400	PF 10% release	30.92	255.78	257.79	201	1.49	22.58
Subansiri	-500	PF 10% release	30.92	255.3	257.32	202	1.68	18.73
Subansiri	-600	PF 10% release	30.92	254.84	256.83	199	1.65	20.57
Subansiri	-700	PF 10% release	30.92	254.38	256.31	193	1.63	22.26
Subansiri	-800	PF 10% release	30.92	253.92	255.78	186	1.62	22.02
Subansiri	-900	PF 10% release	30.92	253.46	255.32	186	1.53	22.31
Subansiri	-1000	PF 10% release	30.92	253	255.02	202	1.23	25.64
Subansiri	-1100	PF 10% release	30.92	252.72	254.77	205	1.22	25.87
Subansiri	-1200	PF 10% release	30.92	252.44	254.49	205	1.28	25.38
Subansiri	-1300	PF 10% release	30.92	252.16	254.17	201	1.4	22.38
Subansiri	-1400	PF 10% release	30.92	251.88	253.82	194	1.52	18.45
Subansiri	-1500	PF 10% release	30.92	251.6	253.42	182	1.67	16.7
Subansiri	-1600	PF 10% release	30.92	251.13	253.07	194	1.46	21.59
Subansiri	-1700	PF 10% release	30.92	250.67	252.73	206	1.31	27.67
Subansiri	-1800	PF 10% release	30.92	250.2	252.32	212	1.33	34.83
Subansiri	0	PF 15% release	46.39	257.68	259.35	167	1.05	46.58
Subansiri	-100	PF 15% release	46.39	257.2	259.13	193	1.13	43.88
Subansiri	-200	PF 15% release	46.39	256.73	258.85	212	1.27	39.58
Subansiri	-300	PF 15% release	46.39	256.25	258.52	227	1.42	32.88
Subansiri	-400	PF 15% release	46.39	255.78	258.15	237	1.55	28.9
Subansiri	-500	PF 15% release	46.39	255.3	257.66	236	1.81	24.99
Subansiri	-600	PF 15% release	46.39	254.84	257.13	229	1.79	26.26
Subansiri	-700	PF 15% release	46.39	254.38	256.59	221	1.79	26
Subansiri	-800	PF 15% release	46.39	253.92	256.08	216	1.78	25.74
Subansiri	-900	PF 15% release	46.39	253.46	255.62	216	1.68	26.43
Subansiri	-1000	PF 15% release	46.39	253	255.33	233	1.38	28.45
Subansiri	-1100	PF 15% release	46.39	252.72	255.08	236	1.37	28.45
Subansiri	-1200	PF 15% release	46.39	252.44	254.83	239	1.4	27.93
Subansiri	-1300	PF 15% release	46.39	252.16	254.54	238	1.5	26.27
Subansiri	-1400	PF 15% release	46.39	251.88	254.18	230	1.68	22.53
Subansiri	-1500	PF 15% release	46.39	251.6	253.73	213	1.95	18.4
Subansiri	-1600	PF 15% release	46.39	251.13	253.34	221	1.69	24.15
Subansiri	-1700	PF 15% release	46.39	250.67	252.97	230	1.52	31.46
Subansiri	-1800	PF 15% release	46.39	250.2	252.56	236	1.44	39.57
Subansiri	0	PF 20% release	61.85	257.68	259.55	187	1.16	47.87
Subansiri	-100	PF 20% release	61.85	257.2	259.34	214	1.23	45.31
Subansiri	-200	PF 20% release	61.85	256.73	259.08	235	1.34	42.92
Subansiri	-300	PF 20% release	61.85	256.25	258.78	253	1.48	37.95
Subansiri	-400	PF 20% release	61.85	255.78	258.41	263	1.61	34.45
Subansiri	-500	PF 20% release	61.85	255.3	257.91	261	1.88	31.93
Subansiri	-600	PF 20% release	61.85	254.84	257.36	252	1.91	29.97
Subansiri	-700	PF 20% release	61.85	254.38	256.83	245	1.92	29
Subansiri	-800	PF 20% release	61.85	253.92	256.31	239	1.91	28.63
Subansiri	-900	PF 20% release	61.85	253.46	255.87	241	1.79	29.01

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	-1000	PF 20% release	61.85	253	255.59	259	1.5	30.82
Subansiri	-1100	PF 20% release	61.85	252.72	255.35	263	1.48	30.7
Subansiri	-1200	PF 20% release	61.85	252.44	255.1	266	1.51	30.18
Subansiri	-1300	PF 20% release	61.85	252.16	254.82	266	1.59	28.96
Subansiri	-1400	PF 20% release	61.85	251.88	254.47	259	1.78	25.75
Subansiri	-1500	PF 20% release	61.85	251.6	253.97	237	2.17	19.79
Subansiri	-1600	PF 20% release	61.85	251.13	253.56	243	1.88	26.59
Subansiri	-1700	PF 20% release	61.85	250.67	253.16	249	1.68	34.34
Subansiri	-1800	PF 20% release	61.85	250.2	252.77	257	1.52	43.15
Subansiri	0	PF 30% release	92.77	257.68	259.89	221	1.32	50.06
Subansiri	-100	PF 30% release	92.77	257.2	259.68	248	1.4	47.93
Subansiri	-200	PF 30% release	92.77	256.73	259.44	271	1.49	46.22
Subansiri	-300	PF 30% release	92.77	256.25	259.14	289	1.63	44.92
Subansiri	-400	PF 30% release	92.77	255.78	258.76	298	1.81	39.86
Subansiri	-500	PF 30% release	92.77	255.3	258.26	296	2.06	36.84
Subansiri	-600	PF 30% release	92.77	254.84	257.72	288	2.1	35.03
Subansiri	-700	PF 30% release	92.77	254.38	257.19	281	2.13	33.49
Subansiri	-800	PF 30% release	92.77	253.92	256.7	278	2.1	32.62
Subansiri	-900	PF 30% release	92.77	253.46	256.29	283	1.95	32.98
Subansiri	-1000	PF 30% release	92.77	253	256.03	303	1.67	34.79
Subansiri	-1100	PF 30% release	92.77	252.72	255.79	307	1.65	34.42
Subansiri	-1200	PF 30% release	92.77	252.44	255.55	311	1.68	33.84
Subansiri	-1300	PF 30% release	92.77	252.16	255.28	312	1.75	32.7
Subansiri	-1400	PF 30% release	92.77	251.88	254.96	308	1.92	30.57
Subansiri	-1500	PF 30% release	92.77	251.6	254.41	281	2.42	25.26
Subansiri	-1600	PF 30% release	92.77	251.13	253.95	282	2.09	33.35
Subansiri	-1700	PF 30% release	92.77	250.67	253.52	285	1.82	44.13
Subansiri	-1800	PF 30% release	92.77	250.2	253.16	296	1.51	61.4
Subansiri	0	PF 40% release	123.69	257.68	260.17	249	1.46	51.89
Subansiri	-100	PF 40% release	123.69	257.2	259.96	276	1.55	50.06
Subansiri	-200	PF 40% release	123.69	256.73	259.71	298	1.65	48.76
Subansiri	-300	PF 40% release	123.69	256.25	259.42	317	1.77	46.69
Subansiri	-400	PF 40% release	123.69	255.78	259.04	326	1.97	43.32
Subansiri	-500	PF 40% release	123.69	255.3	258.53	323	2.23	39.55
Subansiri	-600	PF 40% release	123.69	254.84	258	316	2.27	37.79
Subansiri	-700	PF 40% release	123.69	254.38	257.49	311	2.28	36.46
Subansiri	-800	PF 40% release	123.69	253.92	257.02	310	2.23	35.87
Subansiri	-900	PF 40% release	123.69	253.46	256.64	318	2.07	36.38
Subansiri	-1000	PF 40% release	123.69	253	256.39	339	1.8	38.15
Subansiri	-1100	PF 40% release	123.69	252.72	256.15	343	1.79	37.52
Subansiri	-1200	PF 40% release	123.69	252.44	255.91	347	1.82	36.79
Subansiri	-1300	PF 40% release	123.69	252.16	255.64	348	1.89	35.68
Subansiri	-1400	PF 40% release	123.69	251.88	255.31	343	2.07	33.46
Subansiri	-1500	PF 40% release	123.69	251.6	254.72	312	2.66	28.2
Subansiri	-1600	PF 40% release	123.69	251.13	254.22	309	2.29	37.66
Subansiri	-1700	PF 40% release	123.69	250.67	253.78	311	1.96	50.28
Subansiri	-1800	PF 40% release	123.69	250.2	253.47	327	1.51	68.85
Subansiri	0	PF 50% release	154.62	257.68	260.42	274	1.59	53.49
Subansiri	-100	PF 50% release	154.62	257.2	260.2	300	1.67	51.92

River	Distance d/s of Subansiri upper dam site	Profile	Total Discharge	Min Bed Elevation	Water Surface Elevation	Flow Depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	-200	PF 50% release	154.62	256.73	259.95	322	1.78	50.46
Subansiri	-300	PF 50% release	154.62	256.25	259.66	341	1.91	47.8
Subansiri	-400	PF 50% release	154.62	255.78	259.28	350	2.1	45.54
Subansiri	-500	PF 50% release	154.62	255.3	258.77	347	2.37	41.96
Subansiri	-600	PF 50% release	154.62	254.84	258.26	342	2.4	40.23
Subansiri	-700	PF 50% release	154.62	254.38	257.76	338	2.4	39.12
Subansiri	-800	PF 50% release	154.62	253.92	257.31	339	2.34	38.71
Subansiri	-900	PF 50% release	154.62	253.46	256.95	349	2.17	39.31
Subansiri	-1000	PF 50% release	154.62	253	256.7	370	1.91	41.07
Subansiri	-1100	PF 50% release	154.62	252.72	256.46	374	1.9	40.36
Subansiri	-1200	PF 50% release	154.62	252.44	256.22	378	1.94	39.34
Subansiri	-1300	PF 50% release	154.62	252.16	255.95	379	2.02	38.1
Subansiri	-1400	PF 50% release	154.62	251.88	255.6	372	2.21	35.99
Subansiri	-1500	PF 50% release	154.62	251.6	254.96	336	2.88	30.58
Subansiri	-1600	PF 50% release	154.62	251.13	254.44	331	2.46	40.88
Subansiri	-1700	PF 50% release	154.62	250.67	254.01	334	2.05	54.31
Subansiri	-1800	PF 50% release	154.62	250.2	253.77	357	1.49	76.27
Subansiri	0	PF 100% release	309.24	257.68	261.39	371	2.02	59.44
Subansiri	-100	PF 100% release	309.24	257.2	261.17	397	2.13	56.89
Subansiri	-200	PF 100% release	309.24	256.73	260.9	417	2.26	54.66
Subansiri	-300	PF 100% release	309.24	256.25	260.59	434	2.42	52.77
Subansiri	-400	PF 100% release	309.24	255.78	260.21	443	2.61	51.56
Subansiri	-500	PF 100% release	309.24	255.3	259.73	443	2.81	52.4
Subansiri	-600	PF 100% release	309.24	254.84	259.25	441	2.83	50.54
Subansiri	-700	PF 100% release	309.24	254.38	258.8	442	2.81	49.13
Subansiri	-800	PF 100% release	309.24	253.92	258.41	449	2.71	48.69
Subansiri	-900	PF 100% release	309.24	253.46	258.09	463	2.53	49.31
Subansiri	-1000	PF 100% release	309.24	253	257.86	486	2.3	50.76
Subansiri	-1100	PF 100% release	309.24	252.72	257.61	489	2.33	48.96
Subansiri	-1200	PF 100% release	309.24	252.44	257.35	491	2.39	47.66
Subansiri	-1300	PF 100% release	309.24	252.16	257.06	490	2.51	45.9
Subansiri	-1400	PF 100% release	309.24	251.88	256.68	480	2.74	43.26
Subansiri	-1500	PF 100% release	309.24	251.6	255.82	422	3.71	38.08
Subansiri	-1600	PF 100% release	309.24	251.13	255.35	422	2.94	51.29
Subansiri	-1700	PF 100% release	309.24	250.67	255.11	444	2.15	70.18
Subansiri	-1800	PF 100% release	309.24	250.2	255.02	482	1.41	106.37

**Subansiri Lower HE Project - denotes loaction 10 km d/s of Subansiri Lower dam axis**

River	Ch d/s of Subansiri Lower Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	-10000	PF180 cumec release	196	98.27	101.09	282	0.4	319.24
Subansiri	-20000	PF180 cumec release	196	95.43	99.05	362	0.64	164.26
Subansiri	-30000	PF180 cumec release	227	91.6	94.62	302	0.88	167.34
Subansiri	-40000	PF180 cumec release	231	89.01	91.57	256	0.43	352.29
Subansiri	-60000	PF180 cumec release	231	79.57	83.53	396	0.44	367.61
Subansiri	-70000	PF180 cumec release	231	76.91	80.72	381	0.82	140.87
Subansiri	-80000	PF180 cumec release	231	72.45	78.25	580	0.42	365.2
Subansiri	-89500	PF180 cumec release	231	72.39	77.65	526	0.19	768.14
Subansiri	-10000	PF200 cumec release	216	98.27	101.2	293	0.42	321.82
Subansiri	-20000	PF200 cumec release	216	95.43	99.16	373	0.67	168.02
Subansiri	-30000	PF200 cumec release	247	91.6	94.73	313	0.9	170.37
Subansiri	-40000	PF200 cumec release	251	89.01	91.65	264	0.45	359.86
Subansiri	-60000	PF200 cumec release	251	79.57	83.64	407	0.44	393.1
Subansiri	-70000	PF200 cumec release	251	76.91	80.85	394	0.84	144.45
Subansiri	-80000	PF200 cumec release	251	72.45	78.38	593	0.41	407.29
Subansiri	-89500	PF200 cumec release	251	72.39	77.84	545	0.19	830.13
						397.75		
Subansiri	-10000	PF220 cumec release	236	98.27	101.3	303	0.43	324.3
Subansiri	-20000	PF220 cumec release	236	95.43	99.27	384	0.69	171.63
Subansiri	-30000	PF220 cumec release	267	91.6	94.82	322	0.92	173.24
Subansiri	-40000	PF220 cumec release	271	89.01	91.73	272	0.46	367.73
Subansiri	-60000	PF220 cumec release	271	79.57	83.75	418	0.44	422.58
Subansiri	-70000	PF220 cumec release	271	76.91	80.95	404	0.86	147.61
Subansiri	-80000	PF220 cumec release	271	72.45	78.51	606	0.41	446.37
Subansiri	-89500	PF220 cumec release	271	72.39	78.02	563	0.18	885.32
						409		
Subansiri	-10000	PF240 cumec release	256	98.27	101.4	313	0.44	326.71
Subansiri	-20000	PF240 cumec release	256	95.43	99.4	397	0.7	177.05
Subansiri	-30000	PF240 cumec release	287	91.6	94.95	335	0.91	191.2
Subansiri	-40000	PF240 cumec release	291	89.01	91.8	279	0.47	375.48
Subansiri	-60000	PF240 cumec release	291	79.57	83.86	429	0.44	452.24
Subansiri	-70000	PF240 cumec release	291	76.91	81.02	411	0.9	149.66
Subansiri	-80000	PF240 cumec release	291	72.45	78.63	618	0.41	461.68
Subansiri	-89500	PF240 cumec release	291	72.39	78.18	579	0.18	935.48
						420.125		
Subansiri	-10000	PF260 cumec release	276	98.27	101.5	323	0.45	328.61
Subansiri	-20000	PF260 cumec release	276	95.43	99.52	409	0.71	182.01
Subansiri	-30000	PF260 cumec release	307	91.6	95.06	346	0.91	205.31
Subansiri	-40000	PF260 cumec release	311	89.01	91.88	287	0.48	383.25
Subansiri	-60000	PF260 cumec release	311	79.57	83.94	437	0.45	461.87
Subansiri	-70000	PF260 cumec release	311	76.91	81.09	418	0.93	151.94
Subansiri	-80000	PF260 cumec release	311	72.45	78.76	631	0.4	486.97
Subansiri	-89500	PF260 cumec release	311	72.39	78.3	591	0.18	1044.73
						430.25		
Subansiri	-10000	PF280 cumec release	296	98.27	101.59	332	0.46	329.32
Subansiri	-20000	PF280 cumec release	296	95.43	99.64	421	0.73	186.32
Subansiri	-30000	PF280 cumec release	327	91.6	95.16	356	0.92	218.67
Subansiri	-40000	PF280 cumec release	331	89.01	91.95	294	0.49	387.47
Subansiri	-60000	PF280 cumec release	331	79.57	84.02	445	0.45	472.04
Subansiri	-70000	PF280 cumec release	331	76.91	81.19	428	0.94	155.37
Subansiri	-80000	PF280 cumec release	331	72.45	78.88	643	0.4	531.65

River	Ch d/s of Subansiri Lower Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
Subansiri	-89500	PF280 cumec release	331	72.39	78.42	603	0.17	1131.81
						440.25		
Subansiri	-10000	PF300 cumec release	316	98.27	101.68	341	0.47	330.01
Subansiri	-20000	PF300 cumec release	316	95.43	99.74	431	0.74	191.31
Subansiri	-30000	PF300 cumec release	347	91.6	95.24	364	0.93	227.48
Subansiri	-40000	PF300 cumec release	351	89.01	92.01	300	0.5	390.25
Subansiri	-60000	PF300 cumec release	351	79.57	84.09	452	0.46	480.07
Subansiri	-70000	PF300 cumec release	351	76.91	81.28	437	0.96	158.39
Subansiri	-80000	PF300 cumec release	351	72.45	78.96	651	0.4	554.71
Subansiri	-89500	PF300 cumec release	351	72.39	78.52	613	0.17	1144.37
						448.625		
Subansiri	-10000	PF320 cumec release	336	98.27	101.77	350	0.48	330.69
Subansiri	-20000	PF320 cumec release	336	95.43	99.83	440	0.76	195.51
Subansiri	-30000	PF320 cumec release	367	91.6	95.34	374	0.92	237.83
Subansiri	-40000	PF320 cumec release	371	89.01	92.13	312	0.5	427.12
Subansiri	-60000	PF320 cumec release	371	79.57	84.19	462	0.45	496.46
Subansiri	-70000	PF320 cumec release	371	76.91	81.42	451	0.96	175.46
Subansiri	-80000	PF320 cumec release	371	72.45	79.04	659	0.4	583.56
Subansiri	-89500	PF320 cumec release	371	72.39	78.61	622	0.18	1158.58

Tammu HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	3.14	281.18	281.38	20	0.6	32.1
River	-100	PF 10% release	3.14	280.45	280.78	33	0.61	27.47
River	-200	PF 10% release	3.14	279.71	280.08	37	0.74	22.82
River	-300	PF 10% release	3.14	278.98	279.41	43	0.67	21.85
River	-400	PF 10% release	3.14	278.25	278.63	38	0.86	19.03
River	-500	PF 10% release	3.14	277.51	277.92	41	0.62	24.91
River	-600	PF 10% release	3.14	276.78	276.97	19	0.86	32.59
River	-700	PF 10% release	3.14	274.16	274.45	29	1.16	18.8
River	-800	PF 10% release	3.14	271.55	271.88	33	1.16	16.22
River	-900	PF 10% release	3.14	268.93	269.26	33	1.29	14.54
River	-1000	PF 10% release	3.14	266.31	266.66	35	1.2	14.87
River	-1100	PF 10% release	3.14	263.69	264.03	34	1.3	14.47
River	-1200	PF 10% release	3.14	261.07	261.42	35	1.17	15.7
River	-1300	PF 10% release	3.14	258.46	258.77	31	1.26	15.92
River	-1400	PF 10% release	3.14	255.84	256.18	34	0.94	19.84
River	0	PF 15% release	4.72	281.18	281.43	25	0.69	33.13
River	-100	PF 15% release	4.72	280.45	280.83	38	0.71	29.14
River	-200	PF 15% release	4.72	279.71	280.15	44	0.81	26.81
River	-300	PF 15% release	4.72	278.98	279.48	50	0.75	25.35
River	-400	PF 15% release	4.72	278.25	278.69	44	0.95	22.29
River	-500	PF 15% release	4.72	277.51	277.99	48	0.69	28.88
River	-600	PF 15% release	4.72	276.78	277	22	1.01	33.29
River	-700	PF 15% release	4.72	274.16	274.5	34	1.26	22.12
River	-800	PF 15% release	4.72	271.55	271.93	38	1.3	18.75
River	-900	PF 15% release	4.72	268.93	269.32	39	1.4	17.11
River	-1000	PF 15% release	4.72	266.31	266.72	41	1.36	17.16

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1100	PF 15% release	4.72	263.69	264.09	40	1.41	17.03
River	-1200	PF 15% release	4.72	261.07	261.47	40	1.32	18.12
River	-1300	PF 15% release	4.72	258.46	258.83	37	1.37	18.74
River	-1400	PF 15% release	4.72	255.84	256.23	39	1.04	23.11
River	0	PF 20% release	6.29	281.18	281.47	29	0.76	34
River	-100	PF 20% release	6.29	280.45	280.88	43	0.78	30.54
River	-200	PF 20% release	6.29	279.71	280.2	49	0.86	29.96
River	-300	PF 20% release	6.29	278.98	279.53	55	0.81	28.19
River	-400	PF 20% release	6.29	278.25	278.75	50	1.01	24.86
River	-500	PF 20% release	6.29	277.51	278.04	53	0.75	32.12
River	-600	PF 20% release	6.29	276.78	277.03	25	1.14	33.88
River	-700	PF 20% release	6.29	274.16	274.54	38	1.33	24.84
River	-800	PF 20% release	6.29	271.55	271.97	42	1.42	20.74
River	-900	PF 20% release	6.29	268.93	269.37	44	1.49	19.19
River	-1000	PF 20% release	6.29	266.31	266.76	45	1.48	18.98
River	-1100	PF 20% release	6.29	263.69	264.13	44	1.49	19.11
River	-1200	PF 20% release	6.29	261.07	261.51	44	1.44	20.02
River	-1300	PF 20% release	6.29	258.46	258.87	41	1.44	21.03
River	-1400	PF 20% release	6.29	255.84	256.28	44	1.11	25.74
River	0	PF 25% release	7.86	281.18	281.51	33	0.82	34.81
River	-100	PF 25% release	7.86	280.45	280.92	47	0.85	31.76
River	-200	PF 25% release	7.86	279.71	280.24	53	0.92	30.87
River	-300	PF 25% release	7.86	278.98	279.58	60	0.86	30.6
River	-400	PF 25% release	7.86	278.25	278.79	54	1.07	27.06
River	-500	PF 25% release	7.86	277.51	278.08	57	0.79	34.86
River	-600	PF 25% release	7.86	276.78	277.05	27	1.24	34.41
River	-700	PF 25% release	7.86	274.16	274.58	42	1.39	27.12
River	-800	PF 25% release	7.86	271.55	272.01	46	1.51	22.47
River	-900	PF 25% release	7.86	268.93	269.41	48	1.56	20.95
River	-1000	PF 25% release	7.86	266.31	266.8	49	1.57	20.6
River	-1100	PF 25% release	7.86	263.69	264.18	49	1.56	20.88
River	-1200	PF 25% release	7.86	261.07	261.55	48	1.54	21.67
River	-1300	PF 25% release	7.86	258.46	258.91	45	1.51	22.99
River	-1400	PF 25% release	7.86	255.84	256.32	48	1.18	27.98
River	0	PF 30% release	9.43	281.18	281.55	37	0.86	35.56
River	-100	PF 30% release	9.43	280.45	280.95	50	0.9	32.86
River	-200	PF 30% release	9.43	279.71	280.28	57	0.98	31.73
River	-300	PF 30% release	9.43	278.98	279.62	64	0.9	32.72
River	-400	PF 30% release	9.43	278.25	278.83	58	1.12	29.01
River	-500	PF 30% release	9.43	277.51	278.12	61	0.83	37.08
River	-600	PF 30% release	9.43	276.78	277.07	29	1.33	34.93
River	-700	PF 30% release	9.43	274.16	274.61	45	1.46	29.06
River	-800	PF 30% release	9.43	271.55	272.04	49	1.58	24.06
River	-900	PF 30% release	9.43	268.93	269.44	51	1.62	22.53
River	-1000	PF 30% release	9.43	266.31	266.83	52	1.63	22.15
River	-1100	PF 30% release	9.43	263.69	264.21	52	1.62	22.46
River	-1200	PF 30% release	9.43	261.07	261.58	51	1.6	23.3
River	-1300	PF 30% release	9.43	258.46	258.94	48	1.57	24.71
River	-1400	PF 30% release	9.43	255.84	256.35	51	1.23	29.96
River	0	PF 40% release	12.58	281.18	281.61	43	0.95	36.9



River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-100	PF 40% release	12.58	280.45	281.02	57	1	34.83
River	-200	PF 40% release	12.58	279.71	280.34	63	1.07	33.25
River	-300	PF 40% release	12.58	278.98	279.69	71	0.97	36.26
River	-400	PF 40% release	12.58	278.25	278.9	65	1.2	32.36
River	-500	PF 40% release	12.58	277.51	278.18	67	0.92	39.24
River	-600	PF 40% release	12.58	276.78	277.11	33	1.47	35.9
River	-700	PF 40% release	12.58	274.16	274.66	50	1.58	32.26
River	-800	PF 40% release	12.58	271.55	272.1	55	1.68	27
River	-900	PF 40% release	12.58	268.93	269.51	58	1.71	25.28
River	-1000	PF 40% release	12.58	266.31	266.9	59	1.72	24.89
River	-1100	PF 40% release	12.58	263.69	264.28	59	1.71	25.23
River	-1200	PF 40% release	12.58	261.07	261.64	57	1.69	26.15
River	-1300	PF 40% release	12.58	258.46	259	54	1.66	27.74
River	-1400	PF 40% release	12.58	255.84	256.41	57	1.33	32.91
River	0	PF 50% release	15.72	281.18	281.67	49	1.02	38.09
River	-100	PF 50% release	15.72	280.45	281.08	63	1.07	36.62
River	-200	PF 50% release	15.72	279.71	280.4	69	1.15	34.53
River	-300	PF 50% release	15.72	278.98	279.75	77	1.04	37.59
River	-400	PF 50% release	15.72	278.25	278.95	70	1.27	35.13
River	-500	PF 50% release	15.72	277.51	278.24	73	0.98	41.26
River	-600	PF 50% release	15.72	276.78	277.15	37	1.61	36.66
River	-700	PF 50% release	15.72	274.16	274.7	54	1.64	35.33
River	-800	PF 50% release	15.72	271.55	272.15	60	1.75	29.54
River	-900	PF 50% release	15.72	268.93	269.56	63	1.79	27.67
River	-1000	PF 50% release	15.72	266.31	266.95	64	1.8	27.19
River	-1100	PF 50% release	15.72	263.69	264.33	64	1.79	27.59
River	-1200	PF 50% release	15.72	261.07	261.7	63	1.77	28.59
River	-1300	PF 50% release	15.72	258.46	259.05	59	1.74	30.31
River	-1400	PF 50% release	15.72	255.84	256.45	61	1.45	33.3
River	0	PF 100% release	31.44	281.18	281.89	71	1.29	42.71
River	-100	PF 100% release	31.44	280.45	281.3	85	1.35	41.01
River	-200	PF 100% release	31.44	279.71	280.62	91	1.43	39.75
River	-300	PF 100% release	31.44	278.98	279.96	98	1.33	42.57
River	-400	PF 100% release	31.44	278.25	279.17	92	1.48	46.03
River	-500	PF 100% release	31.44	277.51	278.45	94	1.24	48.63
River	-600	PF 100% release	31.44	276.78	277.31	53	1.98	40.3
River	-700	PF 100% release	31.44	274.16	274.87	71	1.94	43.65
River	-800	PF 100% release	31.44	271.55	272.35	80	2.01	38.96
River	-900	PF 100% release	31.44	268.93	269.77	84	2.04	36.66
River	-1000	PF 100% release	31.44	266.31	267.16	85	2.07	35.87
River	-1100	PF 100% release	31.44	263.69	264.53	84	2.06	35.97
River	-1200	PF 100% release	31.44	261.07	261.89	82	2.06	35.14
River	-1300	PF 100% release	31.44	258.46	259.24	78	2.07	35.74
River	-1400	PF 100% release	31.44	255.84	256.62	78	1.88	34.88

Tammu HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	13.33	281.18	281.62	44	0.97	37.2
River	-100	PF 10% release	13.33	280.45	281.03	58	1.01	35.27

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-200	PF 10% release	13.33	279.71	280.36	65	1.09	33.57
River	-300	PF 10% release	13.33	278.98	279.71	73	0.99	36.59
River	-400	PF 10% release	13.33	278.25	278.91	66	1.21	33.08
River	-500	PF 10% release	13.33	277.51	278.2	69	0.94	39.73
River	-600	PF 10% release	13.33	276.78	277.12	34	1.5	36.1
River	-700	PF 10% release	13.33	274.16	274.67	51	1.6	32.99
River	-800	PF 10% release	13.33	271.55	272.11	56	1.69	27.68
River	-900	PF 10% release	13.33	268.93	269.52	59	1.73	25.87
River	-1000	PF 10% release	13.33	266.31	266.91	60	1.73	25.5
River	-1100	PF 10% release	13.33	263.69	264.29	60	1.74	25.79
River	-1200	PF 10% release	13.33	261.07	261.66	59	1.71	26.76
River	-1300	PF 10% release	13.33	258.46	259.02	56	1.68	28.4
River	-1400	PF 10% release	13.33	255.84	256.42	58	1.36	33
River	0	PF 15% release	19.99	281.18	281.74	56	1.11	39.49
River	-100	PF 15% release	19.99	280.45	281.14	69	1.16	38.06
River	-200	PF 15% release	19.99	279.71	280.47	76	1.24	36.12
River	-300	PF 15% release	19.99	278.98	279.82	84	1.13	39.16
River	-400	PF 15% release	19.99	278.25	279.02	77	1.34	38.52
River	-500	PF 15% release	19.99	277.51	278.31	80	1.06	43.6
River	-600	PF 15% release	19.99	276.78	277.19	41	1.74	37.7
River	-700	PF 15% release	19.99	274.16	274.76	60	1.74	38.45
River	-800	PF 15% release	19.99	271.55	272.21	66	1.83	32.53
River	-900	PF 15% release	19.99	268.93	269.63	70	1.88	30.43
River	-1000	PF 15% release	19.99	266.31	267.02	71	1.89	29.92
River	-1100	PF 15% release	19.99	263.69	264.4	71	1.87	30.4
River	-1200	PF 15% release	19.99	261.07	261.76	69	1.85	31.54
River	-1300	PF 15% release	19.99	258.46	259.11	65	1.85	32.04
River	-1400	PF 15% release	19.99	255.84	256.5	66	1.59	33.77
River	0	PF 20% release	26.66	281.18	281.83	65	1.22	41.45
River	-100	PF 20% release	26.66	280.45	281.24	79	1.27	39.85
River	-200	PF 20% release	26.66	279.71	280.56	85	1.36	38.32
River	-300	PF 20% release	26.66	278.98	279.91	93	1.25	41.25
River	-400	PF 20% release	26.66	278.25	279.11	86	1.43	43.15
River	-500	PF 20% release	26.66	277.51	278.39	88	1.17	46.66
River	-600	PF 20% release	26.66	276.78	277.26	48	1.89	39.27
River	-700	PF 20% release	26.66	274.16	274.83	67	1.87	41.61
River	-800	PF 20% release	26.66	271.55	272.3	75	1.95	36.46
River	-900	PF 20% release	26.66	268.93	269.72	79	1.97	34.32
River	-1000	PF 20% release	26.66	266.31	267.11	80	1.99	33.67
River	-1100	PF 20% release	26.66	263.69	264.48	79	1.99	34.09
River	-1200	PF 20% release	26.66	261.07	261.84	77	1.99	33.93
River	-1300	PF 20% release	26.66	258.46	259.19	73	1.99	34.3
River	-1400	PF 20% release	26.66	255.84	256.58	74	1.77	34.44
River	0	PF 25% release	33.32	281.18	281.91	73	1.31	43.19
River	-100	PF 25% release	33.32	280.45	281.32	87	1.37	41.43
River	-200	PF 25% release	33.32	279.71	280.64	93	1.45	40.28
River	-300	PF 25% release	33.32	278.98	279.99	101	1.36	43.06
River	-400	PF 25% release	33.32	278.25	279.19	94	1.5	46.78
River	-500	PF 25% release	33.32	277.51	278.47	96	1.26	49.38
River	-600	PF 25% release	33.32	276.78	277.32	54	2.01	40.68
River	-700	PF 25% release	33.32	274.16	274.89	73	1.96	44.42

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-800	PF 25% release	33.32	271.55	272.37	82	2.02	40.08
River	-900	PF 25% release	33.32	268.93	269.79	86	2.06	37.51
River	-1000	PF 25% release	33.32	266.31	267.18	87	2.09	36.73
River	-1100	PF 25% release	33.32	263.69	264.55	86	2.08	36.42
River	-1200	PF 25% release	33.32	261.07	261.91	84	2.1	35.56
River	-1300	PF 25% release	33.32	258.46	259.26	80	2.1	35.94
River	-1400	PF 25% release	33.32	255.84	256.64	80	1.92	35.05
River	0	PF 30% release	39.99	281.18	281.99	81	1.39	44.79
River	-100	PF 30% release	39.99	280.45	281.39	94	1.46	42.84
River	-200	PF 30% release	39.99	279.71	280.72	101	1.53	42.07
River	-300	PF 30% release	39.99	278.98	280.05	107	1.45	44.64
River	-400	PF 30% release	39.99	278.25	279.26	101	1.58	48.6
River	-500	PF 30% release	39.99	277.51	278.54	103	1.34	51.79
River	-600	PF 30% release	39.99	276.78	277.38	60	2.11	41.99
River	-700	PF 30% release	39.99	274.16	274.95	79	2.04	46.62
River	-800	PF 30% release	39.99	271.55	272.43	88	2.09	43.13
River	-900	PF 30% release	39.99	268.93	269.85	92	2.14	40.35
River	-1000	PF 30% release	39.99	266.31	267.25	94	2.15	39.61
River	-1100	PF 30% release	39.99	263.69	264.62	93	2.19	37.7
River	-1200	PF 30% release	39.99	261.07	261.97	90	2.21	36.92
River	-1300	PF 30% release	39.99	258.46	259.32	86	2.21	36.57
River	-1400	PF 30% release	39.99	255.84	256.7	86	2.05	35.6
River	0	PF 40% release	53.32	281.18	282.13	95	1.52	47.6
River	-100	PF 40% release	53.32	280.45	281.53	108	1.6	45.41
River	-200	PF 40% release	53.32	279.71	280.86	115	1.67	45.22
River	-300	PF 40% release	53.32	278.98	280.17	119	1.61	47.43
River	-400	PF 40% release	53.32	278.25	279.37	112	1.71	51.32
River	-500	PF 40% release	53.32	277.51	278.66	115	1.46	56.05
River	-600	PF 40% release	53.32	276.78	277.48	70	2.29	44.33
River	-700	PF 40% release	53.32	274.16	275.04	88	2.21	48.95
River	-800	PF 40% release	53.32	271.55	272.54	99	2.21	48.39
River	-900	PF 40% release	53.32	268.93	269.97	104	2.27	45.24
River	-1000	PF 40% release	53.32	266.31	267.35	104	2.32	41.9
River	-1100	PF 40% release	53.32	263.69	264.73	104	2.36	40
River	-1200	PF 40% release	53.32	261.07	262.09	102	2.37	39.4
River	-1300	PF 40% release	53.32	258.46	259.43	97	2.4	37.68
River	-1400	PF 40% release	53.32	255.84	256.81	97	2.27	36.6
River	0	PF 50% release	66.64	281.18	282.25	107	1.62	50.1
River	-100	PF 50% release	66.64	280.45	281.65	120	1.72	47.65
River	-200	PF 50% release	66.64	279.71	280.97	126	1.78	47.83
River	-300	PF 50% release	66.64	278.98	280.28	130	1.74	49.88
River	-400	PF 50% release	66.64	278.25	279.47	122	1.85	52.47
River	-500	PF 50% release	66.64	277.51	278.76	125	1.58	57.82
River	-600	PF 50% release	66.64	276.78	277.57	79	2.42	46.45
River	-700	PF 50% release	66.64	274.16	275.13	97	2.33	51.14
River	-800	PF 50% release	66.64	271.55	272.63	108	2.32	52.13
River	-900	PF 50% release	66.64	268.93	270.06	113	2.41	47.49
River	-1000	PF 50% release	66.64	266.31	267.45	114	2.46	43.92
River	-1100	PF 50% release	66.64	263.69	264.83	114	2.5	42.05
River	-1200	PF 50% release	66.64	261.07	262.18	111	2.53	40.52
River	-1300	PF 50% release	66.64	258.46	259.53	107	2.57	38.69

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1400	PF 50% release	66.64	255.84	256.91	107	2.46	37.5
River	0	PF 100% release	133.29	281.18	282.72	154	1.99	59.9
River	-100	PF 100% release	133.29	280.45	282.1	165	2.13	56.4
River	-200	PF 100% release	133.29	279.71	281.41	170	2.21	56.36
River	-300	PF 100% release	133.29	278.98	280.69	171	2.2	58.04
River	-400	PF 100% release	133.29	278.25	279.84	159	2.36	57
River	-500	PF 100% release	133.29	277.51	279.14	163	2.06	60.71
River	-600	PF 100% release	133.29	276.78	277.94	116	2.89	54.89
River	-700	PF 100% release	133.29	274.16	275.47	131	2.83	58.76
River	-800	PF 100% release	133.29	271.55	272.97	142	2.81	58.96
River	-900	PF 100% release	133.29	268.93	270.42	149	2.88	56.04
River	-1000	PF 100% release	133.29	266.31	267.83	152	2.94	51.59
River	-1100	PF 100% release	133.29	263.69	265.21	152	3.01	47.91
River	-1200	PF 100% release	133.29	261.07	262.57	150	3.09	45.04
River	-1300	PF 100% release	133.29	258.46	259.94	148	3.13	42.85
River	-1400	PF 100% release	133.29	255.84	257.31	147	3.12	41.12

Tammu HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	7.31	281.18	281.5	32	0.8	34.54
River	-100	PF 10% release	7.31	280.45	280.9	45	0.83	31.35
River	-200	PF 10% release	7.31	279.71	280.23	52	0.9	30.57
River	-300	PF 10% release	7.31	278.98	279.56	58	0.84	29.79
River	-400	PF 10% release	7.31	278.25	278.78	53	1.05	26.33
River	-500	PF 10% release	7.31	277.51	278.07	56	0.78	33.93
River	-600	PF 10% release	7.31	276.78	277.04	26	1.21	34.23
River	-700	PF 10% release	7.31	274.16	274.57	41	1.37	26.38
River	-800	PF 10% release	7.31	271.55	272	45	1.48	21.87
River	-900	PF 10% release	7.31	268.93	269.4	47	1.53	20.38
River	-1000	PF 10% release	7.31	266.31	266.78	47	1.55	20.01
River	-1100	PF 10% release	7.31	263.69	264.16	47	1.54	20.29
River	-1200	PF 10% release	7.31	261.07	261.53	46	1.51	21.14
River	-1300	PF 10% release	7.31	258.46	258.9	44	1.49	22.32
River	-1400	PF 10% release	7.31	255.84	256.3	46	1.16	27.23
River	0	PF 15% release	10.97	281.18	281.58	40	0.91	36.24
River	-100	PF 15% release	10.97	280.45	280.98	53	0.95	33.84
River	-200	PF 15% release	10.97	279.71	280.31	60	1.02	32.51
River	-300	PF 15% release	10.97	278.98	279.66	68	0.94	34.56
River	-400	PF 15% release	10.97	278.25	278.86	61	1.15	30.79
River	-500	PF 15% release	10.97	277.51	278.15	64	0.88	38.13
River	-600	PF 15% release	10.97	276.78	277.09	31	1.39	35.45
River	-700	PF 15% release	10.97	274.16	274.63	47	1.53	30.57
River	-800	PF 15% release	10.97	271.55	272.07	52	1.62	25.63
River	-900	PF 15% release	10.97	268.93	269.48	55	1.66	23.96
River	-1000	PF 15% release	10.97	266.31	266.87	56	1.68	23.54
River	-1100	PF 15% release	10.97	263.69	264.24	55	1.67	23.87
River	-1200	PF 15% release	10.97	261.07	261.61	54	1.65	24.76
River	-1300	PF 15% release	10.97	258.46	258.97	51	1.62	26.26

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1400	PF 15% release	10.97	255.84	256.38	54	1.28	31.71
River	0	PF 20% release	14.63	281.18	281.65	47	1	37.68
River	-100	PF 20% release	14.63	280.45	281.06	61	1.04	36.02
River	-200	PF 20% release	14.63	279.71	280.38	67	1.12	34.1
River	-300	PF 20% release	14.63	278.98	279.73	75	1.02	37.15
River	-400	PF 20% release	14.63	278.25	278.93	68	1.24	34.24
River	-500	PF 20% release	14.63	277.51	278.22	71	0.96	40.57
River	-600	PF 20% release	14.63	276.78	277.14	36	1.56	36.42
River	-700	PF 20% release	14.63	274.16	274.69	53	1.63	34.25
River	-800	PF 20% release	14.63	271.55	272.14	59	1.71	28.8
River	-900	PF 20% release	14.63	268.93	269.55	62	1.76	26.9
River	-1000	PF 20% release	14.63	266.31	266.93	62	1.78	26.41
River	-1100	PF 20% release	14.63	263.69	264.31	62	1.76	26.81
River	-1200	PF 20% release	14.63	261.07	261.68	61	1.75	27.78
River	-1300	PF 20% release	14.63	258.46	259.04	58	1.71	29.51
River	-1400	PF 20% release	14.63	255.84	256.44	60	1.41	33.16
River	0	PF 25% release	18.28	281.18	281.71	53	1.08	38.93
River	-100	PF 25% release	18.28	280.45	281.12	67	1.12	37.57
River	-200	PF 25% release	18.28	279.71	280.44	73	1.21	35.48
River	-300	PF 25% release	18.28	278.98	279.79	81	1.1	38.56
River	-400	PF 25% release	18.28	278.25	278.99	74	1.32	37.22
River	-500	PF 25% release	18.28	277.51	278.28	77	1.03	42.7
River	-600	PF 25% release	18.28	276.78	277.17	39	1.69	37.29
River	-700	PF 25% release	18.28	274.16	274.74	58	1.7	37.42
River	-800	PF 25% release	18.28	271.55	272.19	64	1.81	31.36
River	-900	PF 25% release	18.28	268.93	269.6	67	1.85	29.35
River	-1000	PF 25% release	18.28	266.31	266.99	68	1.85	28.89
River	-1100	PF 25% release	18.28	263.69	264.37	68	1.85	29.28
River	-1200	PF 25% release	18.28	261.07	261.74	67	1.82	30.41
River	-1300	PF 25% release	18.28	258.46	259.09	63	1.81	31.41
River	-1400	PF 25% release	18.28	255.84	256.48	64	1.53	33.59
River	0	PF 30% release	21.94	281.18	281.76	58	1.14	40.08
River	-100	PF 30% release	21.94	280.45	281.17	72	1.19	38.62
River	-200	PF 30% release	21.94	279.71	280.49	78	1.28	36.77
River	-300	PF 30% release	21.94	278.98	279.85	87	1.17	39.81
River	-400	PF 30% release	21.94	278.25	279.05	80	1.37	39.94
River	-500	PF 30% release	21.94	277.51	278.33	82	1.1	44.56
River	-600	PF 30% release	21.94	276.78	277.21	43	1.79	38.18
River	-700	PF 30% release	21.94	274.16	274.78	62	1.78	39.44
River	-800	PF 30% release	21.94	271.55	272.24	69	1.86	33.83
River	-900	PF 30% release	21.94	268.93	269.65	72	1.91	31.62
River	-1000	PF 30% release	21.94	266.31	267.04	73	1.93	31.05
River	-1100	PF 30% release	21.94	263.69	264.42	73	1.91	31.52
River	-1200	PF 30% release	21.94	261.07	261.78	71	1.9	32.64
River	-1300	PF 30% release	21.94	258.46	259.13	67	1.89	32.72
River	-1400	PF 30% release	21.94	255.84	256.52	68	1.64	33.98
River	0	PF 40% release	29.25	281.18	281.86	68	1.26	42.15
River	-100	PF 40% release	29.25	280.45	281.27	82	1.31	40.49
River	-200	PF 40% release	29.25	279.71	280.59	88	1.4	39.11
River	-300	PF 40% release	29.25	278.98	279.94	96	1.3	41.98

River	Ch d/s of Tammu Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-400	PF 40% release	29.25	278.25	279.14	89	1.46	44.75
River	-500	PF 40% release	29.25	277.51	278.43	92	1.21	47.74
River	-600	PF 40% release	29.25	276.78	277.29	51	1.94	39.85
River	-700	PF 40% release	29.25	274.16	274.85	69	1.91	42.73
River	-800	PF 40% release	29.25	271.55	272.32	77	1.98	37.85
River	-900	PF 40% release	29.25	268.93	269.75	82	2.01	35.62
River	-1000	PF 40% release	29.25	266.31	267.13	82	2.04	34.85
River	-1100	PF 40% release	29.25	263.69	264.51	82	2.03	35.35
River	-1200	PF 40% release	29.25	261.07	261.86	79	2.05	34.53
River	-1300	PF 40% release	29.25	258.46	259.22	76	2.03	35.11
River	-1400	PF 40% release	29.25	255.84	256.6	76	1.83	34.68
River	0	PF 50% release	36.56	281.18	281.95	77	1.35	43.99
River	-100	PF 50% release	36.56	280.45	281.36	91	1.41	42.15
River	-200	PF 50% release	36.56	279.71	280.68	97	1.49	41.17
River	-300	PF 50% release	36.56	278.98	280.02	104	1.4	43.85
River	-400	PF 50% release	36.56	278.25	279.22	97	1.54	47.69
River	-500	PF 50% release	36.56	277.51	278.51	100	1.3	50.57
River	-600	PF 50% release	36.56	276.78	277.35	57	2.07	41.32
River	-700	PF 50% release	36.56	274.16	274.92	76	2.01	45.66
River	-800	PF 50% release	36.56	271.55	272.4	85	2.05	41.6
River	-900	PF 50% release	36.56	268.93	269.82	89	2.1	38.95
River	-1000	PF 50% release	36.56	266.31	267.21	90	2.13	38.15
River	-1100	PF 50% release	36.56	263.69	264.58	89	2.13	37.05
River	-1200	PF 50% release	36.56	261.07	261.94	87	2.17	36.17
River	-1300	PF 50% release	36.56	258.46	259.29	83	2.17	36.21
River	-1400	PF 50% release	36.56	255.84	256.67	83	1.98	35.32
River	0	PF 100% release	73.13	281.18	282.3	112	1.67	51.23
River	-100	PF 100% release	73.13	280.45	281.7	125	1.77	48.66
River	-200	PF 100% release	73.13	279.71	281.03	132	1.83	48.83
River	-300	PF 100% release	73.13	278.98	280.33	135	1.8	51.02
River	-400	PF 100% release	73.13	278.25	279.51	126	1.91	52.96
River	-500	PF 100% release	73.13	277.51	278.8	129	1.64	58.27
River	-600	PF 100% release	73.13	276.78	277.61	83	2.49	47.39
River	-700	PF 100% release	73.13	274.16	275.17	101	2.4	52.01
River	-800	PF 100% release	73.13	271.55	272.67	112	2.4	53.4
River	-900	PF 100% release	73.13	268.93	270.1	117	2.46	48.55
River	-1000	PF 100% release	73.13	266.31	267.49	118	2.54	44.74
River	-1100	PF 100% release	73.13	263.69	264.87	118	2.56	42.98
River	-1200	PF 100% release	73.13	261.07	262.23	116	2.6	41.03
River	-1300	PF 100% release	73.13	258.46	259.57	111	2.64	39.15
River	-1400	PF 100% release	73.13	255.84	256.95	111	2.54	37.91

Subansiri Middle HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Subansiri Middle Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	23.82	277.95	278.83	88	2.29	19.81
Subansiri	-50	PF 10% release	23.82	276.95	277.83	88	2.29	19.82
Subansiri	-100	PF 10% release	23.82	275.72	276.74	102	2.41	13.21
Subansiri	-150	PF 10% release	23.82	274.84	275.91	107	2.26	21.05

River	Ch d/s of Subansiri Middle Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-200	PF 10% release	23.82	272.43	273.94	151	1.78	15.72
Subansiri	-250	PF 10% release	23.82	271.76	273.26	150	2.4	17.08
Subansiri	0 (dam site)	PF 15% release	35.74	277.95	279.02	107	2.49	22.97
Subansiri	-50	PF 15% release	35.74	276.95	278.02	107	2.49	22.98
Subansiri	-100	PF 15% release	35.74	275.72	276.91	119	2.93	13.96
Subansiri	-150	PF 15% release	35.74	274.84	276.08	124	2.53	22.34
Subansiri	-200	PF 15% release	35.74	272.43	274.17	174	2.08	17.24
Subansiri	-250	PF 15% release	35.74	271.76	273.45	169	2.68	18.38
Subansiri	0 (dam site)	PF 20% release	47.65	277.95	279.16	121	2.68	24.73
Subansiri	-50	PF 20% release	47.65	276.95	278.16	121	2.68	24.73
Subansiri	-100	PF 20% release	47.65	275.72	277.1	138	3.17	14.82
Subansiri	-150	PF 20% release	47.65	274.84	276.22	138	2.72	23.29
Subansiri	-200	PF 20% release	47.65	272.43	274.36	193	2.32	18.47
Subansiri	-250	PF 20% release	47.65	271.76	273.62	186	2.89	19.53
Subansiri	0 (dam site)	PF 30% release	71.47	277.95	279.41	146	2.91	28.36
Subansiri	-50	PF 30% release	71.47	276.95	278.46	151	2.78	29.01
Subansiri	-100	PF 30% release	71.47	275.72	277.45	173	3.5	16.32
Subansiri	-150	PF 30% release	71.47	274.84	276.47	163	3.05	24.64
Subansiri	-200	PF 30% release	71.47	272.43	274.71	228	2.6	23.19
Subansiri	-250	PF 30% release	71.47	271.76	273.91	215	3.18	21.91
Subansiri	0 (dam site)	PF 40% release	95.29	277.95	279.62	167	3.1	31.66
Subansiri	-50	PF 40% release	95.29	276.95	278.76	181	2.7	33.67
Subansiri	-100	PF 40% release	95.29	275.72	277.74	202	3.77	17.57
Subansiri	-150	PF 40% release	95.29	274.84	276.68	184	3.32	25.8
Subansiri	-200	PF 40% release	95.29	272.43	275.01	258	2.68	29.79
Subansiri	-250	PF 40% release	95.29	271.76	274.17	241	3.32	25.67
Subansiri	0 (dam site)	PF 50% release	119.12	277.95	279.8	185	3.27	34.11
Subansiri	-50	PF 50% release	119.12	276.95	279.04	209	2.64	37.43
Subansiri	-100	PF 50% release	119.12	275.72	278.01	229	3.93	19.21
Subansiri	-150	PF 50% release	119.12	274.84	276.87	203	3.52	26.87
Subansiri	-200	PF 50% release	119.12	272.43	275.19	276	2.89	30.77
Subansiri	-250	PF 50% release	119.12	271.76	274.39	263	3.45	28.44
Subansiri	0 (dam site)	PF 100% release	238.24	277.95	280.46	251	3.86	41.41
Subansiri	-50	PF 100% release	238.24	276.95	280.05	310	2.72	45.67
Subansiri	-100	PF 100% release	238.24	275.72	279.07	335	4.22	31.57
Subansiri	-150	PF 100% release	238.24	274.84	277.65	281	4.23	30.83
Subansiri	-200	PF 100% release	238.24	272.43	275.98	355	3.58	33.93
Subansiri	-250	PF 100% release	238.24	271.76	275.11	335	4.29	29.92

Subansiri Middle HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Subansiri Middle Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	100.99	277.95	279.67	172	3.13	32.4
Subansiri	-50	PF 10% release	100.99	276.95	278.83	188	2.67	34.63
Subansiri	-100	PF 10% release	100.99	275.72	277.8	208	3.83	17.84

River	Ch d/s of Subansiri Middle Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-150	PF 10% release	100.99	274.84	276.72	188	3.39	26.04
Subansiri	-200	PF 10% release	100.99	272.43	275.06	263	2.73	30.21
Subansiri	-250	PF 10% release	100.99	271.76	274.23	247	3.35	26.52
Subansiri	0 (dam site)	PF 15% release	151.48	277.95	280.01	206	3.44	37
Subansiri	-50	PF 15% release	151.48	276.95	279.38	243	2.59	40.77
Subansiri	-100	PF 15% release	151.48	275.72	278.32	260	4.13	21.32
Subansiri	-150	PF 15% release	151.48	274.84	277.11	227	3.75	28.18
Subansiri	-200	PF 15% release	151.48	272.43	275.42	299	3.13	31.69
Subansiri	-250	PF 15% release	151.48	271.76	274.6	284	3.72	28.88
Subansiri	0 (dam site)	PF 20% release	201.98	277.95	280.29	234	3.67	40.08
Subansiri	-50	PF 20% release	201.98	276.95	279.8	285	2.65	43.87
Subansiri	-100	PF 20% release	201.98	275.72	278.83	311	4.11	28.66
Subansiri	-150	PF 20% release	201.98	274.84	277.44	260	4.05	29.79
Subansiri	-200	PF 20% release	201.98	272.43	275.76	333	3.41	33.04
Subansiri	-250	PF 20% release	201.98	271.76	274.91	315	4.08	29.5
Subansiri	0 (dam site)	PF 30% release	302.96	277.95	280.74	279	4.1	43.47
Subansiri	-50	PF 30% release	302.96	276.95	280.46	351	2.84	48.09
Subansiri	-100	PF 30% release	302.96	275.72	279.41	369	4.5	32.94
Subansiri	-150	PF 30% release	302.96	274.84	277.99	315	4.52	32.36
Subansiri	-200	PF 30% release	302.96	272.43	276.36	393	3.8	35.45
Subansiri	-250	PF 30% release	302.96	271.76	275.44	368	4.61	30.61
Subansiri	0 (dam site)	PF 40% release	403.95	277.95	281.13	318	4.42	46.28
Subansiri	-50	PF 40% release	403.95	276.95	281.03	408	2.99	50.84
Subansiri	-100	PF 40% release	403.95	275.72	279.87	415	4.87	34.83
Subansiri	-150	PF 40% release	403.95	274.84	278.47	363	4.87	34.51
Subansiri	-200	PF 40% release	403.95	272.43	276.91	448	4.04	37.43
Subansiri	-250	PF 40% release	403.95	271.76	275.91	415	5.03	31.58
Subansiri	0 (dam site)	PF 50% release	504.94	277.95	281.47	352	4.7	48.18
Subansiri	-50	PF 50% release	504.94	276.95	281.54	459	3.12	53.6
Subansiri	-100	PF 50% release	504.94	275.72	280.3	458	5.14	36.58
Subansiri	-150	PF 50% release	504.94	274.84	278.89	405	5.15	36.41
Subansiri	-200	PF 50% release	504.94	272.43	277.41	498	4.24	38.77
Subansiri	-250	PF 50% release	504.94	271.76	276.34	458	5.37	32.47
Subansiri	0 (dam site)	PF 100% release	1009.88	277.95	283.52	557	4.65	59.79
Subansiri	-50	PF 100% release	1009.88	276.95	283.65	670	3.5	66.86
Subansiri	-100	PF 100% release	1009.88	275.72	281.96	624	6.15	42.85
Subansiri	-150	PF 100% release	1009.88	274.84	280.55	571	6.16	42.92
Subansiri	-200	PF 100% release	1009.88	272.43	279.54	711	4.87	44.43
Subansiri	-250	PF 100% release	1009.88	271.76	278.18	642	6.42	37.71

Subansiri Middle HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition

River	Ch d/s of Subansiri Middle Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	0 (dam site)	PF 10% release	55.41	277.95	279.25	130	2.76	25.7
Subansiri	-50	PF 10% release	55.41	276.95	278.25	130	2.76	25.7



River	Ch d/s of Subansiri Middle Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Subansiri	-100	PF 10% release	55.41	275.72	277.23	151	3.29	15.35
Subansiri	-150	PF 10% release	55.41	274.84	276.31	147	2.84	23.75
Subansiri	-200	PF 10% release	55.41	272.43	274.47	204	2.45	19.19
Subansiri	-250	PF 10% release	55.41	271.76	273.72	196	3.01	20.19
Subansiri	0 (dam site)	PF 15% release	83.11	277.95	279.52	157	3.01	30.08
Subansiri	-50	PF 15% release	83.11	276.95	278.61	166	2.73	31.54
Subansiri	-100	PF 15% release	83.11	275.72	277.59	187	3.65	16.93
Subansiri	-150	PF 15% release	83.11	274.84	276.57	173	3.2	25.21
Subansiri	-200	PF 15% release	83.11	272.43	274.88	245	2.62	27.38
Subansiri	-250	PF 15% release	83.11	271.76	274.04	228	3.26	23.82
Subansiri	0 (dam site)	PF 20% release	110.81	277.95	279.74	179	3.2	33.39
Subansiri	-50	PF 20% release	110.81	276.95	278.95	200	2.66	36.15
Subansiri	-100	PF 20% release	110.81	275.72	277.92	220	3.89	18.59
Subansiri	-150	PF 20% release	110.81	274.84	276.81	197	3.45	26.51
Subansiri	-200	PF 20% release	110.81	272.43	275.13	270	2.81	30.52
Subansiri	-250	PF 20% release	110.81	271.76	274.32	256	3.4	27.81
Subansiri	0 (dam site)	PF 30% release	166.22	277.95	280.1	215	3.5	38.25
Subansiri	-50	PF 30% release	166.22	276.95	279.51	256	2.59	41.81
Subansiri	-100	PF 30% release	166.22	275.72	278.48	276	4.15	22.97
Subansiri	-150	PF 30% release	166.22	274.84	277.21	237	3.85	28.68
Subansiri	-200	PF 30% release	166.22	272.43	275.53	310	3.21	32.11
Subansiri	-250	PF 30% release	166.22	271.76	274.69	293	3.85	29.06
Subansiri	0 (dam site)	PF 40% release	221.62	277.95	280.38	243	3.78	40.82
Subansiri	-50	PF 40% release	221.62	276.95	279.94	299	2.69	44.86
Subansiri	-100	PF 40% release	221.62	275.72	278.98	326	4.14	30.77
Subansiri	-150	PF 40% release	221.62	274.84	277.56	272	4.15	30.37
Subansiri	-200	PF 40% release	221.62	272.43	275.88	345	3.5	33.53
Subansiri	-250	PF 40% release	221.62	271.76	275.02	326	4.2	29.73
Subansiri	0 (dam site)	PF 50% release	277.03	277.95	280.63	268	4	42.69
Subansiri	-50	PF 50% release	277.03	276.95	280.3	335	2.79	47.34
Subansiri	-100	PF 50% release	277.03	275.72	279.28	356	4.39	32.41
Subansiri	-150	PF 50% release	277.03	274.84	277.86	302	4.42	31.76
Subansiri	-200	PF 50% release	277.03	272.43	276.21	378	3.72	34.85
Subansiri	-250	PF 50% release	277.03	271.76	275.31	355	4.49	30.34
Subansiri	0 (dam site)	PF 100% release	554.06	277.95	281.62	367	4.83	48.9
Subansiri	-50	PF 100% release	554.06	276.95	281.78	483	3.17	55.11
Subansiri	-100	PF 100% release	554.06	275.72	280.48	476	5.28	37.33
Subansiri	-150	PF 100% release	554.06	274.84	279.07	423	5.29	37.24
Subansiri	-200	PF 100% release	554.06	272.43	277.65	522	4.32	39.39
Subansiri	-250	PF 100% release	554.06	271.76	276.54	478	5.51	32.89

Kurang-I & II HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	0	PF 10% release	8.85	619.69	620.39	70	0.6	32.1
Kurang	-100	PF 10% release	8.85	619.44	620.22	78	0.63	30.24

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	-200	PF 10% release	8.85	619.18	619.95	77	0.83	27.47
Kurang	-300	PF 10% release	8.85	618.61	619.04	43	1.47	28.22
Kurang	-400	PF 10% release	8.85	618.04	618.98	94	0.31	32.49
Kurang	-500	PF 10% release	8.85	617.55	618.88	133	1.08	12.4
Kurang	-600	PF 10% release	8.85	617.06	618.38	132	1.45	9.23
Kurang	-700	PF 10% release	8.85	616.46	617.49	103	1.74	9.86
Kurang	-800	PF 10% release	8.85	615.85	616.81	96	1.09	17.06
Kurang	-900	PF 10% release	8.85	615.39	616.25	86	1.1	18.68
Kurang	-1000	PF 10% release	8.85	614.93	615.73	80	0.93	23.78
Kurang	0	PF 15% release	13.28	619.69	620.53	84	0.69	32.88
Kurang	-100	PF 15% release	13.28	619.44	620.35	91	0.74	30.93
Kurang	-200	PF 15% release	13.28	619.18	619.97	79	1.2	28.07
Kurang	-300	PF 15% release	13.28	618.61	619.24	63	1.12	29.66
Kurang	-400	PF 15% release	13.28	618.04	619.22	118	0.37	33.48
Kurang	-500	PF 15% release	13.28	617.55	619.1	155	1.18	14.5
Kurang	-600	PF 15% release	13.28	617.06	618.59	153	1.63	10.68
Kurang	-700	PF 15% release	13.28	616.46	617.65	119	1.95	11.38
Kurang	-800	PF 15% release	13.28	615.85	616.96	111	1.22	19.76
Kurang	-900	PF 15% release	13.28	615.39	616.39	100	1.22	21.73
Kurang	-1000	PF 15% release	13.28	614.93	615.85	92	1.05	27.38
Kurang	0	PF 20% release	17.7	619.69	620.64	95	0.77	33.56
Kurang	-100	PF 20% release	17.7	619.44	620.47	103	0.82	31.55
Kurang	-200	PF 20% release	17.7	619.18	619.97	79	1.58	28.19
Kurang	-300	PF 20% release	17.7	618.61	619.44	83	0.99	30.67
Kurang	-400	PF 20% release	17.7	618.04	619.41	137	0.41	34.28
Kurang	-500	PF 20% release	17.7	617.55	619.28	173	1.26	16.2
Kurang	-600	PF 20% release	17.7	617.06	618.75	169	1.77	11.85
Kurang	-700	PF 20% release	17.7	616.46	617.78	132	2.13	12.59
Kurang	-800	PF 20% release	17.7	615.85	617.08	123	1.32	21.91
Kurang	-900	PF 20% release	17.7	615.39	616.5	111	1.32	24.16
Kurang	-1000	PF 20% release	17.7	614.93	615.95	102	1.15	30.22
Kurang	0	PF 30% release	26.55	619.69	620.83	114	0.9	34.7
Kurang	-100	PF 30% release	26.55	619.44	620.65	121	0.97	32.53
Kurang	-200	PF 30% release	26.55	619.18	620.06	88	1.91	30.33
Kurang	-300	PF 30% release	26.55	618.61	619.75	114	0.96	32.28
Kurang	-400	PF 30% release	26.55	618.04	619.72	168	0.49	35.58
Kurang	-500	PF 30% release	26.55	617.55	619.57	202	1.39	18.94
Kurang	-600	PF 30% release	26.55	617.06	619.02	196	1.98	13.72
Kurang	-700	PF 30% release	26.55	616.46	617.98	152	2.41	14.5
Kurang	-800	PF 30% release	26.55	615.85	617.27	142	1.48	25.33
Kurang	-900	PF 30% release	26.55	615.39	616.68	129	1.47	28.01
Kurang	-1000	PF 30% release	26.55	614.93	616.1	117	1.31	34.75
Kurang	0	PF 40% release	35.41	619.69	620.98	129	1.02	35.59
Kurang	-100	PF 40% release	35.41	619.44	620.78	134	1.12	33.17
Kurang	-200	PF 40% release	35.41	619.18	620.22	104	1.9	30.84
Kurang	-300	PF 40% release	35.41	618.61	620	139	0.98	33.22
Kurang	-400	PF 40% release	35.41	618.04	619.98	194	0.56	36.64
Kurang	-500	PF 40% release	35.41	617.55	619.81	226	1.48	21.16
Kurang	-600	PF 40% release	35.41	617.06	619.24	218	2.14	15.23
Kurang	-700	PF 40% release	35.41	616.46	618.13	167	2.64	15.99

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	-800	PF 40% release	35.41	615.85	617.42	157	1.6	28.11
Kurang	-900	PF 40% release	35.41	615.39	616.82	143	1.59	31.1
Kurang	-1000	PF 40% release	35.41	614.93	616.22	129	1.43	38.33
Kurang	0	PF 50% release	44.26	619.69	621.12	143	1.12	36.39
Kurang	-100	PF 50% release	44.26	619.44	620.89	145	1.25	33.64
Kurang	-200	PF 50% release	44.26	619.18	620.39	121	1.85	31.42
Kurang	-300	PF 50% release	44.26	618.61	620.22	161	1.02	34
Kurang	-400	PF 50% release	44.26	618.04	620.19	215	0.62	37.54
Kurang	-500	PF 50% release	44.26	617.55	620.01	246	1.56	23.06
Kurang	-600	PF 50% release	44.26	617.06	619.42	236	2.27	16.53
Kurang	-700	PF 50% release	44.26	616.46	618.26	180	2.84	17.24
Kurang	-800	PF 50% release	44.26	615.85	617.55	170	1.71	30.41
Kurang	-900	PF 50% release	44.26	615.39	616.94	155	1.7	33.31
Kurang	-1000	PF 50% release	44.26	614.93	616.32	139	1.54	41.27
Kurang	0	PF 100% release	88.52	619.69	621.7	201	1.43	39.87
Kurang	-100	PF 100% release	88.52	619.44	621.46	202	1.6	35.99
Kurang	-200	PF 100% release	88.52	619.18	621.13	195	1.84	33.88
Kurang	-300	PF 100% release	88.52	618.61	621.02	241	1.23	36.89
Kurang	-400	PF 100% release	88.52	618.04	620.99	295	0.87	40.87
Kurang	-500	PF 100% release	88.52	617.55	620.77	322	1.83	30.1
Kurang	-600	PF 100% release	88.52	617.06	620.06	300	2.81	21.01
Kurang	-700	PF 100% release	88.52	616.46	618.8	234	3.39	22.3
Kurang	-800	PF 100% release	88.52	615.85	618.02	217	2.13	36.48
Kurang	-900	PF 100% release	88.52	615.39	617.35	196	2.17	38.23
Kurang	-1000	PF 100% release	88.52	614.93	616.68	175	1.97	48.86

Kurang-I & II HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	0	PF 10% release	37.52	619.69	621.02	133	1.04	35.79
Kurang	-100	PF 10% release	37.52	619.44	620.8	136	1.15	33.28
Kurang	-200	PF 10% release	37.52	619.18	620.26	108	1.89	30.98
Kurang	-300	PF 10% release	37.52	618.61	620.06	145	0.99	33.42
Kurang	-400	PF 10% release	37.52	618.04	620.03	199	0.58	36.86
Kurang	-500	PF 10% release	37.52	617.55	619.86	231	1.5	21.64
Kurang	-600	PF 10% release	37.52	617.06	619.28	222	2.17	15.56
Kurang	-700	PF 10% release	37.52	616.46	618.17	171	2.69	16.29
Kurang	-800	PF 10% release	37.52	615.85	617.46	161	1.63	28.7
Kurang	-900	PF 10% release	37.52	615.39	616.85	146	1.62	31.75
Kurang	-1000	PF 10% release	37.52	614.93	616.25	132	1.46	39.1
Kurang	0	PF 15% release	56.28	619.69	621.28	159	1.23	37.39
Kurang	-100	PF 15% release	56.28	619.44	621.05	161	1.38	34.29
Kurang	-200	PF 15% release	56.28	619.18	620.62	144	1.81	32.17
Kurang	-300	PF 15% release	56.28	618.61	620.48	187	1.08	34.92
Kurang	-400	PF 15% release	56.28	618.04	620.45	241	0.7	38.6
Kurang	-500	PF 15% release	56.28	617.55	620.25	270	1.65	25.3
Kurang	-600	PF 15% release	56.28	617.06	619.64	258	2.42	18.05
Kurang	-700	PF 15% release	56.28	616.46	618.42	196	3.07	18.68

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	-800	PF 15% release	56.28	615.85	617.7	185	1.84	33.08
Kurang	-900	PF 15% release	56.28	615.39	617.07	168	1.85	34.87
Kurang	-1000	PF 15% release	56.28	614.93	616.43	150	1.67	44.33
Kurang	0	PF 20% release	75.04	619.69	621.53	184	1.36	38.87
Kurang	-100	PF 20% release	75.04	619.44	621.29	185	1.52	35.3
Kurang	-200	PF 20% release	75.04	619.18	620.93	175	1.81	33.21
Kurang	-300	PF 20% release	75.04	618.61	620.81	220	1.17	36.14
Kurang	-400	PF 20% release	75.04	618.04	620.78	274	0.8	40
Kurang	-500	PF 20% release	75.04	617.55	620.57	302	1.76	28.25
Kurang	-600	PF 20% release	75.04	617.06	619.9	284	2.65	19.9
Kurang	-700	PF 20% release	75.04	616.46	618.65	219	3.28	20.87
Kurang	-800	PF 20% release	75.04	615.85	617.9	205	2.01	35.57
Kurang	-900	PF 20% release	75.04	615.39	617.24	185	2.05	36.92
Kurang	-1000	PF 20% release	75.04	614.93	616.58	165	1.86	47.12
Kurang	0	PF 30% release	112.57	619.69	621.98	229	1.54	41.54
Kurang	-100	PF 30% release	112.57	619.44	621.75	231	1.71	37.17
Kurang	-200	PF 30% release	112.57	619.18	621.45	227	1.9	34.96
Kurang	-300	PF 30% release	112.57	618.61	621.35	274	1.34	38.08
Kurang	-400	PF 30% release	112.57	618.04	621.32	328	0.97	42.24
Kurang	-500	PF 30% release	112.57	617.55	621.08	353	1.94	33
Kurang	-600	PF 30% release	112.57	617.06	620.31	325	3.05	22.74
Kurang	-700	PF 30% release	112.57	616.46	619.03	257	3.57	24.52
Kurang	-800	PF 30% release	112.57	615.85	618.21	236	2.31	37.94
Kurang	-900	PF 30% release	112.57	615.39	617.52	213	2.37	40.28
Kurang	-1000	PF 30% release	112.57	614.93	616.83	190	2.15	51.72
Kurang	0	PF 40% release	150.09	619.69	622.38	269	1.66	43.92
Kurang	-100	PF 40% release	150.09	619.44	622.15	271	1.85	38.83
Kurang	-200	PF 40% release	150.09	619.18	621.88	270	2.01	36.39
Kurang	-300	PF 40% release	150.09	618.61	621.79	318	1.48	39.66
Kurang	-400	PF 40% release	150.09	618.04	621.75	371	1.12	44.05
Kurang	-500	PF 40% release	150.09	617.55	621.49	394	2.07	36.87
Kurang	-600	PF 40% release	150.09	617.06	620.63	357	3.37	24.97
Kurang	-700	PF 40% release	150.09	616.46	619.34	288	3.79	27.49
Kurang	-800	PF 40% release	150.09	615.85	618.47	262	2.55	39.93
Kurang	-900	PF 40% release	150.09	615.39	617.75	236	2.63	43.04
Kurang	-1000	PF 40% release	150.09	614.93	617.02	209	2.38	55.41
Kurang	0	PF 50% release	187.61	619.69	622.74	305	1.76	46.05
Kurang	-100	PF 50% release	187.61	619.44	622.51	307	1.97	40.31
Kurang	-200	PF 50% release	187.61	619.18	622.25	307	2.13	37.63
Kurang	-300	PF 50% release	187.61	618.61	622.16	355	1.62	41.01
Kurang	-400	PF 50% release	187.61	618.04	622.13	409	1.24	45.6
Kurang	-500	PF 50% release	187.61	617.55	621.84	429	2.17	40.2
Kurang	-600	PF 50% release	187.61	617.06	620.88	382	3.67	26.77
Kurang	-700	PF 50% release	187.61	616.46	619.61	315	3.95	30.07
Kurang	-800	PF 50% release	187.61	615.85	618.69	284	2.76	41.62
Kurang	-900	PF 50% release	187.61	615.39	617.96	257	2.82	45.58
Kurang	-1000	PF 50% release	187.61	614.93	617.13	220	2.73	57.35
Kurang	0	PF 100% release	375.22	619.69	624.15	446	2.11	54.46
Kurang	-100	PF 100% release	375.22	619.44	623.9	446	2.41	46.03

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	-200	PF 100% release	375.22	619.18	623.64	446	2.62	42.24
Kurang	-300	PF 100% release	375.22	618.61	623.55	494	2.13	46.01
Kurang	-400	PF 100% release	375.22	618.04	623.51	547	1.72	51.37
Kurang	-500	PF 100% release	375.22	617.55	623.19	564	2.54	49.21
Kurang	-600	PF 100% release	375.22	617.06	621.79	473	4.79	33.13
Kurang	-700	PF 100% release	375.22	616.46	620.62	416	4.54	39.69
Kurang	-800	PF 100% release	375.22	615.85	619.52	367	3.56	47.99
Kurang	-900	PF 100% release	375.22	615.39	618.78	339	3.48	54.95
Kurang	-1000	PF 100% release	375.22	614.93	617.59	266	3.84	66.21

**Kurang-I HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	0	PF 10% release	20.59	619.69	620.71	102	0.82	33.96
Kurang	-100	PF 10% release	20.59	619.44	620.53	109	0.87	31.91
Kurang	-200	PF 10% release	20.59	619.18	619.99	81	1.76	28.84
Kurang	-300	PF 10% release	20.59	618.61	619.55	94	0.96	31.25
Kurang	-400	PF 10% release	20.59	618.04	619.52	148	0.44	34.74
Kurang	-500	PF 10% release	20.59	617.55	619.38	183	1.31	17.17
Kurang	-600	PF 10% release	20.59	617.06	618.85	179	1.84	12.51
Kurang	-700	PF 10% release	20.59	616.46	617.85	139	2.23	13.27
Kurang	-800	PF 10% release	20.59	615.85	617.15	130	1.37	23.14
Kurang	-900	PF 10% release	20.59	615.39	616.56	117	1.37	25.54
Kurang	-1000	PF 10% release	20.59	614.93	616	107	1.21	31.84
Kurang	0	PF 15% release	30.88	619.69	620.91	122	0.96	35.16
Kurang	-100	PF 15% release	30.88	619.44	620.71	127	1.05	32.89
Kurang	-200	PF 15% release	30.88	619.18	620.13	95	1.93	30.56
Kurang	-300	PF 15% release	30.88	618.61	619.88	127	0.97	32.78
Kurang	-400	PF 15% release	30.88	618.04	619.85	181	0.53	36.12
Kurang	-500	PF 15% release	30.88	617.55	619.69	214	1.43	20.07
Kurang	-600	PF 15% release	30.88	617.06	619.13	207	2.06	14.5
Kurang	-700	PF 15% release	30.88	616.46	618.06	160	2.53	15.26
Kurang	-800	PF 15% release	30.88	615.85	617.35	150	1.54	26.76
Kurang	-900	PF 15% release	30.88	615.39	616.75	136	1.53	29.61
Kurang	-1000	PF 15% release	30.88	614.93	616.16	123	1.38	36.51
Kurang	0	PF 20% release	41.17	619.69	621.07	138	1.09	36.12
Kurang	-100	PF 20% release	41.17	619.44	620.85	141	1.21	33.48
Kurang	-200	PF 20% release	41.17	619.18	620.33	115	1.86	31.22
Kurang	-300	PF 20% release	41.17	618.61	620.15	154	1.01	33.74
Kurang	-400	PF 20% release	41.17	618.04	620.12	208	0.6	37.24
Kurang	-500	PF 20% release	41.17	617.55	619.95	240	1.53	22.43
Kurang	-600	PF 20% release	41.17	617.06	619.36	230	2.22	16.1
Kurang	-700	PF 20% release	41.17	616.46	618.22	176	2.78	16.81
Kurang	-800	PF 20% release	41.17	615.85	617.51	166	1.67	29.66
Kurang	-900	PF 20% release	41.17	615.39	616.9	151	1.66	32.85
Kurang	-1000	PF 20% release	41.17	614.93	616.28	135	1.51	40.25
Kurang	0	PF 30% release	61.76	619.69	621.36	167	1.27	37.84

River	Ch d/s of Kurang-I & II Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
Kurang	-100	PF 30% release	61.76	619.44	621.12	168	1.43	34.59
Kurang	-200	PF 30% release	61.76	619.18	620.71	153	1.8	32.49
Kurang	-300	PF 30% release	61.76	618.61	620.58	197	1.11	35.3
Kurang	-400	PF 30% release	61.76	618.04	620.55	251	0.73	39.04
Kurang	-500	PF 30% release	61.76	617.55	620.35	280	1.68	26.23
Kurang	-600	PF 30% release	61.76	617.06	619.72	266	2.49	18.66
Kurang	-700	PF 30% release	61.76	616.46	618.48	202	3.16	19.3
Kurang	-800	PF 30% release	61.76	615.85	617.76	191	1.89	34.19
Kurang	-900	PF 30% release	61.76	615.39	617.12	173	1.91	35.51
Kurang	-1000	PF 30% release	61.76	614.93	616.48	155	1.73	45.19
Kurang	0	PF 40% release	82.34	619.69	621.62	193	1.4	39.42
Kurang	-100	PF 40% release	82.34	619.44	621.39	195	1.57	35.68
Kurang	-200	PF 40% release	82.34	619.18	621.04	186	1.83	33.58
Kurang	-300	PF 40% release	82.34	618.61	620.93	232	1.21	36.56
Kurang	-400	PF 40% release	82.34	618.04	620.9	286	0.84	40.48
Kurang	-500	PF 40% release	82.34	617.55	620.68	313	1.8	29.27
Kurang	-600	PF 40% release	82.34	617.06	619.99	293	2.74	20.52
Kurang	-700	PF 40% release	82.34	616.46	618.73	227	3.34	21.66
Kurang	-800	PF 40% release	82.34	615.85	617.96	211	2.07	36.08
Kurang	-900	PF 40% release	82.34	615.39	617.3	191	2.12	37.64
Kurang	-1000	PF 40% release	82.34	614.93	616.64	171	1.92	48.12
Kurang	0	PF 50% release	102.93	619.69	621.87	218	1.5	40.89
Kurang	-100	PF 50% release	102.93	619.44	621.64	220	1.67	36.71
Kurang	-200	PF 50% release	102.93	619.18	621.33	215	1.88	34.54
Kurang	-300	PF 50% release	102.93	618.61	621.23	262	1.3	37.63
Kurang	-400	PF 50% release	102.93	618.04	621.19	315	0.93	41.71
Kurang	-500	PF 50% release	102.93	617.55	620.96	341	1.9	31.89
Kurang	-600	PF 50% release	102.93	617.06	620.21	315	2.96	22.07
Kurang	-700	PF 50% release	102.93	616.46	618.94	248	3.49	23.69
Kurang	-800	PF 50% release	102.93	615.85	618.13	228	2.24	37.38
Kurang	-900	PF 50% release	102.93	615.39	617.45	206	2.3	39.49
Kurang	-1000	PF 50% release	102.93	614.93	616.77	184	2.08	50.63
Kurang	0	PF 100% release	205.86	619.69	622.9	321	1.81	47.02
Kurang	-100	PF 100% release	205.86	619.44	622.67	323	2.02	40.97
Kurang	-200	PF 100% release	205.86	619.18	622.42	324	2.18	38.17
Kurang	-300	PF 100% release	205.86	618.61	622.33	372	1.67	41.6
Kurang	-400	PF 100% release	205.86	618.04	622.29	425	1.3	46.29
Kurang	-500	PF 100% release	205.86	617.55	622	445	2.22	41.69
Kurang	-600	PF 100% release	205.86	617.06	620.99	393	3.8	27.55
Kurang	-700	PF 100% release	205.86	616.46	619.73	327	4.03	31.21
Kurang	-800	PF 100% release	205.86	615.85	618.79	294	2.86	42.36
Kurang	-900	PF 100% release	205.86	615.39	618.06	267	2.89	46.82
Kurang	-1000	PF 100% release	205.86	614.93	617.15	222	2.93	57.88

Mili HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	2.39	1375.49	1375.87	38	0.61	20.36
River	-100	PF 10% release	2.39	1374.47	1374.92	45	0.75	14.18

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-200	PF 10% release	2.39	1373.45	1373.98	53	0.76	11.98
River	-300	PF 10% release	2.39	1372.44	1372.98	54	0.88	9.97
River	-400	PF 10% release	2.39	1371.42	1372.03	61	0.82	9.6
River	-500	PF 10% release	2.39	1370.4	1370.98	58	1	8.22
River	-600	PF 10% release	2.39	1369.38	1370.05	67	0.81	8.84
River	-700	PF 10% release	2.39	1368.37	1368.93	56	1.16	7.25
River	-800	PF 10% release	2.39	1367.35	1368.06	71	0.73	9.17
River	-900	PF 10% release	2.39	1366.33	1366.81	48	1.55	6.43
River	-1000	PF 10% release	2.39	1351.86	1352.36	50	1.59	6.01
River	-1100	PF 10% release	2.39	1337.4	1337.88	48	1.57	6.25
River	-1200	PF 10% release	2.39	1322.93	1323.41	48	1.31	7.59
River	-1300	PF 10% release	2.39	1320.13	1320.65	52	1.31	7.04
River	0	PF 15% release	3.58	1375.49	1375.93	44	0.68	23.63
River	-100	PF 15% release	3.58	1374.47	1375	53	0.81	16.63
River	-200	PF 15% release	3.58	1373.45	1374.06	61	0.85	13.88
River	-300	PF 15% release	3.58	1372.44	1373.07	63	0.96	11.7
River	-400	PF 15% release	3.58	1371.42	1372.12	70	0.92	11.09
River	-500	PF 15% release	3.58	1370.4	1371.09	69	1.08	9.68
River	-600	PF 15% release	3.58	1369.38	1370.16	78	0.91	10.19
River	-700	PF 15% release	3.58	1368.37	1369.04	67	1.25	8.56
River	-800	PF 15% release	3.58	1367.35	1368.18	83	0.82	10.61
River	-900	PF 15% release	3.58	1366.33	1366.89	56	1.68	7.56
River	-1000	PF 15% release	3.58	1351.86	1352.45	59	1.72	7.07
River	-1100	PF 15% release	3.58	1337.4	1337.97	57	1.7	7.36
River	-1200	PF 15% release	3.58	1322.93	1323.49	56	1.45	8.84
River	-1300	PF 15% release	3.58	1320.13	1320.73	60	1.44	8.2
River	0	PF 20% release	4.78	1375.49	1375.99	50	0.73	26.34
River	-100	PF 20% release	4.78	1374.47	1375.07	60	0.87	18.65
River	-200	PF 20% release	4.78	1373.45	1374.13	68	0.92	15.44
River	-300	PF 20% release	4.78	1372.44	1373.15	71	1.02	13.12
River	-400	PF 20% release	4.78	1371.42	1372.2	78	1	12.29
River	-500	PF 20% release	4.78	1370.4	1371.17	77	1.14	10.88
River	-600	PF 20% release	4.78	1369.38	1370.24	86	0.99	11.28
River	-700	PF 20% release	4.78	1368.37	1369.12	75	1.31	9.64
River	-800	PF 20% release	4.78	1367.35	1368.27	92	0.89	11.77
River	-900	PF 20% release	4.78	1366.33	1366.96	63	1.78	8.49
River	-1000	PF 20% release	4.78	1351.86	1352.53	67	1.82	7.95
River	-1100	PF 20% release	4.78	1337.4	1338.04	64	1.8	8.26
River	-1200	PF 20% release	4.78	1322.93	1323.55	62	1.56	9.84
River	-1300	PF 20% release	4.78	1320.13	1320.8	67	1.55	9.15
River	0	PF 25% release	5.97	1375.49	1376.03	54	0.77	28.67
River	-100	PF 25% release	5.97	1374.47	1375.12	65	0.91	20.33
River	-200	PF 25% release	5.97	1373.45	1374.19	74	0.97	16.76
River	-300	PF 25% release	5.97	1372.44	1373.22	78	1.07	14.31
River	-400	PF 25% release	5.97	1371.42	1372.27	85	1.06	13.33
River	-500	PF 25% release	5.97	1370.4	1371.24	84	1.19	11.89
River	-600	PF 25% release	5.97	1369.38	1370.31	93	1.06	12.21
River	-700	PF 25% release	5.97	1368.37	1369.19	82	1.37	10.56
River	-800	PF 25% release	5.97	1367.35	1368.34	99	0.94	12.75
River	-900	PF 25% release	5.97	1366.33	1367.02	69	1.86	9.28
River	-1000	PF 25% release	5.97	1351.86	1352.59	73	1.91	8.68

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1100	PF 25% release	5.97	1337.4	1338.1	70	1.88	9.03
River	-1200	PF 25% release	5.97	1322.93	1323.61	68	1.65	10.7
River	-1300	PF 25% release	5.97	1320.13	1320.86	73	1.64	9.95
River	0	PF 30% release	7.16	1375.49	1376.07	58	0.81	29.84
River	-100	PF 30% release	7.16	1374.47	1375.17	70	0.95	21.82
River	-200	PF 30% release	7.16	1373.45	1374.24	79	1.02	17.94
River	-300	PF 30% release	7.16	1372.44	1373.27	83	1.12	15.36
River	-400	PF 30% release	7.16	1371.42	1372.33	91	1.11	14.24
River	-500	PF 30% release	7.16	1370.4	1371.31	91	1.24	12.77
River	-600	PF 30% release	7.16	1369.38	1370.37	99	1.11	13.02
River	-700	PF 30% release	7.16	1368.37	1369.26	89	1.41	11.37
River	-800	PF 30% release	7.16	1367.35	1368.41	106	0.99	13.6
River	-900	PF 30% release	7.16	1366.33	1367.07	74	1.93	9.99
River	-1000	PF 30% release	7.16	1351.86	1352.64	78	1.98	9.33
River	-1100	PF 30% release	7.16	1337.4	1338.15	75	1.95	9.7
River	-1200	PF 30% release	7.16	1322.93	1323.66	73	1.72	11.45
River	-1300	PF 30% release	7.16	1320.13	1320.91	78	1.71	10.67
River	0	PF 40% release	9.55	1375.49	1376.13	64	0.9	30.04
River	-100	PF 40% release	9.55	1374.47	1375.25	78	1.01	24.4
River	-200	PF 40% release	9.55	1373.45	1374.33	88	1.09	19.98
River	-300	PF 40% release	9.55	1372.44	1373.37	93	1.19	17.18
River	-400	PF 40% release	9.55	1371.42	1372.43	101	1.2	15.82
River	-500	PF 40% release	9.55	1370.4	1371.42	102	1.32	14.31
River	-600	PF 40% release	9.55	1369.38	1370.48	110	1.21	14.43
River	-700	PF 40% release	9.55	1368.37	1369.37	100	1.49	12.79
River	-800	PF 40% release	9.55	1367.35	1368.52	117	1.08	15.08
River	-900	PF 40% release	9.55	1366.33	1367.16	83	2.04	11.22
River	-1000	PF 40% release	9.55	1351.86	1352.74	88	2.07	10.52
River	-1100	PF 40% release	9.55	1337.4	1338.25	85	2.07	10.89
River	-1200	PF 40% release	9.55	1322.93	1323.74	81	1.85	12.75
River	-1300	PF 40% release	9.55	1320.13	1321	87	1.83	11.9
River	0	PF 50% release	11.94	1375.49	1376.18	69	0.98	30.23
River	-100	PF 50% release	11.94	1374.47	1375.32	85	1.06	26.62
River	-200	PF 50% release	11.94	1373.45	1374.41	96	1.15	21.75
River	-300	PF 50% release	11.94	1372.44	1373.46	102	1.25	18.73
River	-400	PF 50% release	11.94	1371.42	1372.51	109	1.27	17.19
River	-500	PF 50% release	11.94	1370.4	1371.51	111	1.38	15.62
River	-600	PF 50% release	11.94	1369.38	1370.57	119	1.29	15.63
River	-700	PF 50% release	11.94	1368.37	1369.46	109	1.56	14
River	-800	PF 50% release	11.94	1367.35	1368.62	127	1.15	16.33
River	-900	PF 50% release	11.94	1366.33	1367.24	91	2.14	12.26
River	-1000	PF 50% release	11.94	1351.86	1352.82	96	2.18	11.46
River	-1100	PF 50% release	11.94	1337.4	1338.33	93	2.14	11.95
River	-1200	PF 50% release	11.94	1322.93	1323.81	88	1.96	13.86
River	-1300	PF 50% release	11.94	1320.13	1321.08	95	1.93	12.95
River	0	PF 100% release	23.88	1375.49	1376.39	90	1.28	30.97
River	-100	PF 100% release	23.88	1374.47	1375.56	109	1.29	31.04
River	-200	PF 100% release	23.88	1373.45	1374.69	124	1.36	28.32
River	-300	PF 100% release	23.88	1372.44	1373.77	133	1.46	24.5
River	-400	PF 100% release	23.88	1371.42	1372.83	141	1.52	22.24



River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-500	PF 100% release	23.88	1370.4	1371.85	145	1.61	20.47
River	-600	PF 100% release	23.88	1369.38	1370.9	152	1.57	20.05
River	-700	PF 100% release	23.88	1368.37	1369.81	144	1.78	18.49
River	-800	PF 100% release	23.88	1367.35	1368.98	163	1.4	20.89
River	-900	PF 100% release	23.88	1366.33	1367.54	121	2.44	16.23
River	-1000	PF 100% release	23.88	1351.86	1353.12	126	2.51	15.12
River	-1100	PF 100% release	23.88	1337.4	1338.62	122	2.48	15.72
River	-1200	PF 100% release	23.88	1322.93	1324.08	115	2.28	18.18
River	-1300	PF 100% release	23.88	1320.13	1321.35	122	2.34	16.65

**Mili HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition**

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	10.12	1375.49	1376.14	65	0.92	30.09
River	-100	PF 10% release	10.12	1374.47	1375.27	80	1.02	24.95
River	-200	PF 10% release	10.12	1373.45	1374.35	90	1.11	20.43
River	-300	PF 10% release	10.12	1372.44	1373.39	95	1.2	17.57
River	-400	PF 10% release	10.12	1371.42	1372.45	103	1.22	16.17
River	-500	PF 10% release	10.12	1370.4	1371.44	104	1.33	14.64
River	-600	PF 10% release	10.12	1369.38	1370.5	112	1.23	14.73
River	-700	PF 10% release	10.12	1368.37	1369.39	102	1.51	13.09
River	-800	PF 10% release	10.12	1367.35	1368.55	120	1.09	15.4
River	-900	PF 10% release	10.12	1366.33	1367.18	85	2.07	11.46
River	-1000	PF 10% release	10.12	1351.86	1352.76	90	2.12	10.72
River	-1100	PF 10% release	10.12	1337.4	1338.27	87	2.08	11.16
River	-1200	PF 10% release	10.12	1322.93	1323.76	83	1.88	13.03
River	-1300	PF 10% release	10.12	1320.13	1321.02	89	1.86	12.16
River	0	PF 15% release	15.18	1375.49	1376.24	75	1.07	30.46
River	-100	PF 15% release	15.18	1374.47	1375.4	93	1.12	29.22
River	-200	PF 15% release	15.18	1373.45	1374.5	105	1.22	23.81
River	-300	PF 15% release	15.18	1372.44	1373.56	112	1.32	20.57
River	-400	PF 15% release	15.18	1371.42	1372.61	119	1.35	18.78
River	-500	PF 15% release	15.18	1370.4	1371.62	122	1.45	17.16
River	-600	PF 15% release	15.18	1369.38	1370.68	130	1.38	17.03
River	-700	PF 15% release	15.18	1368.37	1369.57	120	1.63	15.43
River	-800	PF 15% release	15.18	1367.35	1368.73	138	1.23	17.79
River	-900	PF 15% release	15.18	1366.33	1367.33	100	2.24	13.5
River	-1000	PF 15% release	15.18	1351.86	1352.92	106	2.28	12.66
River	-1100	PF 15% release	15.18	1337.4	1338.42	102	2.25	13.16
River	-1200	PF 15% release	15.18	1322.93	1323.89	96	2.09	15.16
River	-1300	PF 15% release	15.18	1320.13	1321.17	104	2.05	14.19
River	0	PF 20% release	20.25	1375.49	1376.33	84	1.2	30.77
River	-100	PF 20% release	20.25	1374.47	1375.5	103	1.22	30.8
River	-200	PF 20% release	20.25	1373.45	1374.62	117	1.31	26.58
River	-300	PF 20% release	20.25	1372.44	1373.69	125	1.41	22.98
River	-400	PF 20% release	20.25	1371.42	1372.75	133	1.46	20.91
River	-500	PF 20% release	20.25	1370.4	1371.76	136	1.55	19.19
River	-600	PF 20% release	20.25	1369.38	1370.82	144	1.5	18.89
River	-700	PF 20% release	20.25	1368.37	1369.72	135	1.73	17.3
River	-800	PF 20% release	20.25	1367.35	1368.89	154	1.34	19.72

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-900	PF 20% release	20.25	1366.33	1367.46	113	2.37	15.15
River	-1000	PF 20% release	20.25	1351.86	1353.04	118	2.43	14.16
River	-1100	PF 20% release	20.25	1337.4	1338.54	114	2.4	14.72
River	-1200	PF 20% release	20.25	1322.93	1324	107	2.23	16.94
River	-1300	PF 20% release	20.25	1320.13	1321.29	116	2.21	15.78
River	0	PF 25% release	25.31	1375.49	1376.41	92	1.31	31.04
River	-100	PF 25% release	25.31	1374.47	1375.59	112	1.31	31.13
River	-200	PF 25% release	25.31	1373.45	1374.72	127	1.38	28.96
River	-300	PF 25% release	25.31	1372.44	1373.8	136	1.48	25.05
River	-400	PF 25% release	25.31	1371.42	1372.87	145	1.54	22.73
River	-500	PF 25% release	25.31	1370.4	1371.88	148	1.63	20.93
River	-600	PF 25% release	25.31	1369.38	1370.94	156	1.59	20.47
River	-700	PF 25% release	25.31	1368.37	1369.85	148	1.8	18.93
River	-800	PF 25% release	25.31	1367.35	1369.01	166	1.43	21.34
River	-900	PF 25% release	25.31	1366.33	1367.57	124	2.47	16.61
River	-1000	PF 25% release	25.31	1351.86	1353.15	129	2.54	15.48
River	-1100	PF 25% release	25.31	1337.4	1338.65	125	2.51	16.09
River	-1200	PF 25% release	25.31	1322.93	1324.11	118	2.31	18.62
River	-1300	PF 25% release	25.31	1320.13	1321.38	125	2.38	16.99
River	0	PF 30% release	30.37	1375.49	1376.48	99	1.41	31.29
River	-100	PF 30% release	30.37	1374.47	1375.66	119	1.4	31.42
River	-200	PF 30% release	30.37	1373.45	1374.81	136	1.44	31.05
River	-300	PF 30% release	30.37	1372.44	1373.9	146	1.54	26.87
River	-400	PF 30% release	30.37	1371.42	1372.97	155	1.61	24.35
River	-500	PF 30% release	30.37	1370.4	1371.99	159	1.7	22.45
River	-600	PF 30% release	30.37	1369.38	1371.04	166	1.67	21.88
River	-700	PF 30% release	30.37	1368.37	1369.96	159	1.87	20.34
River	-800	PF 30% release	30.37	1367.35	1369.13	178	1.5	22.81
River	-900	PF 30% release	30.37	1366.33	1367.65	132	2.58	17.79
River	-1000	PF 30% release	30.37	1351.86	1353.25	139	2.64	16.64
River	-1100	PF 30% release	30.37	1337.4	1338.75	135	2.58	17.37
River	-1200	PF 30% release	30.37	1322.93	1324.2	127	2.39	20.02
River	-1300	PF 30% release	30.37	1320.13	1321.46	133	2.51	18.14
River	0	PF 40% release	40.49	1375.49	1376.62	113	1.56	31.77
River	-100	PF 40% release	40.49	1374.47	1375.8	133	1.57	31.93
River	-200	PF 40% release	40.49	1373.45	1374.96	151	1.57	32.13
River	-300	PF 40% release	40.49	1372.44	1374.07	163	1.65	30
River	-400	PF 40% release	40.49	1371.42	1373.15	173	1.73	27.15
River	-500	PF 40% release	40.49	1370.4	1372.18	178	1.82	25.09
River	-600	PF 40% release	40.49	1369.38	1371.23	185	1.81	24.29
River	-700	PF 40% release	40.49	1368.37	1370.15	178	1.99	22.8
River	-800	PF 40% release	40.49	1367.35	1369.32	197	1.63	25.26
River	-900	PF 40% release	40.49	1366.33	1367.82	149	2.73	19.97
River	-1000	PF 40% release	40.49	1351.86	1353.42	156	2.78	18.72
River	-1100	PF 40% release	40.49	1337.4	1338.92	152	2.73	19.5
River	-1200	PF 40% release	40.49	1322.93	1324.35	142	2.55	22.37
River	-1300	PF 40% release	40.49	1320.13	1321.61	148	2.7	20.17
River	0	PF 50% release	50.61	1375.49	1376.74	125	1.7	32.19
River	-100	PF 50% release	50.61	1374.47	1375.91	144	1.71	32.38
River	-200	PF 50% release	50.61	1373.45	1375.08	163	1.7	32.66

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-300	PF 50% release	50.61	1372.44	1374.22	178	1.74	32.72
River	-400	PF 50% release	50.61	1371.42	1373.3	188	1.82	29.56
River	-500	PF 50% release	50.61	1370.4	1372.34	194	1.91	27.32
River	-600	PF 50% release	50.61	1369.38	1371.38	200	1.92	26.36
River	-700	PF 50% release	50.61	1368.37	1370.32	195	2.08	24.91
River	-800	PF 50% release	50.61	1367.35	1369.48	213	1.74	27.31
River	-900	PF 50% release	50.61	1366.33	1367.96	163	2.83	21.92
River	-1000	PF 50% release	50.61	1351.86	1353.57	171	2.9	20.49
River	-1100	PF 50% release	50.61	1337.4	1339.06	166	2.86	21.31
River	-1200	PF 50% release	50.61	1322.93	1324.47	154	2.71	24.3
River	-1300	PF 50% release	50.61	1320.13	1321.75	162	2.84	21.98
River	0	PF 100% release	101.23	1375.49	1377.24	175	2.2	33.92
River	-100	PF 100% release	101.23	1374.47	1376.41	194	2.2	34.27
River	-200	PF 100% release	101.23	1373.45	1375.57	212	2.2	34.71
River	-300	PF 100% release	101.23	1372.44	1374.72	228	2.2	35.24
River	-400	PF 100% release	101.23	1371.42	1373.85	243	2.19	35.88
River	-500	PF 100% release	101.23	1370.4	1372.93	253	2.25	35.66
River	-600	PF 100% release	101.23	1369.38	1371.97	259	2.3	34.08
River	-700	PF 100% release	101.23	1368.37	1370.92	255	2.42	32.65
River	-800	PF 100% release	101.23	1367.35	1370.07	272	2.13	34.96
River	-900	PF 100% release	101.23	1366.33	1368.48	215	3.25	28.93
River	-1000	PF 100% release	101.23	1351.86	1354.11	225	3.33	27.02
River	-1100	PF 100% release	101.23	1337.4	1339.58	218	3.31	28.02
River	-1200	PF 100% release	101.23	1322.93	1324.95	202	3.15	31.85
River	-1300	PF 100% release	101.23	1320.13	1322.27	214	3.25	29.09

**Mili HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	5.55	1375.49	1376.02	53	0.76	27.89
River	-100	PF 10% release	5.55	1374.47	1375.1	63	0.9	19.75
River	-200	PF 10% release	5.55	1373.45	1374.17	72	0.95	16.32
River	-300	PF 10% release	5.55	1372.44	1373.2	76	1.05	13.91
River	-400	PF 10% release	5.55	1371.42	1372.24	82	1.04	12.97
River	-500	PF 10% release	5.55	1370.4	1371.22	82	1.18	11.54
River	-600	PF 10% release	5.55	1369.38	1370.29	91	1.03	11.9
River	-700	PF 10% release	5.55	1368.37	1369.17	80	1.35	10.25
River	-800	PF 10% release	5.55	1367.35	1368.32	97	0.92	12.41
River	-900	PF 10% release	5.55	1366.33	1367	67	1.83	9.02
River	-1000	PF 10% release	5.55	1351.86	1352.57	71	1.88	8.43
River	-1100	PF 10% release	5.55	1337.4	1338.08	68	1.86	8.75
River	-1200	PF 10% release	5.55	1322.93	1323.59	66	1.62	10.41
River	-1300	PF 10% release	5.55	1320.13	1320.84	71	1.61	9.68
River	0	PF 15% release	8.33	1375.49	1376.1	61	0.86	29.94
River	-100	PF 15% release	8.33	1374.47	1375.21	74	0.98	23.14
River	-200	PF 15% release	8.33	1373.45	1374.29	84	1.06	18.98
River	-300	PF 15% release	8.33	1372.44	1373.32	88	1.15	16.29
River	-400	PF 15% release	8.33	1371.42	1372.38	96	1.16	15.05
River	-500	PF 15% release	8.33	1370.4	1371.36	96	1.28	13.56

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-600	PF 15% release	8.33	1369.38	1370.43	105	1.16	13.74
River	-700	PF 15% release	8.33	1368.37	1369.31	94	1.45	12.09
River	-800	PF 15% release	8.33	1367.35	1368.47	112	1.04	14.37
River	-900	PF 15% release	8.33	1366.33	1367.12	79	1.99	10.6
River	-1000	PF 15% release	8.33	1351.86	1352.69	83	2.02	9.96
River	-1100	PF 15% release	8.33	1337.4	1338.2	80	1.99	10.35
River	-1200	PF 15% release	8.33	1322.93	1323.7	77	1.79	12.12
River	-1300	PF 15% release	8.33	1320.13	1320.96	83	1.77	11.29
River	0	PF 20% release	11.11	1375.49	1376.16	67	0.95	30.17
River	-100	PF 20% release	11.11	1374.47	1375.29	82	1.04	25.87
River	-200	PF 20% release	11.11	1373.45	1374.38	93	1.13	21.16
River	-300	PF 20% release	11.11	1372.44	1373.43	99	1.23	18.22
River	-400	PF 20% release	11.11	1371.42	1372.48	106	1.25	16.73
River	-500	PF 20% release	11.11	1370.4	1371.48	108	1.36	15.19
River	-600	PF 20% release	11.11	1369.38	1370.54	116	1.26	15.23
River	-700	PF 20% release	11.11	1368.37	1369.43	106	1.53	13.6
River	-800	PF 20% release	11.11	1367.35	1368.59	124	1.13	15.92
River	-900	PF 20% release	11.11	1366.33	1367.22	89	2.1	11.91
River	-1000	PF 20% release	11.11	1351.86	1352.79	93	2.14	11.17
River	-1100	PF 20% release	11.11	1337.4	1338.3	90	2.13	11.57
River	-1200	PF 20% release	11.11	1322.93	1323.79	86	1.93	13.49
River	-1300	PF 20% release	11.11	1320.13	1321.06	93	1.9	12.59
River	0	PF 25% release	13.88	1375.49	1376.22	73	1.04	30.37
River	-100	PF 25% release	13.88	1374.47	1375.37	90	1.1	28.22
River	-200	PF 25% release	13.88	1373.45	1374.46	101	1.2	23.01
River	-300	PF 25% release	13.88	1372.44	1373.52	108	1.29	19.86
River	-400	PF 25% release	13.88	1371.42	1372.57	115	1.32	18.16
River	-500	PF 25% release	13.88	1370.4	1371.58	118	1.43	16.57
River	-600	PF 25% release	13.88	1369.38	1370.63	125	1.35	16.48
River	-700	PF 25% release	13.88	1368.37	1369.53	116	1.6	14.89
River	-800	PF 25% release	13.88	1367.35	1368.69	134	1.2	17.21
River	-900	PF 25% release	13.88	1366.33	1367.3	97	2.19	13.07
River	-1000	PF 25% release	13.88	1351.86	1352.88	102	2.25	12.17
River	-1100	PF 25% release	13.88	1337.4	1338.38	98	2.23	12.65
River	-1200	PF 25% release	13.88	1322.93	1323.86	93	2.04	14.66
River	-1300	PF 25% release	13.88	1320.13	1321.14	101	2.01	13.71
River	0	PF 30% release	16.66	1375.49	1376.27	78	1.11	30.56
River	-100	PF 30% release	16.66	1374.47	1375.43	96	1.14	30.27
River	-200	PF 30% release	16.66	1373.45	1374.53	108	1.25	24.67
River	-300	PF 30% release	16.66	1372.44	1373.6	116	1.35	21.32
River	-400	PF 30% release	16.66	1371.42	1372.66	124	1.39	19.44
River	-500	PF 30% release	16.66	1370.4	1371.66	126	1.49	17.79
River	-600	PF 30% release	16.66	1369.38	1370.72	134	1.42	17.61
River	-700	PF 30% release	16.66	1368.37	1369.62	125	1.66	16.01
River	-800	PF 30% release	16.66	1367.35	1368.78	143	1.26	18.4
River	-900	PF 30% release	16.66	1366.33	1367.37	104	2.29	14
River	-1000	PF 30% release	16.66	1351.86	1352.95	109	2.33	13.1
River	-1100	PF 30% release	16.66	1337.4	1338.46	106	2.31	13.6
River	-1200	PF 30% release	16.66	1322.93	1323.93	100	2.12	15.74
River	-1300	PF 30% release	16.66	1320.13	1321.21	108	2.1	14.66

River	Ch d/s of Mili Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 40% release	22.21	1375.49	1376.36	87	1.25	30.88
River	-100	PF 40% release	22.21	1374.47	1375.54	107	1.26	30.93
River	-200	PF 40% release	22.21	1373.45	1374.66	121	1.34	27.54
River	-300	PF 40% release	22.21	1372.44	1373.73	129	1.44	23.82
River	-400	PF 40% release	22.21	1371.42	1372.8	138	1.49	21.64
River	-500	PF 40% release	22.21	1370.4	1371.81	141	1.58	19.9
River	-600	PF 40% release	22.21	1369.38	1370.87	149	1.54	19.53
River	-700	PF 40% release	22.21	1368.37	1369.77	140	1.76	17.97
River	-800	PF 40% release	22.21	1367.35	1368.93	158	1.38	20.36
River	-900	PF 40% release	22.21	1366.33	1367.5	117	2.4	15.77
River	-1000	PF 40% release	22.21	1351.86	1353.09	123	2.48	14.68
River	-1100	PF 40% release	22.21	1337.4	1338.59	119	2.44	15.28
River	-1200	PF 40% release	22.21	1322.93	1324.05	112	2.27	17.59
River	-1300	PF 40% release	22.21	1320.13	1321.33	120	2.27	16.29
River	0	PF 50% release	27.77	1375.49	1376.45	96	1.36	31.17
River	-100	PF 50% release	27.77	1374.47	1375.63	116	1.36	31.27
River	-200	PF 50% release	27.77	1373.45	1374.77	132	1.41	30.01
River	-300	PF 50% release	27.77	1372.44	1373.85	141	1.51	25.96
River	-400	PF 50% release	27.77	1371.42	1372.92	150	1.58	23.54
River	-500	PF 50% release	27.77	1370.4	1371.94	154	1.67	21.69
River	-600	PF 50% release	27.77	1369.38	1370.99	161	1.63	21.18
River	-700	PF 50% release	27.77	1368.37	1369.9	153	1.84	19.64
River	-800	PF 50% release	27.77	1367.35	1369.07	172	1.47	22.05
River	-900	PF 50% release	27.77	1366.33	1367.61	128	2.51	17.25
River	-1000	PF 50% release	27.77	1351.86	1353.2	134	2.59	16.06
River	-1100	PF 50% release	27.77	1337.4	1338.7	130	2.54	16.76
River	-1200	PF 50% release	27.77	1322.93	1324.15	122	2.35	19.32
River	-1300	PF 50% release	27.77	1320.13	1321.42	129	2.44	17.56
River	0	PF 100% release	55.54	1375.49	1376.8	131	1.76	32.39
River	-100	PF 100% release	55.54	1374.47	1375.97	150	1.77	32.59
River	-200	PF 100% release	55.54	1373.45	1375.14	169	1.76	32.89
River	-300	PF 100% release	55.54	1372.44	1374.28	184	1.78	33.18
River	-400	PF 100% release	55.54	1371.42	1373.37	195	1.86	30.62
River	-500	PF 100% release	55.54	1370.4	1372.41	201	1.95	28.32
River	-600	PF 100% release	55.54	1369.38	1371.45	207	1.97	27.28
River	-700	PF 100% release	55.54	1368.37	1370.39	202	2.12	25.83
River	-800	PF 100% release	55.54	1367.35	1369.55	220	1.79	28.23
River	-900	PF 100% release	55.54	1366.33	1368.02	169	2.88	22.76
River	-1000	PF 100% release	55.54	1351.86	1353.63	177	2.95	21.27
River	-1100	PF 100% release	55.54	1337.4	1339.12	172	2.91	22.12
River	-1200	PF 100% release	55.54	1322.93	1324.52	159	2.8	25.03
River	-1300	PF 100% release	55.54	1320.13	1321.81	168	2.88	22.89

Sape HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	3.27	1130.24	1130.91	67	1.62	6.02
River	-100	PF 10% release	3.27	1128.08	1128.79	71	1.27	7.32
River	-200	PF 10% release	3.27	1125.93	1126.51	58	1.55	7.19
River	-300	PF 10% release	3.27	1123.77	1124.39	62	1.14	9.26

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-400	PF 10% release	3.27	1121.61	1122.1	49	1.44	9.33
River	-500	PF 10% release	3.27	1119.46	1119.96	50	0.98	13.35
River	-600	PF 10% release	3.27	1117.3	1117.65	35	1.23	15.21
River	-700	PF 10% release	3.27	1113.3	1113.73	43	1.41	10.83
River	-800	PF 10% release	3.27	1109.3	1109.78	48	1.53	8.84
River	-900	PF 10% release	3.27	1105.3	1105.83	53	1.63	7.62
River	-1000	PF 10% release	3.27	1101.01	1101.59	58	1.7	6.66
River	-1100	PF 10% release	3.27	1096.73	1097.33	60	1.74	6.23
River	-1200	PF 10% release	3.27	1092.44	1093.06	62	1.76	5.98
River	-1300	PF 10% release	3.27	1089.06	1089.7	64	1.59	6.44
River	-1400	PF 10% release	3.27	1085.68	1086.28	60	1.72	6.36
River	-1500	PF 10% release	3.27	1082.3	1082.91	61	1.55	6.89
River	0	PF 15% release	4.9	1130.24	1131.02	78	1.78	7.03
River	-100	PF 15% release	4.9	1128.08	1128.9	82	1.41	8.48
River	-200	PF 15% release	4.9	1125.93	1126.61	68	1.7	8.4
River	-300	PF 15% release	4.9	1123.77	1124.49	72	1.27	10.74
River	-400	PF 15% release	4.9	1121.61	1122.18	57	1.58	10.9
River	-500	PF 15% release	4.9	1119.46	1120.04	58	1.09	15.48
River	-600	PF 15% release	4.9	1117.3	1117.71	41	1.35	17.76
River	-700	PF 15% release	4.9	1113.3	1113.8	50	1.57	12.59
River	-800	PF 15% release	4.9	1109.3	1109.87	57	1.68	10.31
River	-900	PF 15% release	4.9	1105.3	1105.92	62	1.77	8.95
River	-1000	PF 15% release	4.9	1101.01	1101.69	68	1.85	7.83
River	-1100	PF 15% release	4.9	1096.73	1097.44	71	1.89	7.3
River	-1200	PF 15% release	4.9	1092.44	1093.17	73	1.9	7.05
River	-1300	PF 15% release	4.9	1089.06	1089.8	74	1.79	7.44
River	-1400	PF 15% release	4.9	1085.68	1086.38	70	1.88	7.46
River	-1500	PF 15% release	4.9	1082.3	1083.01	71	1.72	8.02
River	0	PF 20% release	6.54	1130.24	1131.11	87	1.91	7.84
River	-100	PF 20% release	6.54	1128.08	1128.99	91	1.52	9.44
River	-200	PF 20% release	6.54	1125.93	1126.69	76	1.83	9.36
River	-300	PF 20% release	6.54	1123.77	1124.57	80	1.37	11.96
River	-400	PF 20% release	6.54	1121.61	1122.25	64	1.7	12.13
River	-500	PF 20% release	6.54	1119.46	1120.11	65	1.17	17.26
River	-600	PF 20% release	6.54	1117.3	1117.75	45	1.46	19.73
River	-700	PF 20% release	6.54	1113.3	1113.86	56	1.67	14.1
River	-800	PF 20% release	6.54	1109.3	1109.93	63	1.79	11.57
River	-900	PF 20% release	6.54	1105.3	1106	70	1.85	10.1
River	-1000	PF 20% release	6.54	1101.01	1101.77	76	1.95	8.8
River	-1100	PF 20% release	6.54	1096.73	1097.53	80	2	8.21
River	-1200	PF 20% release	6.54	1092.44	1093.26	82	2.01	7.92
River	-1300	PF 20% release	6.54	1089.06	1089.87	81	1.96	8.22
River	-1400	PF 20% release	6.54	1085.68	1086.47	79	1.98	8.38
River	-1500	PF 20% release	6.54	1082.3	1083.09	79	1.84	8.94
River	0	PF 25% release	8.17	1130.24	1131.19	95	2.02	8.52
River	-100	PF 25% release	8.17	1128.08	1129.07	99	1.61	10.26
River	-200	PF 25% release	8.17	1125.93	1126.76	83	1.94	10.17
River	-300	PF 25% release	8.17	1123.77	1124.64	87	1.45	13
River	-400	PF 25% release	8.17	1121.61	1122.3	69	1.81	13.15
River	-500	PF 25% release	8.17	1119.46	1120.16	70	1.23	18.77
River	-600	PF 25% release	8.17	1117.3	1117.79	49	1.56	21.35

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-700	PF 25% release	8.17	1113.3	1113.91	61	1.75	15.41
River	-800	PF 25% release	8.17	1109.3	1109.99	69	1.87	12.64
River	-900	PF 25% release	8.17	1105.3	1106.06	76	1.95	11.01
River	-1000	PF 25% release	8.17	1101.01	1101.85	84	2.03	9.65
River	-1100	PF 25% release	8.17	1096.73	1097.6	87	2.07	9
River	-1200	PF 25% release	8.17	1092.44	1093.34	90	2.1	8.65
River	-1300	PF 25% release	8.17	1089.06	1089.94	88	2.08	8.91
River	-1400	PF 25% release	8.17	1085.68	1086.54	86	2.06	9.19
River	-1500	PF 25% release	8.17	1082.3	1083.16	86	1.95	9.72
River	0	PF 30% release	9.81	1130.24	1131.26	102	2.11	9.14
River	-100	PF 30% release	9.81	1128.08	1129.14	106	1.69	10.97
River	-200	PF 30% release	9.81	1125.93	1126.82	89	2.02	10.91
River	-300	PF 30% release	9.81	1123.77	1124.7	93	1.52	13.9
River	-400	PF 30% release	9.81	1121.61	1122.35	74	1.89	14.1
River	-500	PF 30% release	9.81	1119.46	1120.21	75	1.29	20.08
River	-600	PF 30% release	9.81	1117.3	1117.83	53	1.63	22.86
River	-700	PF 30% release	9.81	1113.3	1113.95	65	1.81	16.59
River	-800	PF 30% release	9.81	1109.3	1110.04	74	1.94	13.6
River	-900	PF 30% release	9.81	1105.3	1106.12	82	2.01	11.88
River	-1000	PF 30% release	9.81	1101.01	1101.91	90	2.1	10.38
River	-1100	PF 30% release	9.81	1096.73	1097.67	94	2.15	9.68
River	-1200	PF 30% release	9.81	1092.44	1093.41	97	2.18	9.31
River	-1300	PF 30% release	9.81	1089.06	1090.01	95	2.16	9.59
River	-1400	PF 30% release	9.81	1085.68	1086.61	93	2.14	9.89
River	-1500	PF 30% release	9.81	1082.3	1083.22	92	2.04	10.4
River	0	PF 40% release	13.08	1130.24	1131.38	114	2.24	10.24
River	-100	PF 40% release	13.08	1128.08	1129.25	117	1.84	12.15
River	-200	PF 40% release	13.08	1125.93	1126.92	99	2.15	12.22
River	-300	PF 40% release	13.08	1123.77	1124.8	103	1.65	15.4
River	-400	PF 40% release	13.08	1121.61	1122.44	83	2	15.82
River	-500	PF 40% release	13.08	1119.46	1120.29	83	1.41	22.21
River	-600	PF 40% release	13.08	1117.3	1117.89	59	1.72	25.68
River	-700	PF 40% release	13.08	1113.3	1114.03	73	1.92	18.61
River	-800	PF 40% release	13.08	1109.3	1110.14	84	2.05	15.27
River	-900	PF 40% release	13.08	1105.3	1106.22	92	2.13	13.33
River	-1000	PF 40% release	13.08	1101.01	1102.02	101	2.23	11.65
River	-1100	PF 40% release	13.08	1096.73	1097.78	105	2.28	10.87
River	-1200	PF 40% release	13.08	1092.44	1093.52	108	2.31	10.45
River	-1300	PF 40% release	13.08	1089.06	1090.12	106	2.29	10.75
River	-1400	PF 40% release	13.08	1085.68	1086.72	104	2.26	11.09
River	-1500	PF 40% release	13.08	1082.3	1083.33	103	2.19	11.59
River	0	PF 50% release	16.35	1130.24	1131.48	124	2.36	11.17
River	-100	PF 50% release	16.35	1128.08	1129.35	127	1.96	13.16
River	-200	PF 50% release	16.35	1125.93	1127.02	109	2.25	13.35
River	-300	PF 50% release	16.35	1123.77	1124.88	111	1.77	16.66
River	-400	PF 50% release	16.35	1121.61	1122.52	91	2.1	17.29
River	-500	PF 50% release	16.35	1119.46	1120.36	90	1.51	24.02
River	-600	PF 50% release	16.35	1117.3	1117.95	65	1.8	28.07
River	-700	PF 50% release	16.35	1113.3	1114.11	81	1.99	20.43
River	-800	PF 50% release	16.35	1109.3	1110.22	92	2.13	16.76
River	-900	PF 50% release	16.35	1105.3	1106.31	101	2.23	14.57

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1000	PF 50% release	16.35	1101.01	1102.12	111	2.33	12.74
River	-1100	PF 50% release	16.35	1096.73	1097.88	115	2.38	11.88
River	-1200	PF 50% release	16.35	1092.44	1093.62	118	2.43	11.38
River	-1300	PF 50% release	16.35	1089.06	1090.22	116	2.41	11.7
River	-1400	PF 50% release	16.35	1085.68	1086.82	114	2.37	12.12
River	-1500	PF 50% release	16.35	1082.3	1083.42	112	2.32	12.6
River	0	PF 100% release	32.7	1130.24	1131.87	163	2.74	14.65
River	-100	PF 100% release	32.7	1128.08	1129.7	162	2.41	16.8
River	-200	PF 100% release	32.7	1125.93	1127.36	143	2.6	17.57
River	-300	PF 100% release	32.7	1123.77	1125.19	142	2.18	21.21
River	-400	PF 100% release	32.7	1121.61	1122.81	120	2.4	22.85
River	-500	PF 100% release	32.7	1119.46	1120.6	114	1.87	30.46
River	-600	PF 100% release	32.7	1117.3	1118.16	86	2.05	37.21
River	-700	PF 100% release	32.7	1113.3	1114.36	106	2.28	26.96
River	-800	PF 100% release	32.7	1109.3	1110.51	121	2.44	22.13
River	-900	PF 100% release	32.7	1105.3	1106.63	133	2.56	19.2
River	-1000	PF 100% release	32.7	1101.01	1102.47	146	2.67	16.81
River	-1100	PF 100% release	32.7	1096.73	1098.25	152	2.74	15.67
River	-1200	PF 100% release	32.7	1092.44	1094	156	2.79	15.02
River	-1300	PF 100% release	32.7	1089.06	1090.59	153	2.77	15.45
River	-1400	PF 100% release	32.7	1085.68	1087.18	150	2.72	15.99
River	-1500	PF 100% release	32.7	1082.3	1083.77	147	2.69	16.55

**Sape HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition**

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	13.86	1130.24	1131.4	116	2.27	10.47
River	-100	PF 10% release	13.86	1128.08	1129.28	120	1.87	12.41
River	-200	PF 10% release	13.86	1125.93	1126.95	102	2.18	12.5
River	-300	PF 10% release	13.86	1123.77	1124.82	105	1.68	15.72
River	-400	PF 10% release	13.86	1121.61	1122.46	85	2.03	16.19
River	-500	PF 10% release	13.86	1119.46	1120.31	85	1.43	22.68
River	-600	PF 10% release	13.86	1117.3	1117.91	61	1.75	26.27
River	-700	PF 10% release	13.86	1113.3	1114.05	75	1.94	19.04
River	-800	PF 10% release	13.86	1109.3	1110.16	86	2.06	15.69
River	-900	PF 10% release	13.86	1105.3	1106.24	94	2.15	13.64
River	-1000	PF 10% release	13.86	1101.01	1102.05	104	2.25	11.92
River	-1100	PF 10% release	13.86	1096.73	1097.81	108	2.31	11.12
River	-1200	PF 10% release	13.86	1092.44	1093.55	111	2.34	10.69
River	-1300	PF 10% release	13.86	1089.06	1090.14	108	2.33	10.97
River	-1400	PF 10% release	13.86	1085.68	1086.75	107	2.29	11.35
River	-1500	PF 10% release	13.86	1082.3	1083.35	105	2.23	11.84
River	0	PF 15% release	20.79	1130.24	1131.6	136	2.49	12.25
River	-100	PF 15% release	20.79	1128.08	1129.47	139	2.1	14.35
River	-200	PF 15% release	20.79	1125.93	1127.12	119	2.38	14.66
River	-300	PF 15% release	20.79	1123.77	1124.98	121	1.89	18.14
River	-400	PF 15% release	20.79	1121.61	1122.6	99	2.21	19
River	-500	PF 15% release	20.79	1119.46	1120.44	98	1.62	26.14
River	-600	PF 15% release	20.79	1117.3	1118.01	71	1.89	30.88
River	-700	PF 15% release	20.79	1113.3	1114.18	88	2.1	22.42



River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-800	PF 15% release	20.79	1109.3	1110.31	101	2.23	18.46
River	-900	PF 15% release	20.79	1105.3	1106.41	111	2.35	15.99
River	-1000	PF 15% release	20.79	1101.01	1102.23	122	2.45	14.01
River	-1100	PF 15% release	20.79	1096.73	1098	127	2.5	13.09
River	-1200	PF 15% release	20.79	1092.44	1093.74	130	2.56	12.52
River	-1300	PF 15% release	20.79	1089.06	1090.34	128	2.51	12.94
River	-1400	PF 15% release	20.79	1085.68	1086.93	125	2.48	13.36
River	-1500	PF 15% release	20.79	1082.3	1083.53	123	2.45	13.81
River	0	PF 20% release	27.72	1130.24	1131.77	153	2.65	13.72
River	-100	PF 20% release	27.72	1128.08	1129.61	153	2.29	15.87
River	-200	PF 20% release	27.72	1125.93	1127.27	134	2.52	16.43
River	-300	PF 20% release	27.72	1123.77	1125.11	134	2.06	20.05
River	-400	PF 20% release	27.72	1121.61	1122.73	112	2.33	21.35
River	-500	PF 20% release	27.72	1119.46	1120.54	108	1.77	28.85
River	-600	PF 20% release	27.72	1117.3	1118.1	80	2	34.71
River	-700	PF 20% release	27.72	1113.3	1114.29	99	2.21	25.23
River	-800	PF 20% release	27.72	1109.3	1110.43	113	2.38	20.62
River	-900	PF 20% release	27.72	1105.3	1106.54	124	2.48	17.98
River	-1000	PF 20% release	27.72	1101.01	1102.37	136	2.59	15.71
River	-1100	PF 20% release	27.72	1096.73	1098.15	142	2.65	14.67
River	-1200	PF 20% release	27.72	1092.44	1093.91	147	2.68	14.11
River	-1300	PF 20% release	27.72	1089.06	1090.5	144	2.66	14.53
River	-1400	PF 20% release	27.72	1085.68	1087.09	141	2.63	14.98
River	-1500	PF 20% release	27.72	1082.3	1083.68	138	2.6	15.48
River	0	PF 25% release	34.65	1130.24	1131.91	167	2.78	14.98
River	-100	PF 25% release	34.65	1128.08	1129.74	166	2.45	17.15
River	-200	PF 25% release	34.65	1125.93	1127.39	146	2.63	17.97
River	-300	PF 25% release	34.65	1123.77	1125.22	145	2.22	21.64
River	-400	PF 25% release	34.65	1121.61	1122.83	122	2.43	23.38
River	-500	PF 25% release	34.65	1119.46	1120.63	117	1.91	31.09
River	-600	PF 25% release	34.65	1117.3	1118.18	88	2.08	38.08
River	-700	PF 25% release	34.65	1113.3	1114.39	109	2.31	27.58
River	-800	PF 25% release	34.65	1109.3	1110.54	124	2.47	22.65
River	-900	PF 25% release	34.65	1105.3	1106.66	136	2.59	19.67
River	-1000	PF 25% release	34.65	1101.01	1102.5	149	2.71	17.2
River	-1100	PF 25% release	34.65	1096.73	1098.28	155	2.78	16.02
River	-1200	PF 25% release	34.65	1092.44	1094.04	160	2.83	15.37
River	-1300	PF 25% release	34.65	1089.06	1090.63	157	2.8	15.83
River	-1400	PF 25% release	34.65	1085.68	1087.21	153	2.77	16.32
River	-1500	PF 25% release	34.65	1082.3	1083.8	150	2.73	16.92
River	0	PF 30% release	41.58	1130.24	1132.03	179	2.9	16.06
River	-100	PF 30% release	41.58	1128.08	1129.85	177	2.57	18.32
River	-200	PF 30% release	41.58	1125.93	1127.5	157	2.75	19.27
River	-300	PF 30% release	41.58	1123.77	1125.31	154	2.33	23.11
River	-400	PF 30% release	41.58	1121.61	1122.92	131	2.53	25.08
River	-500	PF 30% release	41.58	1119.46	1120.71	125	2.01	33.19
River	-600	PF 30% release	41.58	1117.3	1118.24	94	2.17	40.82
River	-700	PF 30% release	41.58	1113.3	1114.47	117	2.4	29.67
River	-800	PF 30% release	41.58	1109.3	1110.63	133	2.58	24.25
River	-900	PF 30% release	41.58	1105.3	1106.76	146	2.69	21.15
River	-1000	PF 30% release	41.58	1101.01	1102.62	161	2.81	18.5

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1100	PF 30% release	41.58	1096.73	1098.4	167	2.87	17.26
River	-1200	PF 30% release	41.58	1092.44	1094.16	172	2.91	16.6
River	-1300	PF 30% release	41.58	1089.06	1090.75	169	2.88	17.09
River	-1400	PF 30% release	41.58	1085.68	1087.33	165	2.85	17.62
River	-1500	PF 30% release	41.58	1082.3	1083.92	162	2.82	18.22
River	0	PF 40% release	55.44	1130.24	1132.24	200	3.08	17.98
River	-100	PF 40% release	55.44	1128.08	1130.03	195	2.81	20.23
River	-200	PF 40% release	55.44	1125.93	1127.69	176	2.91	21.62
River	-300	PF 40% release	55.44	1123.77	1125.47	170	2.56	25.47
River	-400	PF 40% release	55.44	1121.61	1123.09	148	2.67	28.2
River	-500	PF 40% release	55.44	1119.46	1120.83	137	2.21	36.49
River	-600	PF 40% release	55.44	1117.3	1118.35	105	2.31	44.05
River	-700	PF 40% release	55.44	1113.3	1114.61	131	2.56	33.15
River	-800	PF 40% release	55.44	1109.3	1110.8	150	2.72	27.31
River	-900	PF 40% release	55.44	1105.3	1106.94	164	2.84	23.75
River	-1000	PF 40% release	55.44	1101.01	1102.81	180	2.97	20.76
River	-1100	PF 40% release	55.44	1096.73	1098.61	188	3.04	19.36
River	-1200	PF 40% release	55.44	1092.44	1094.37	193	3.08	18.62
River	-1300	PF 40% release	55.44	1089.06	1090.96	190	3.05	19.17
River	-1400	PF 40% release	55.44	1085.68	1087.54	186	3.02	19.76
River	-1500	PF 40% release	55.44	1082.3	1084.12	182	2.99	20.44
River	0	PF 50% release	69.3	1130.24	1132.42	218	3.23	19.63
River	-100	PF 50% release	69.3	1128.08	1130.19	211	3.01	21.85
River	-200	PF 50% release	69.3	1125.93	1127.85	192	3.05	23.63
River	-300	PF 50% release	69.3	1123.77	1125.6	183	2.75	27.46
River	-400	PF 50% release	69.3	1121.61	1123.22	161	2.79	30.85
River	-500	PF 50% release	69.3	1119.46	1120.94	148	2.39	39.3
River	-600	PF 50% release	69.3	1117.3	1118.45	115	2.46	45.63
River	-700	PF 50% release	69.3	1113.3	1114.73	143	2.66	36.37
River	-800	PF 50% release	69.3	1109.3	1110.93	163	2.86	29.77
River	-900	PF 50% release	69.3	1105.3	1107.09	179	2.98	25.94
River	-1000	PF 50% release	69.3	1101.01	1102.98	197	3.11	22.7
River	-1100	PF 50% release	69.3	1096.73	1098.79	206	3.18	21.18
River	-1200	PF 50% release	69.3	1092.44	1094.55	211	3.22	20.36
River	-1300	PF 50% release	69.3	1089.06	1091.13	207	3.19	20.96
River	-1400	PF 50% release	69.3	1085.68	1087.71	203	3.16	21.62
River	-1500	PF 50% release	69.3	1082.3	1084.29	199	3.12	22.35
River	0	PF 100% release	138.61	1130.24	1133.1	286	3.76	25.75
River	-100	PF 100% release	138.61	1128.08	1130.79	271	3.65	28.08
River	-200	PF 100% release	138.61	1125.93	1128.45	252	3.54	31.01
River	-300	PF 100% release	138.61	1123.77	1126.11	234	3.39	34.99
River	-400	PF 100% release	138.61	1121.61	1123.73	212	3.24	40.21
River	-500	PF 100% release	138.61	1119.46	1121.3	184	3.13	44.24
River	-600	PF 100% release	138.61	1117.3	1118.82	152	2.97	52.04
River	-700	PF 100% release	138.61	1113.3	1115.19	189	3.08	46.95
River	-800	PF 100% release	138.61	1109.3	1111.46	216	3.26	39.43
River	-900	PF 100% release	138.61	1105.3	1107.67	237	3.42	34.25
River	-1000	PF 100% release	138.61	1101.01	1103.6	259	3.6	29.84
River	-1100	PF 100% release	138.61	1096.73	1099.43	270	3.68	27.84
River	-1200	PF 100% release	138.61	1092.44	1095.23	279	3.71	26.84
River	-1300	PF 100% release	138.61	1089.06	1091.79	273	3.68	27.61

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1400	PF 100% release	138.61	1085.68	1088.35	267	3.64	28.47
River	-1500	PF 100% release	138.61	1082.3	1084.91	261	3.62	29.38

Sape HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	7.6	1130.24	1131.16	92	1.98	8.3
River	-100	PF 10% release	7.6	1128.08	1129.05	97	1.58	9.98
River	-200	PF 10% release	7.6	1125.93	1126.73	80	1.9	9.91
River	-300	PF 10% release	7.6	1123.77	1124.61	84	1.42	12.65
River	-400	PF 10% release	7.6	1121.61	1122.28	67	1.77	12.82
River	-500	PF 10% release	7.6	1119.46	1120.14	68	1.21	18.26
River	-600	PF 10% release	7.6	1117.3	1117.78	48	1.52	20.83
River	-700	PF 10% release	7.6	1113.3	1113.89	59	1.72	14.96
River	-800	PF 10% release	7.6	1109.3	1109.97	67	1.84	12.28
River	-900	PF 10% release	7.6	1105.3	1106.04	74	1.93	10.67
River	-1000	PF 10% release	7.6	1101.01	1101.83	82	2	9.38
River	-1100	PF 10% release	7.6	1096.73	1097.57	84	2.06	8.71
River	-1200	PF 10% release	7.6	1092.44	1093.31	87	2.08	8.39
River	-1300	PF 10% release	7.6	1089.06	1089.92	86	2.04	8.68
River	-1400	PF 10% release	7.6	1085.68	1086.51	83	2.05	8.89
River	-1500	PF 10% release	7.6	1082.3	1083.14	84	1.91	9.45
River	0	PF 15% release	11.41	1130.24	1131.32	108	2.18	9.7
River	-100	PF 15% release	11.41	1128.08	1129.2	112	1.77	11.58
River	-200	PF 15% release	11.41	1125.93	1126.87	94	2.09	11.57
River	-300	PF 15% release	11.41	1123.77	1124.75	98	1.59	14.67
River	-400	PF 15% release	11.41	1121.61	1122.39	78	1.95	14.97
River	-500	PF 15% release	11.41	1119.46	1120.25	79	1.35	21.18
River	-600	PF 15% release	11.41	1117.3	1117.86	56	1.68	24.29
River	-700	PF 15% release	11.41	1113.3	1113.99	69	1.87	17.6
River	-800	PF 15% release	11.41	1109.3	1110.09	79	1.99	14.47
River	-900	PF 15% release	11.41	1105.3	1106.17	87	2.07	12.62
River	-1000	PF 15% release	11.41	1101.01	1101.97	96	2.17	11.03
River	-1100	PF 15% release	11.41	1096.73	1097.73	100	2.22	10.29
River	-1200	PF 15% release	11.41	1092.44	1093.47	103	2.25	9.89
River	-1300	PF 15% release	11.41	1089.06	1090.07	101	2.22	10.19
River	-1400	PF 15% release	11.41	1085.68	1086.67	99	2.2	10.51
River	-1500	PF 15% release	11.41	1082.3	1083.28	98	2.12	11.01
River	0	PF 20% release	15.21	1130.24	1131.45	121	2.32	10.86
River	-100	PF 20% release	15.21	1128.08	1129.32	124	1.92	12.82
River	-200	PF 20% release	15.21	1125.93	1126.98	105	2.22	12.97
River	-300	PF 20% release	15.21	1123.77	1124.85	108	1.73	16.24
River	-400	PF 20% release	15.21	1121.61	1122.49	88	2.07	16.8
River	-500	PF 20% release	15.21	1119.46	1120.34	88	1.47	23.42
River	-600	PF 20% release	15.21	1117.3	1117.93	63	1.78	27.26
River	-700	PF 20% release	15.21	1113.3	1114.08	78	1.98	19.75
River	-800	PF 20% release	15.21	1109.3	1110.19	89	2.11	16.24
River	-900	PF 20% release	15.21	1105.3	1106.28	98	2.19	14.16
River	-1000	PF 20% release	15.21	1101.01	1102.08	107	2.3	12.37

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1100	PF 20% release	15.21	1096.73	1097.85	112	2.35	11.53
River	-1200	PF 20% release	15.21	1092.44	1093.59	115	2.38	11.09
River	-1300	PF 20% release	15.21	1089.06	1090.19	113	2.36	11.43
River	-1400	PF 20% release	15.21	1085.68	1086.79	111	2.33	11.79
River	-1500	PF 20% release	15.21	1082.3	1083.39	109	2.28	12.26
River	0	PF 25% release	19.01	1130.24	1131.56	132	2.44	11.85
River	-100	PF 25% release	19.01	1128.08	1129.42	134	2.05	13.88
River	-200	PF 25% release	19.01	1125.93	1127.08	115	2.32	14.17
River	-300	PF 25% release	19.01	1123.77	1124.94	117	1.85	17.55
River	-400	PF 25% release	19.01	1121.61	1122.57	96	2.16	18.37
River	-500	PF 25% release	19.01	1119.46	1120.41	95	1.58	25.31
River	-600	PF 25% release	19.01	1117.3	1117.99	69	1.86	29.84
River	-700	PF 25% release	19.01	1113.3	1114.15	85	2.07	21.59
River	-800	PF 25% release	19.01	1109.3	1110.27	97	2.2	17.77
River	-900	PF 25% release	19.01	1105.3	1106.37	107	2.29	15.48
River	-1000	PF 25% release	19.01	1101.01	1102.18	117	2.42	13.48
River	-1100	PF 25% release	19.01	1096.73	1097.95	122	2.47	12.59
River	-1200	PF 25% release	19.01	1092.44	1093.7	126	2.49	12.14
River	-1300	PF 25% release	19.01	1089.06	1090.3	124	2.46	12.49
River	-1400	PF 25% release	19.01	1085.68	1086.89	121	2.44	12.87
River	-1500	PF 25% release	19.01	1082.3	1083.48	118	2.41	13.33
River	0	PF 30% release	22.81	1130.24	1131.65	141	2.54	12.71
River	-100	PF 30% release	22.81	1128.08	1129.51	143	2.16	14.82
River	-200	PF 30% release	22.81	1125.93	1127.17	124	2.42	15.21
River	-300	PF 30% release	22.81	1123.77	1125.02	125	1.95	18.74
River	-400	PF 30% release	22.81	1121.61	1122.64	103	2.25	19.73
River	-500	PF 30% release	22.81	1119.46	1120.47	101	1.66	26.98
River	-600	PF 30% release	22.81	1117.3	1118.04	74	1.93	32.05
River	-700	PF 30% release	22.81	1113.3	1114.22	92	2.13	23.33
River	-800	PF 30% release	22.81	1109.3	1110.35	105	2.27	19.16
River	-900	PF 30% release	22.81	1105.3	1106.45	115	2.38	16.64
River	-1000	PF 30% release	22.81	1101.01	1102.27	126	2.49	14.55
River	-1100	PF 30% release	22.81	1096.73	1098.04	131	2.57	13.51
River	-1200	PF 30% release	22.81	1092.44	1093.79	135	2.6	13
River	-1300	PF 30% release	22.81	1089.06	1090.38	132	2.58	13.38
River	-1400	PF 30% release	22.81	1085.68	1086.98	130	2.55	13.8
River	-1500	PF 30% release	22.81	1082.3	1083.57	127	2.52	14.28
River	0	PF 40% release	30.42	1130.24	1131.82	158	2.7	14.24
River	-100	PF 40% release	30.42	1128.08	1129.66	158	2.36	16.38
River	-200	PF 40% release	30.42	1125.93	1127.32	139	2.56	17.08
River	-300	PF 40% release	30.42	1123.77	1125.15	138	2.13	20.68
River	-400	PF 40% release	30.42	1121.61	1122.77	116	2.37	22.2
River	-500	PF 40% release	30.42	1119.46	1120.58	112	1.83	29.72
River	-600	PF 40% release	30.42	1117.3	1118.13	83	2.02	36.15
River	-700	PF 40% release	30.42	1113.3	1114.33	103	2.27	26.09
River	-800	PF 40% release	30.42	1109.3	1110.48	118	2.41	21.49
River	-900	PF 40% release	30.42	1105.3	1106.59	129	2.54	18.61
River	-1000	PF 40% release	30.42	1101.01	1102.43	142	2.64	16.33
River	-1100	PF 40% release	30.42	1096.73	1098.21	148	2.7	15.24
River	-1200	PF 40% release	30.42	1092.44	1093.96	152	2.74	14.63
River	-1300	PF 40% release	30.42	1089.06	1090.55	149	2.71	15.07

River	Ch d/s of Sape Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1400	PF 40% release	30.42	1085.68	1087.14	146	2.68	15.55
River	-1500	PF 40% release	30.42	1082.3	1083.73	143	2.65	16.09
River	0	PF 50% release	38.02	1130.24	1131.97	173	2.83	15.53
River	-100	PF 50% release	38.02	1128.08	1129.79	171	2.51	17.73
River	-200	PF 50% release	38.02	1125.93	1127.45	152	2.69	18.64
River	-300	PF 50% release	38.02	1123.77	1125.26	149	2.28	22.36
River	-400	PF 50% release	38.02	1121.61	1122.88	127	2.48	24.26
River	-500	PF 50% release	38.02	1119.46	1120.67	121	1.96	32.1
River	-600	PF 50% release	38.02	1117.3	1118.21	91	2.12	39.51
River	-700	PF 50% release	38.02	1113.3	1114.43	113	2.35	28.63
River	-800	PF 50% release	38.02	1109.3	1110.59	129	2.52	23.5
River	-900	PF 50% release	38.02	1105.3	1106.71	141	2.63	20.43
River	-1000	PF 50% release	38.02	1101.01	1102.55	154	2.78	17.79
River	-1100	PF 50% release	38.02	1096.73	1098.34	161	2.84	16.61
River	-1200	PF 50% release	38.02	1092.44	1094.1	166	2.86	16.01
River	-1300	PF 50% release	38.02	1089.06	1090.69	163	2.83	16.48
River	-1400	PF 50% release	38.02	1085.68	1087.28	160	2.8	17
River	-1500	PF 50% release	38.02	1082.3	1083.86	156	2.79	17.53
River	0	PF 100% release	76.05	1130.24	1132.5	226	3.31	20.31
River	-100	PF 100% release	76.05	1128.08	1130.26	218	3.09	22.62
River	-200	PF 100% release	76.05	1125.93	1127.92	199	3.12	24.45
River	-300	PF 100% release	76.05	1123.77	1125.67	190	2.82	28.43
River	-400	PF 100% release	76.05	1121.61	1123.28	167	2.86	31.92
River	-500	PF 100% release	76.05	1119.46	1120.99	153	2.44	40.74
River	-600	PF 100% release	76.05	1117.3	1118.48	118	2.55	46.25
River	-700	PF 100% release	76.05	1113.3	1114.78	148	2.73	37.63
River	-800	PF 100% release	76.05	1109.3	1111	170	2.89	30.99
River	-900	PF 100% release	76.05	1105.3	1107.16	186	3.03	26.95
River	-1000	PF 100% release	76.05	1101.01	1103.05	204	3.17	23.56
River	-1100	PF 100% release	76.05	1096.73	1098.86	213	3.24	21.98
River	-1200	PF 100% release	76.05	1092.44	1094.63	219	3.29	21.09
River	-1300	PF 100% release	76.05	1089.06	1091.21	215	3.25	21.74
River	-1400	PF 100% release	76.05	1085.68	1087.79	211	3.22	22.43
River	-1500	PF 100% release	76.05	1082.3	1084.36	206	3.18	23.2

Chomi HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition

River	Ch d/s of Chomi Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	3.94	1041.74	1042.52	78	0.66	15.26
River	-100	PF 10% release	3.94	1041.38	1042.13	75	0.65	16.16
River	-200	PF 10% release	3.94	1041.02	1041.74	72	0.63	17.2
River	-300	PF 10% release	3.94	1040.65	1041.35	70	0.62	18.44
River	-400	PF 10% release	3.94	1040.29	1040.95	66	0.6	19.97
River	-500	PF 10% release	3.94	1039.93	1040.55	62	0.58	21.72
River	-600	PF 10% release	3.94	1039.57	1040.16	59	0.55	24.35
River	-700	PF 10% release	3.94	1039.2	1039.73	53	0.56	26.62
River	-800	PF 10% release	3.94	1038.84	1039.35	51	0.48	29.87
River	-900	PF 10% release	3.94	1038.48	1038.86	38	0.62	30.13
River	-1000	PF 10% release	3.94	1037.63	1038.14	51	0.66	23.35
River	-1100	PF 10% release	3.94	1036.78	1037.33	55	0.81	17.4

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	-1200	PF 10% release	3.94	1035.93	1036.59	66	0.75	15.82
River	-1300	PF 10% release	3.94	1035.07	1035.7	63	1.03	12.19
River	-1400	PF 10% release	3.94	1034.22	1035.04	82	0.72	13.47
River	0	PF 15% release	5.92	1041.74	1042.65	91	0.74	17.75
River	-100	PF 15% release	5.92	1041.38	1042.25	87	0.72	18.77
River	-200	PF 15% release	5.92	1041.02	1041.86	84	0.7	20.02
River	-300	PF 15% release	5.92	1040.65	1041.46	81	0.69	21.43
River	-400	PF 15% release	5.92	1040.29	1041.06	77	0.67	23.19
River	-500	PF 15% release	5.92	1039.93	1040.65	72	0.65	25.28
River	-600	PF 15% release	5.92	1039.57	1040.25	68	0.62	28.14
River	-700	PF 15% release	5.92	1039.2	1039.82	62	0.63	29.51
River	-800	PF 15% release	5.92	1038.84	1039.42	58	0.57	30.31
River	-900	PF 15% release	5.92	1038.48	1038.93	45	0.71	30.51
River	-1000	PF 15% release	5.92	1037.63	1038.22	59	0.74	27.12
River	-1100	PF 15% release	5.92	1036.78	1037.43	65	0.88	20.54
River	-1200	PF 15% release	5.92	1035.93	1036.69	76	0.85	18.27
River	-1300	PF 15% release	5.92	1035.07	1035.82	75	1.1	14.47
River	-1400	PF 15% release	5.92	1034.22	1035.17	95	0.8	15.6
River	0	PF 20% release	7.89	1041.74	1042.75	101	0.79	19.73
River	-100	PF 20% release	7.89	1041.38	1042.35	97	0.78	20.9
River	-200	PF 20% release	7.89	1041.02	1041.95	93	0.76	22.26
River	-300	PF 20% release	7.89	1040.65	1041.55	90	0.74	23.82
River	-400	PF 20% release	7.89	1040.29	1041.14	85	0.72	25.77
River	-500	PF 20% release	7.89	1039.93	1040.73	80	0.7	28.03
River	-600	PF 20% release	7.89	1039.57	1040.31	74	0.69	29.38
River	-700	PF 20% release	7.89	1039.2	1039.88	68	0.7	29.92
River	-800	PF 20% release	7.89	1038.84	1039.48	64	0.65	30.69
River	-900	PF 20% release	7.89	1038.48	1038.98	50	0.79	30.83
River	-1000	PF 20% release	7.89	1037.63	1038.29	66	0.8	30.01
River	-1100	PF 20% release	7.89	1036.78	1037.51	73	0.93	23.06
River	-1200	PF 20% release	7.89	1035.93	1036.77	84	0.92	20.23
River	-1300	PF 20% release	7.89	1035.07	1035.91	84	1.15	16.33
River	-1400	PF 20% release	7.89	1034.22	1035.27	105	0.87	17.27
River	0	PF 25% release	9.86	1041.74	1042.84	110	0.84	21.42
River	-100	PF 25% release	9.86	1041.38	1042.43	105	0.82	22.68
River	-200	PF 25% release	9.86	1041.02	1042.03	101	0.81	24.13
River	-300	PF 25% release	9.86	1040.65	1041.62	97	0.79	25.86
River	-400	PF 25% release	9.86	1040.29	1041.21	92	0.77	27.88
River	-500	PF 25% release	9.86	1039.93	1040.79	86	0.76	29.14
River	-600	PF 25% release	9.86	1039.57	1040.37	80	0.75	29.75
River	-700	PF 25% release	9.86	1039.2	1039.94	74	0.76	30.3
River	-800	PF 25% release	9.86	1038.84	1039.54	70	0.71	31.02
River	-900	PF 25% release	9.86	1038.48	1039.03	55	0.86	31.11
River	-1000	PF 25% release	9.86	1037.63	1038.33	70	0.86	30.33
River	-1100	PF 25% release	9.86	1036.78	1037.58	80	0.97	25.2
River	-1200	PF 25% release	9.86	1035.93	1036.84	91	0.98	21.93
River	-1300	PF 25% release	9.86	1035.07	1036	93	1.19	17.92
River	-1400	PF 25% release	9.86	1034.22	1035.36	114	0.93	18.72
River	0	PF 30% release	11.83	1041.74	1042.91	117	0.88	22.9
River	-100	PF 30% release	11.83	1041.38	1042.51	113	0.87	24.23

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	-200	PF 30% release	11.83	1041.02	1042.1	108	0.85	25.8
River	-300	PF 30% release	11.83	1040.65	1041.69	104	0.83	27.58
River	-400	PF 30% release	11.83	1040.29	1041.27	98	0.82	28.92
River	-500	PF 30% release	11.83	1039.93	1040.85	92	0.81	29.53
River	-600	PF 30% release	11.83	1039.57	1040.42	85	0.81	30.1
River	-700	PF 30% release	11.83	1039.2	1039.99	79	0.81	30.63
River	-800	PF 30% release	11.83	1038.84	1039.59	75	0.76	31.34
River	-900	PF 30% release	11.83	1038.48	1039.07	59	0.92	31.36
River	-1000	PF 30% release	11.83	1037.63	1038.38	75	0.92	30.62
River	-1100	PF 30% release	11.83	1036.78	1037.64	86	1.01	27.1
River	-1200	PF 30% release	11.83	1035.93	1036.91	98	1.03	23.42
River	-1300	PF 30% release	11.83	1035.07	1036.07	100	1.23	19.31
River	-1400	PF 30% release	11.83	1034.22	1035.44	122	0.97	20.01
River	0	PF 40% release	15.77	1041.74	1043.04	130	0.95	25.43
River	-100	PF 40% release	15.77	1041.38	1042.63	125	0.94	26.91
River	-200	PF 40% release	15.77	1041.02	1042.21	119	0.92	28.39
River	-300	PF 40% release	15.77	1040.65	1041.79	114	0.92	29.07
River	-400	PF 40% release	15.77	1040.29	1041.37	108	0.91	29.68
River	-500	PF 40% release	15.77	1039.93	1040.94	101	0.9	30.22
River	-600	PF 40% release	15.77	1039.57	1040.52	95	0.9	30.75
River	-700	PF 40% release	15.77	1039.2	1040.09	89	0.9	31.24
River	-800	PF 40% release	15.77	1038.84	1039.68	84	0.86	31.89
River	-900	PF 40% release	15.77	1038.48	1039.15	67	1.03	31.83
River	-1000	PF 40% release	15.77	1037.63	1038.46	83	1.03	31.13
River	-1100	PF 40% release	15.77	1036.78	1037.75	97	1.07	30.22
River	-1200	PF 40% release	15.77	1035.93	1037.02	109	1.11	26.04
River	-1300	PF 40% release	15.77	1035.07	1036.19	112	1.29	21.75
River	-1400	PF 40% release	15.77	1034.22	1035.57	135	1.06	22.18
River	0	PF 50% release	19.72	1041.74	1043.15	141	1.02	27.57
River	-100	PF 50% release	19.72	1041.38	1042.73	135	1	28.68
River	-200	PF 50% release	19.72	1041.02	1042.31	129	1	29.33
River	-300	PF 50% release	19.72	1040.65	1041.88	123	0.99	29.86
River	-400	PF 50% release	19.72	1040.29	1041.45	116	0.99	30.35
River	-500	PF 50% release	19.72	1039.93	1041.03	110	0.98	30.86
River	-600	PF 50% release	19.72	1039.57	1040.6	103	0.97	31.33
River	-700	PF 50% release	19.72	1039.2	1040.17	97	0.97	31.8
River	-800	PF 50% release	19.72	1038.84	1039.76	92	0.94	32.39
River	-900	PF 50% release	19.72	1038.48	1039.23	75	1.12	32.26
River	-1000	PF 50% release	19.72	1037.63	1038.54	91	1.12	31.59
River	-1100	PF 50% release	19.72	1036.78	1037.83	105	1.15	30.76
River	-1200	PF 50% release	19.72	1035.93	1037.11	118	1.18	28.29
River	-1300	PF 50% release	19.72	1035.07	1036.3	123	1.35	23.82
River	-1400	PF 50% release	19.72	1034.22	1035.68	146	1.12	24.06
River	0	PF 100% release	39.44	1041.74	1043.55	181	1.23	35.39
River	-100	PF 100% release	39.44	1041.38	1043.11	173	1.26	33.36
River	-200	PF 100% release	39.44	1041.02	1042.68	166	1.26	32.96
River	-300	PF 100% release	39.44	1040.65	1042.24	159	1.26	32.96
River	-400	PF 100% release	39.44	1040.29	1041.81	152	1.26	33.13
River	-500	PF 100% release	39.44	1039.93	1041.38	145	1.26	33.38
River	-600	PF 100% release	39.44	1039.57	1040.95	138	1.25	33.68
River	-700	PF 100% release	39.44	1039.2	1040.52	132	1.25	34.01

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	-800	PF 100% release	39.44	1038.84	1040.09	125	1.24	34.39
River	-900	PF 100% release	39.44	1038.48	1039.52	104	1.43	34
River	-1000	PF 100% release	39.44	1037.63	1038.83	120	1.44	33.45
River	-1100	PF 100% release	39.44	1036.78	1038.14	136	1.46	32.84
River	-1200	PF 100% release	39.44	1035.93	1037.44	151	1.46	32.23
River	-1300	PF 100% release	39.44	1035.07	1036.7	163	1.54	31.16
River	-1400	PF 100% release	39.44	1034.22	1036.1	188	1.36	30.93

**Chomi HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition**

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	0	PF 10% release	16.72	1041.74	1043.07	133	0.97	26
River	-100	PF 10% release	16.72	1041.38	1042.66	128	0.95	27.48
River	-200	PF 10% release	16.72	1041.02	1042.24	122	0.94	28.65
River	-300	PF 10% release	16.72	1040.65	1041.81	116	0.94	29.27
River	-400	PF 10% release	16.72	1040.29	1041.39	110	0.93	29.83
River	-500	PF 10% release	16.72	1039.93	1040.96	103	0.92	30.38
River	-600	PF 10% release	16.72	1039.57	1040.54	97	0.92	30.89
River	-700	PF 10% release	16.72	1039.2	1040.11	91	0.92	31.38
River	-800	PF 10% release	16.72	1038.84	1039.7	86	0.88	32.02
River	-900	PF 10% release	16.72	1038.48	1039.17	69	1.05	31.93
River	-1000	PF 10% release	16.72	1037.63	1038.48	85	1.05	31.25
River	-1100	PF 10% release	16.72	1036.78	1037.77	99	1.09	30.36
River	-1200	PF 10% release	16.72	1035.93	1037.04	111	1.13	26.61
River	-1300	PF 10% release	16.72	1035.07	1036.22	115	1.31	22.27
River	-1400	PF 10% release	16.72	1034.22	1035.6	138	1.07	22.69
River	0	PF 15% release	25.08	1041.74	1043.27	153	1.09	30.01
River	-100	PF 15% release	25.08	1041.38	1042.85	147	1.09	30.1
River	-200	PF 15% release	25.08	1041.02	1042.42	140	1.08	30.43
River	-300	PF 15% release	25.08	1040.65	1041.99	134	1.08	30.8
River	-400	PF 15% release	25.08	1040.29	1041.56	127	1.08	31.2
River	-500	PF 15% release	25.08	1039.93	1041.14	121	1.07	31.62
River	-600	PF 15% release	25.08	1039.57	1040.71	114	1.06	32.04
River	-700	PF 15% release	25.08	1039.2	1040.28	108	1.06	32.47
River	-800	PF 15% release	25.08	1038.84	1039.86	102	1.03	33
River	-900	PF 15% release	25.08	1038.48	1039.32	84	1.22	32.79
River	-1000	PF 15% release	25.08	1037.63	1038.62	99	1.23	32.14
River	-1100	PF 15% release	25.08	1036.78	1037.92	114	1.24	31.41
River	-1200	PF 15% release	25.08	1035.93	1037.22	129	1.26	30.6
River	-1300	PF 15% release	25.08	1035.07	1036.43	136	1.41	26.3
River	-1400	PF 15% release	25.08	1034.22	1035.81	159	1.2	26.23
River	0	PF 20% release	33.43	1041.74	1043.44	170	1.18	33.3
River	-100	PF 20% release	33.43	1041.38	1043.01	163	1.19	32.08
River	-200	PF 20% release	33.43	1041.02	1042.57	155	1.2	31.96
River	-300	PF 20% release	33.43	1040.65	1042.14	149	1.19	32.11
River	-400	PF 20% release	33.43	1040.29	1041.71	142	1.19	32.36
River	-500	PF 20% release	33.43	1039.93	1041.28	135	1.18	32.68
River	-600	PF 20% release	33.43	1039.57	1040.85	128	1.18	33.02
River	-700	PF 20% release	33.43	1039.2	1040.42	122	1.17	33.4
River	-800	PF 20% release	33.43	1038.84	1040	116	1.16	33.84



River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	-900	PF 20% release	33.43	1038.48	1039.44	96	1.35	33.52
River	-1000	PF 20% release	33.43	1037.63	1038.75	112	1.36	32.93
River	-1100	PF 20% release	33.43	1036.78	1038.05	127	1.38	32.27
River	-1200	PF 20% release	33.43	1035.93	1037.35	142	1.38	31.6
River	-1300	PF 20% release	33.43	1035.07	1036.6	153	1.48	29.59
River	-1400	PF 20% release	33.43	1034.22	1035.99	177	1.3	29.13
River	0	PF 25% release	41.79	1041.74	1043.59	185	1.25	36.16
River	-100	PF 25% release	41.79	1041.38	1043.15	177	1.28	33.83
River	-200	PF 25% release	41.79	1041.02	1042.71	169	1.29	33.32
River	-300	PF 25% release	41.79	1040.65	1042.28	163	1.29	33.27
River	-400	PF 25% release	41.79	1040.29	1041.85	156	1.29	33.41
River	-500	PF 25% release	41.79	1039.93	1041.42	149	1.28	33.63
River	-600	PF 25% release	41.79	1039.57	1040.98	141	1.28	33.91
River	-700	PF 25% release	41.79	1039.2	1040.55	135	1.27	34.23
River	-800	PF 25% release	41.79	1038.84	1040.12	128	1.27	34.59
River	-900	PF 25% release	41.79	1038.48	1039.55	107	1.46	34.18
River	-1000	PF 25% release	41.79	1037.63	1038.86	123	1.47	33.64
River	-1100	PF 25% release	41.79	1036.78	1038.17	139	1.49	33.05
River	-1200	PF 25% release	41.79	1035.93	1037.47	154	1.5	32.46
River	-1300	PF 25% release	41.79	1035.07	1036.74	167	1.56	31.46
River	-1400	PF 25% release	41.79	1034.22	1036.14	192	1.38	31.46
River	0	PF 30% release	50.15	1041.74	1043.71	197	1.32	37.78
River	-100	PF 30% release	50.15	1041.38	1043.28	190	1.35	35.4
River	-200	PF 30% release	50.15	1041.02	1042.84	182	1.36	34.57
River	-300	PF 30% release	50.15	1040.65	1042.4	175	1.37	34.34
River	-400	PF 30% release	50.15	1040.29	1041.97	168	1.37	34.36
River	-500	PF 30% release	50.15	1039.93	1041.54	161	1.37	34.5
River	-600	PF 30% release	50.15	1039.57	1041.1	153	1.36	34.72
River	-700	PF 30% release	50.15	1039.2	1040.67	147	1.36	34.99
River	-800	PF 30% release	50.15	1038.84	1040.23	139	1.36	35.27
River	-900	PF 30% release	50.15	1038.48	1039.66	118	1.56	34.79
River	-1000	PF 30% release	50.15	1037.63	1038.97	134	1.57	34.29
River	-1100	PF 30% release	50.15	1036.78	1038.27	149	1.59	33.77
River	-1200	PF 30% release	50.15	1035.93	1037.58	165	1.6	33.23
River	-1300	PF 30% release	50.15	1035.07	1036.85	178	1.64	32.43
River	-1400	PF 30% release	50.15	1034.22	1036.26	204	1.47	32.68
River	0	PF 40% release	66.87	1041.74	1043.93	219	1.44	39.15
River	-100	PF 40% release	66.87	1041.38	1043.5	212	1.47	38.21
River	-200	PF 40% release	66.87	1041.02	1043.06	204	1.49	36.78
River	-300	PF 40% release	66.87	1040.65	1042.63	198	1.5	36.24
River	-400	PF 40% release	66.87	1040.29	1042.19	190	1.51	36.06
River	-500	PF 40% release	66.87	1039.93	1041.75	182	1.51	36.07
River	-600	PF 40% release	66.87	1039.57	1041.32	175	1.51	36.17
River	-700	PF 40% release	66.87	1039.2	1040.88	168	1.5	36.34
River	-800	PF 40% release	66.87	1038.84	1040.43	159	1.52	36.5
River	-900	PF 40% release	66.87	1038.48	1039.84	136	1.73	35.88
River	-1000	PF 40% release	66.87	1037.63	1039.16	153	1.74	35.47
River	-1100	PF 40% release	66.87	1036.78	1038.47	169	1.75	35.06
River	-1200	PF 40% release	66.87	1035.93	1037.77	184	1.76	34.65
River	-1300	PF 40% release	66.87	1035.07	1037.06	199	1.78	34.17
River	-1400	PF 40% release	66.87	1034.22	1036.48	226	1.6	34.89

River	Ch d/s of Chomi Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 50% release	83.58	1041.74	1044.12	238	1.54	40.35
River	-100	PF 50% release	83.58	1041.38	1043.7	232	1.57	40.27
River	-200	PF 50% release	83.58	1041.02	1043.26	224	1.6	38.73
River	-300	PF 50% release	83.58	1040.65	1042.82	217	1.61	37.93
River	-400	PF 50% release	83.58	1040.29	1042.39	210	1.62	37.58
River	-500	PF 50% release	83.58	1039.93	1041.95	202	1.62	37.46
River	-600	PF 50% release	83.58	1039.57	1041.51	194	1.62	37.46
River	-700	PF 50% release	83.58	1039.2	1041.07	187	1.63	37.54
River	-800	PF 50% release	83.58	1038.84	1040.61	177	1.65	37.59
River	-900	PF 50% release	83.58	1038.48	1040.01	153	1.86	36.86
River	-1000	PF 50% release	83.58	1037.63	1039.33	170	1.87	36.53
River	-1100	PF 50% release	83.58	1036.78	1038.64	186	1.89	36.22
River	-1200	PF 50% release	83.58	1035.93	1037.94	201	1.9	35.92
River	-1300	PF 50% release	83.58	1035.07	1037.25	218	1.9	35.7
River	-1400	PF 50% release	83.58	1034.22	1036.67	245	1.73	36.74
River	0	PF 100% release	167.17	1041.74	1044.87	313	1.95	45.02
River	-100	PF 100% release	167.17	1041.38	1044.46	308	1.96	44.98
River	-200	PF 100% release	167.17	1041.02	1044.03	301	1.97	44.85
River	-300	PF 100% release	167.17	1040.65	1043.6	295	1.99	44.59
River	-400	PF 100% release	167.17	1040.29	1043.16	287	2.02	43.58
River	-500	PF 100% release	167.17	1039.93	1042.71	278	2.03	42.97
River	-600	PF 100% release	167.17	1039.57	1042.27	270	2.04	42.59
River	-700	PF 100% release	167.17	1039.2	1041.81	261	2.07	42.29
River	-800	PF 100% release	167.17	1038.84	1041.32	248	2.12	41.93
River	-900	PF 100% release	167.17	1038.48	1040.69	221	2.35	40.82
River	-1000	PF 100% release	167.17	1037.63	1040.01	238	2.36	40.78
River	-1100	PF 100% release	167.17	1036.78	1039.32	254	2.36	40.82
River	-1200	PF 100% release	167.17	1035.93	1038.64	271	2.36	41.04
River	-1300	PF 100% release	167.17	1035.07	1037.97	290	2.33	41.67
River	-1400	PF 100% release	167.17	1034.22	1037.38	316	2.17	43.83

**Chomi HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	0	PF 10% release	9.17	1041.74	1042.81	107	0.82	20.86
River	-100	PF 10% release	9.17	1041.38	1042.41	103	0.81	22.09
River	-200	PF 10% release	9.17	1041.02	1042	98	0.79	23.49
River	-300	PF 10% release	9.17	1040.65	1041.6	95	0.77	25.18
River	-400	PF 10% release	9.17	1040.29	1041.19	90	0.75	27.19
River	-500	PF 10% release	9.17	1039.93	1040.77	84	0.74	28.99
River	-600	PF 10% release	9.17	1039.57	1040.35	78	0.73	29.63
River	-700	PF 10% release	9.17	1039.2	1039.92	72	0.74	30.17
River	-800	PF 10% release	9.17	1038.84	1039.52	68	0.69	30.91
River	-900	PF 10% release	9.17	1038.48	1039.01	53	0.84	31.01
River	-1000	PF 10% release	9.17	1037.63	1038.32	69	0.84	30.22
River	-1100	PF 10% release	9.17	1036.78	1037.56	78	0.96	24.48
River	-1200	PF 10% release	9.17	1035.93	1036.82	89	0.96	21.35
River	-1300	PF 10% release	9.17	1035.07	1035.97	90	1.18	17.38
River	-1400	PF 10% release	9.17	1034.22	1035.33	111	0.91	18.25
River	0	PF 15% release	13.76	1041.74	1042.98	124	0.92	24.21
River	-100	PF 15% release	13.76	1041.38	1042.57	119	0.9	25.61
River	-200	PF 15% release	13.76	1041.02	1042.16	114	0.88	27.23
River	-300	PF 15% release	13.76	1040.65	1041.74	109	0.87	28.66
River	-400	PF 15% release	13.76	1040.29	1041.32	103	0.86	29.3
River	-500	PF 15% release	13.76	1039.93	1040.89	96	0.86	29.88
River	-600	PF 15% release	13.76	1039.57	1040.47	90	0.85	30.43
River	-700	PF 15% release	13.76	1039.2	1040.04	84	0.85	30.94
River	-800	PF 15% release	13.76	1038.84	1039.64	80	0.81	31.62
River	-900	PF 15% release	13.76	1038.48	1039.11	63	0.98	31.6
River	-1000	PF 15% release	13.76	1037.63	1038.42	79	0.98	30.88
River	-1100	PF 15% release	13.76	1036.78	1037.7	92	1.04	28.79
River	-1200	PF 15% release	13.76	1035.93	1036.96	103	1.07	24.74
River	-1300	PF 15% release	13.76	1035.07	1036.13	106	1.26	20.56
River	-1400	PF 15% release	13.76	1034.22	1035.5	128	1.02	21.11
River	0	PF 20% release	18.34	1041.74	1043.11	137	0.99	26.89
River	-100	PF 20% release	18.34	1041.38	1042.7	132	0.98	28.28
River	-200	PF 20% release	18.34	1041.02	1042.27	125	0.97	29
River	-300	PF 20% release	18.34	1040.65	1041.85	120	0.97	29.6
River	-400	PF 20% release	18.34	1040.29	1041.43	114	0.96	30.13
River	-500	PF 20% release	18.34	1039.93	1041	107	0.95	30.65
River	-600	PF 20% release	18.34	1039.57	1040.57	100	0.95	31.13
River	-700	PF 20% release	18.34	1039.2	1040.14	94	0.95	31.62
River	-800	PF 20% release	18.34	1038.84	1039.73	89	0.91	32.22
River	-900	PF 20% release	18.34	1038.48	1039.2	72	1.09	32.11
River	-1000	PF 20% release	18.34	1037.63	1038.51	88	1.09	31.44
River	-1100	PF 20% release	18.34	1036.78	1037.8	102	1.12	30.58
River	-1200	PF 20% release	18.34	1035.93	1037.08	115	1.15	27.55
River	-1300	PF 20% release	18.34	1035.07	1036.26	119	1.33	23.11
River	-1400	PF 20% release	18.34	1034.22	1035.65	143	1.1	23.45
River	0	PF 25% release	22.93	1041.74	1043.22	148	1.06	29.05
River	-100	PF 25% release	22.93	1041.38	1042.8	142	1.06	29.54

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	-200	PF 25% release	22.93	1041.02	1042.38	136	1.05	30
River	-300	PF 25% release	22.93	1040.65	1041.95	130	1.05	30.44
River	-400	PF 25% release	22.93	1040.29	1041.52	123	1.04	30.87
River	-500	PF 25% release	22.93	1039.93	1041.1	117	1.03	31.32
River	-600	PF 25% release	22.93	1039.57	1040.67	110	1.03	31.76
River	-700	PF 25% release	22.93	1039.2	1040.24	104	1.03	32.21
River	-800	PF 25% release	22.93	1038.84	1039.82	98	1	32.77
River	-900	PF 25% release	22.93	1038.48	1039.28	80	1.18	32.58
River	-1000	PF 25% release	22.93	1037.63	1038.59	96	1.19	31.92
River	-1100	PF 25% release	22.93	1036.78	1037.89	111	1.21	31.16
River	-1200	PF 25% release	22.93	1035.93	1037.18	125	1.22	29.92
River	-1300	PF 25% release	22.93	1035.07	1036.38	131	1.39	25.36
River	-1400	PF 25% release	22.93	1034.22	1035.76	154	1.17	25.39
River	0	PF 30% release	27.51	1041.74	1043.33	159	1.12	31.03
River	-100	PF 30% release	27.51	1041.38	1042.89	151	1.12	30.7
River	-200	PF 30% release	27.51	1041.02	1042.47	145	1.12	30.89
River	-300	PF 30% release	27.51	1040.65	1042.04	139	1.12	31.19
River	-400	PF 30% release	27.51	1040.29	1041.61	132	1.11	31.55
River	-500	PF 30% release	27.51	1039.93	1041.18	125	1.11	31.93
River	-600	PF 30% release	27.51	1039.57	1040.75	118	1.1	32.34
River	-700	PF 30% release	27.51	1039.2	1040.32	112	1.1	32.76
River	-800	PF 30% release	27.51	1038.84	1039.9	106	1.07	33.26
River	-900	PF 30% release	27.51	1038.48	1039.36	88	1.26	33.01
River	-1000	PF 30% release	27.51	1037.63	1038.66	103	1.27	32.38
River	-1100	PF 30% release	27.51	1036.78	1037.96	118	1.29	31.67
River	-1200	PF 30% release	27.51	1035.93	1037.26	133	1.3	30.91
River	-1300	PF 30% release	27.51	1035.07	1036.48	141	1.43	27.32
River	-1400	PF 30% release	27.51	1034.22	1035.87	165	1.23	27.13
River	0	PF 40% release	36.69	1041.74	1043.5	176	1.21	34.45
River	-100	PF 40% release	36.69	1041.38	1043.06	168	1.23	32.79
River	-200	PF 40% release	36.69	1041.02	1042.63	161	1.23	32.51
River	-300	PF 40% release	36.69	1040.65	1042.2	155	1.23	32.58
River	-400	PF 40% release	36.69	1040.29	1041.77	148	1.23	32.78
River	-500	PF 40% release	36.69	1039.93	1041.34	141	1.22	33.06
River	-600	PF 40% release	36.69	1039.57	1040.91	134	1.22	33.38
River	-700	PF 40% release	36.69	1039.2	1040.47	127	1.21	33.74
River	-800	PF 40% release	36.69	1038.84	1040.05	121	1.2	34.14
River	-900	PF 40% release	36.69	1038.48	1039.49	101	1.4	33.79
River	-1000	PF 40% release	36.69	1037.63	1038.8	117	1.41	33.21
River	-1100	PF 40% release	36.69	1036.78	1038.1	132	1.43	32.58
River	-1200	PF 40% release	36.69	1035.93	1037.4	147	1.43	31.96
River	-1300	PF 40% release	36.69	1035.07	1036.66	159	1.51	30.73
River	-1400	PF 40% release	36.69	1034.22	1036.05	183	1.33	30.13
River	0	PF 50% release	45.86	1041.74	1043.65	191	1.28	37.4
River	-100	PF 50% release	45.86	1041.38	1043.21	183	1.32	34.62
River	-200	PF 50% release	45.86	1041.02	1042.78	176	1.33	33.94
River	-300	PF 50% release	45.86	1040.65	1042.34	169	1.33	33.81
River	-400	PF 50% release	45.86	1040.29	1041.91	162	1.33	33.88
River	-500	PF 50% release	45.86	1039.93	1041.48	155	1.32	34.07

River	Ch d/s of Chomi Dam axis	Profile	Total discharge	Bed Elevation	Water surface Elevation	Water depth	Flow Velocity	Flow Top Width
	(m)		(m <sup>3</sup> /s)	(m)	(m)	(cm)	(m/s)	(m)
River	-600	PF 50% release	45.86	1039.57	1041.04	147	1.32	34.31
River	-700	PF 50% release	45.86	1039.2	1040.61	141	1.31	34.62
River	-800	PF 50% release	45.86	1038.84	1040.18	134	1.31	34.93
River	-900	PF 50% release	45.86	1038.48	1039.61	113	1.51	34.48
River	-1000	PF 50% release	45.86	1037.63	1038.92	129	1.52	33.96
River	-1100	PF 50% release	45.86	1036.78	1038.22	144	1.54	33.41
River	-1200	PF 50% release	45.86	1035.93	1037.52	159	1.55	32.85
River	-1300	PF 50% release	45.86	1035.07	1036.79	172	1.6	31.94
River	-1400	PF 50% release	45.86	1034.22	1036.2	198	1.42	32.08
River	0	PF 100% release	91.71	1041.74	1044.21	247	1.59	40.88
River	-100	PF 100% release	91.71	1041.38	1043.79	241	1.62	40.81
River	-200	PF 100% release	91.71	1041.02	1043.35	233	1.65	39.61
River	-300	PF 100% release	91.71	1040.65	1042.91	226	1.66	38.69
River	-400	PF 100% release	91.71	1040.29	1042.47	218	1.67	38.26
River	-500	PF 100% release	91.71	1039.93	1042.04	211	1.67	38.09
River	-600	PF 100% release	91.71	1039.57	1041.6	203	1.68	38.05
River	-700	PF 100% release	91.71	1039.2	1041.15	195	1.68	38.09
River	-800	PF 100% release	91.71	1038.84	1040.69	185	1.71	38.08
River	-900	PF 100% release	91.71	1038.48	1040.09	161	1.92	37.31
River	-1000	PF 100% release	91.71	1037.63	1039.4	177	1.93	37.01
River	-1100	PF 100% release	91.71	1036.78	1038.72	194	1.95	36.74
River	-1200	PF 100% release	91.71	1035.93	1038.02	209	1.95	36.51
River	-1300	PF 100% release	91.71	1035.07	1037.33	226	1.95	36.39
River	-1400	PF 100% release	91.71	1034.22	1036.75	253	1.78	37.59

**Chela HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition**

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	4.78	864.84	865.37	53	0.62	29.36
River	-100	PF 10% release	4.78	864.01	864.51	50	0.9	20.97
River	-200	PF 10% release	4.78	863.18	863.83	65	0.63	23.44
River	-300	PF 10% release	4.78	862.35	862.73	38	1.39	17.84
River	-400	PF 10% release	4.78	857.51	857.96	45	1.52	13.81
River	-500	PF 10% release	4.78	852.66	853.13	47	1.54	13.16
River	-600	PF 10% release	4.78	847.82	848.32	50	1.46	13.09
River	-700	PF 10% release	4.78	844.13	844.61	48	1.53	12.96
River	-800	PF 10% release	4.78	840.44	840.92	48	1.44	13.74
River	-900	PF 10% release	4.78	836.75	837.17	42	1.43	15.79
River	-1000	PF 10% release	4.78	833.54	834.03	49	1.25	15.54
River	-1100	PF 10% release	4.78	830.33	830.76	43	1.48	14.97
River	-1200	PF 10% release	4.78	827.12	827.81	69	0.51	27.31
River	-1300	PF 10% release	4.78	826.63	827.5	87	0.66	16.6
River	0	PF 15% release	7.16	864.84	865.44	60	0.72	31.16
River	-100	PF 15% release	7.16	864.01	864.61	60	0.96	24.87
River	-200	PF 15% release	7.16	863.18	863.93	75	0.7	27.08
River	-300	PF 15% release	7.16	862.35	862.8	45	1.51	20.96
River	-400	PF 15% release	7.16	857.51	858.04	53	1.64	16.29
River	-500	PF 15% release	7.16	852.66	853.22	56	1.66	15.53

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-600	PF 15% release	7.16	847.82	848.39	57	1.66	15.06
River	-700	PF 15% release	7.16	844.13	844.7	57	1.66	15.25
River	-800	PF 15% release	7.16	840.44	841	56	1.63	15.81
River	-900	PF 15% release	7.16	836.75	837.25	50	1.55	18.58
River	-1000	PF 15% release	7.16	833.54	834.11	57	1.4	17.92
River	-1100	PF 15% release	7.16	830.33	830.84	51	1.6	17.61
River	-1200	PF 15% release	7.16	827.12	827.93	81	0.55	29.65
River	-1300	PF 15% release	7.16	826.63	827.65	102	0.72	19.54
River	0	PF 20% release	9.55	864.84	865.5	66	0.81	31.65
River	-100	PF 20% release	9.55	864.01	864.68	67	1.01	28.05
River	-200	PF 20% release	9.55	863.18	864.01	83	0.77	29.97
River	-300	PF 20% release	9.55	862.35	862.86	51	1.6	23.55
River	-400	PF 20% release	9.55	857.51	858.11	60	1.74	18.22
River	-500	PF 20% release	9.55	852.66	853.28	62	1.77	17.36
River	-600	PF 20% release	9.55	847.82	848.46	64	1.79	16.73
River	-700	PF 20% release	9.55	844.13	844.76	63	1.77	17.05
River	-800	PF 20% release	9.55	840.44	841.06	62	1.77	17.54
River	-900	PF 20% release	9.55	836.75	837.31	56	1.63	20.88
River	-1000	PF 20% release	9.55	833.54	834.17	63	1.53	19.82
River	-1100	PF 20% release	9.55	830.33	830.9	57	1.69	19.78
River	-1200	PF 20% release	9.55	827.12	828.04	92	0.59	30.2
River	-1300	PF 20% release	9.55	826.63	827.78	115	0.76	21.95
River	0	PF 25% release	11.94	864.84	865.55	71	0.88	32.09
River	-100	PF 25% release	11.94	864.01	864.75	74	1.05	30.33
River	-200	PF 25% release	11.94	863.18	864.08	90	0.82	32.44
River	-300	PF 25% release	11.94	862.35	862.9	55	1.67	25.73
River	-400	PF 25% release	11.94	857.51	858.16	65	1.82	19.94
River	-500	PF 25% release	11.94	852.66	853.34	68	1.85	18.99
River	-600	PF 25% release	11.94	847.82	848.52	70	1.88	18.28
River	-700	PF 25% release	11.94	844.13	844.82	69	1.86	18.56
River	-800	PF 25% release	11.94	840.44	841.11	67	1.84	19.19
River	-900	PF 25% release	11.94	836.75	837.36	61	1.71	22.84
River	-1000	PF 25% release	11.94	833.54	834.22	68	1.63	21.45
River	-1100	PF 25% release	11.94	830.33	830.95	62	1.77	21.62
River	-1200	PF 25% release	11.94	827.12	828.13	101	0.63	30.7
River	-1300	PF 25% release	11.94	826.63	827.89	126	0.79	24.07
River	0	PF 30% release	14.33	864.84	865.6	76	0.95	32.49
River	-100	PF 30% release	14.33	864.01	864.8	79	1.11	30.91
River	-200	PF 30% release	14.33	863.18	864.14	96	0.87	33.46
River	-300	PF 30% release	14.33	862.35	862.95	60	1.74	27.67
River	-400	PF 30% release	14.33	857.51	858.21	70	1.89	21.44
River	-500	PF 30% release	14.33	852.66	853.4	74	1.9	20.54
River	-600	PF 30% release	14.33	847.82	848.57	75	1.94	19.68
River	-700	PF 30% release	14.33	844.13	844.87	74	1.94	19.95
River	-800	PF 30% release	14.33	840.44	841.17	73	1.91	20.66
River	-900	PF 30% release	14.33	836.75	837.41	66	1.77	24.61
River	-1000	PF 30% release	14.33	833.54	834.27	73	1.73	22.85
River	-1100	PF 30% release	14.33	830.33	831	67	1.83	23.29
River	-1200	PF 30% release	14.33	827.12	828.22	110	0.66	31.15
River	-1300	PF 30% release	14.33	826.63	827.99	136	0.81	25.95

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 40% release	19.1	864.84	865.69	85	1.07	33.21
River	-100	PF 40% release	19.1	864.01	864.89	88	1.21	31.95
River	-200	PF 40% release	19.1	863.18	864.23	105	0.97	35.21
River	-300	PF 40% release	19.1	862.35	863.02	67	1.84	31.05
River	-400	PF 40% release	19.1	857.51	858.3	79	2	24.06
River	-500	PF 40% release	19.1	852.66	853.48	82	2.03	22.96
River	-600	PF 40% release	19.1	847.82	848.67	85	2.04	22.18
River	-700	PF 40% release	19.1	844.13	844.97	84	2.03	22.49
River	-800	PF 40% release	19.1	840.44	841.26	82	2.01	23.27
River	-900	PF 40% release	19.1	836.75	837.49	74	1.87	27.62
River	-1000	PF 40% release	19.1	833.54	834.34	80	1.88	25.27
River	-1100	PF 40% release	19.1	830.33	831.08	75	1.94	26.13
River	-1200	PF 40% release	19.1	827.12	828.38	126	0.71	31.98
River	-1300	PF 40% release	19.1	826.63	828.16	153	0.85	29.24
River	0	PF 50% release	23.88	864.84	865.76	92	1.16	33.85
River	-100	PF 50% release	23.88	864.01	864.97	96	1.3	32.88
River	-200	PF 50% release	23.88	863.18	864.32	114	1.05	36.74
River	-300	PF 50% release	23.88	862.35	863.08	73	1.92	33.96
River	-400	PF 50% release	23.88	857.51	858.37	86	2.09	26.3
River	-500	PF 50% release	23.88	852.66	853.56	90	2.13	24.44
River	-600	PF 50% release	23.88	847.82	848.74	92	2.13	24.25
River	-700	PF 50% release	23.88	844.13	845.04	91	2.14	24.48
River	-800	PF 50% release	23.88	840.44	841.33	89	2.12	25.35
River	-900	PF 50% release	23.88	836.75	837.56	81	1.93	30.36
River	-1000	PF 50% release	23.88	833.54	834.4	86	2.04	26.96
River	-1100	PF 50% release	23.88	830.33	831.15	82	2.04	27.83
River	-1200	PF 50% release	23.88	827.12	828.51	139	0.77	32.67
River	-1300	PF 50% release	23.88	826.63	828.3	167	0.9	30.38
River	0	PF 100% release	47.76	864.84	866.08	124	1.51	36.46
River	-100	PF 100% release	47.76	864.01	865.3	129	1.6	36.65
River	-200	PF 100% release	47.76	863.18	864.63	145	1.35	42.54
River	-300	PF 100% release	47.76	862.35	863.32	97	2.2	44.85
River	-400	PF 100% release	47.76	857.51	858.64	113	2.5	30.08
River	-500	PF 100% release	47.76	852.66	853.84	118	2.61	26.38
River	-600	PF 100% release	47.76	847.82	849.03	121	2.48	30.85
River	-700	PF 100% release	47.76	844.13	845.33	120	2.5	30.26
River	-800	PF 100% release	47.76	840.44	841.61	117	2.47	32.28
River	-900	PF 100% release	47.76	836.75	837.81	106	2.3	39.37
River	-1000	PF 100% release	47.76	833.54	834.66	112	2.53	29.89
River	-1100	PF 100% release	47.76	830.33	831.41	108	2.51	29.63
River	-1200	PF 100% release	47.76	827.12	829.05	193	0.97	35.47
River	-1300	PF 100% release	47.76	826.63	828.85	222	1.08	33.38

**Chela HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition**

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	20.25	864.84	865.71	87	1.09	33.37
River	-100	PF 10% release	20.25	864.01	864.91	90	1.24	32.17
River	-200	PF 10% release	20.25	863.18	864.25	107	0.99	35.6
River	-300	PF 10% release	20.25	862.35	863.03	68	1.86	31.76

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-400	PF 10% release	20.25	857.51	858.32	81	2	24.76
River	-500	PF 10% release	20.25	852.66	853.5	84	2.05	23.51
River	-600	PF 10% release	20.25	847.82	848.69	87	2.06	22.7
River	-700	PF 10% release	20.25	844.13	844.99	86	2.05	23.02
River	-800	PF 10% release	20.25	840.44	841.27	83	2.05	23.73
River	-900	PF 10% release	20.25	836.75	837.51	76	1.88	28.32
River	-1000	PF 10% release	20.25	833.54	834.36	82	1.92	25.76
River	-1100	PF 10% release	20.25	830.33	831.1	77	1.96	26.79
River	-1200	PF 10% release	20.25	827.12	828.41	129	0.73	32.15
River	-1300	PF 10% release	20.25	826.63	828.2	157	0.86	29.81
River	0	PF 15% release	30.37	864.84	865.86	102	1.27	34.65
River	-100	PF 15% release	30.37	864.01	865.07	106	1.39	34.04
River	-200	PF 15% release	30.37	863.18	864.42	124	1.15	38.54
River	-300	PF 15% release	30.37	862.35	863.16	81	2	37.58
River	-400	PF 15% release	30.37	857.51	858.47	96	2.16	28.95
River	-500	PF 15% release	30.37	852.66	853.64	98	2.28	25.03
River	-600	PF 15% release	30.37	847.82	848.83	101	2.26	26.57
River	-700	PF 15% release	30.37	844.13	845.14	101	2.22	27.09
River	-800	PF 15% release	30.37	840.44	841.42	98	2.22	27.91
River	-900	PF 15% release	30.37	836.75	837.64	89	2.06	33.18
River	-1000	PF 15% release	30.37	833.54	834.48	94	2.21	27.83
River	-1100	PF 15% release	30.37	830.33	831.23	90	2.19	28.37
River	-1200	PF 15% release	30.37	827.12	828.68	156	0.83	33.52
River	-1300	PF 15% release	30.37	826.63	828.47	184	0.95	31.32
River	0	PF 20% release	40.49	864.84	865.99	115	1.42	35.74
River	-100	PF 20% release	40.49	864.01	865.21	120	1.52	35.63
River	-200	PF 20% release	40.49	863.18	864.55	137	1.28	40.96
River	-300	PF 20% release	40.49	862.35	863.26	91	2.12	42.14
River	-400	PF 20% release	40.49	857.51	858.57	106	2.39	29.59
River	-500	PF 20% release	40.49	852.66	853.76	110	2.51	25.8
River	-600	PF 20% release	40.49	847.82	848.96	114	2.38	29.87
River	-700	PF 20% release	40.49	844.13	845.25	112	2.39	29.31
River	-800	PF 20% release	40.49	840.44	841.54	110	2.33	31.43
River	-900	PF 20% release	40.49	836.75	837.74	99	2.22	36.86
River	-1000	PF 20% release	40.49	833.54	834.59	105	2.39	29.11
River	-1100	PF 20% release	40.49	830.33	831.34	101	2.39	29.13
River	-1200	PF 20% release	40.49	827.12	828.9	178	0.92	34.71
River	-1300	PF 20% release	40.49	826.63	828.71	208	1.03	32.59
River	0	PF 25% release	50.61	864.84	866.11	127	1.54	36.73
River	-100	PF 25% release	50.61	864.01	865.34	133	1.62	37.03
River	-200	PF 25% release	50.61	863.18	864.66	148	1.38	43.06
River	-300	PF 25% release	50.61	862.35	863.34	99	2.21	46.12
River	-400	PF 25% release	50.61	857.51	858.67	116	2.54	30.25
River	-500	PF 25% release	50.61	852.66	853.87	121	2.65	26.58
River	-600	PF 25% release	50.61	847.82	849.06	124	2.53	30.94
River	-700	PF 25% release	50.61	844.13	845.35	122	2.54	30.59
River	-800	PF 25% release	50.61	840.44	841.64	120	2.5	32.58
River	-900	PF 25% release	50.61	836.75	837.83	108	2.31	40.42
River	-1000	PF 25% release	50.61	833.54	834.69	115	2.55	30.26
River	-1100	PF 25% release	50.61	830.33	831.43	110	2.56	29.82
River	-1200	PF 25% release	50.61	827.12	829.1	198	0.99	35.74



River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1300	PF 25% release	50.61	826.63	828.91	228	1.1	33.67
River	0	PF 30% release	60.74	864.84	866.22	138	1.65	37.64
River	-100	PF 30% release	60.74	864.01	865.45	144	1.72	38.29
River	-200	PF 30% release	60.74	863.18	864.77	159	1.48	44.95
River	-300	PF 30% release	60.74	862.35	863.41	106	2.32	48.72
River	-400	PF 30% release	60.74	857.51	858.75	124	2.71	30.79
River	-500	PF 30% release	60.74	852.66	853.96	130	2.81	27.24
River	-600	PF 30% release	60.74	847.82	849.14	132	2.68	31.23
River	-700	PF 30% release	60.74	844.13	845.45	132	2.66	31.81
River	-800	PF 30% release	60.74	840.44	841.73	129	2.61	33.58
River	-900	PF 30% release	60.74	836.75	837.92	117	2.4	43.45
River	-1000	PF 30% release	60.74	833.54	834.78	124	2.67	31.33
River	-1100	PF 30% release	60.74	830.33	831.52	119	2.71	30.44
River	-1200	PF 30% release	60.74	827.12	829.28	216	1.05	36.68
River	-1300	PF 30% release	60.74	826.63	829.09	246	1.17	34.56
River	0	PF 40% release	80.98	864.84	866.42	158	1.82	39.27
River	-100	PF 40% release	80.98	864.01	865.64	163	1.88	40.52
River	-200	PF 40% release	80.98	863.18	864.94	176	1.65	48.11
River	-300	PF 40% release	80.98	862.35	863.54	119	2.49	51.39
River	-400	PF 40% release	80.98	857.51	858.92	141	2.92	31.89
River	-500	PF 40% release	80.98	852.66	854.14	148	3.03	28.5
River	-600	PF 40% release	80.98	847.82	849.3	148	2.93	31.77
River	-700	PF 40% release	80.98	844.13	845.61	148	2.87	33.84
River	-800	PF 40% release	80.98	840.44	841.88	144	2.83	35.29
River	-900	PF 40% release	80.98	836.75	838.05	130	2.59	45.96
River	-1000	PF 40% release	80.98	833.54	834.95	141	2.88	33.26
River	-1100	PF 40% release	80.98	830.33	831.68	135	2.95	31.59
River	-1200	PF 40% release	80.98	827.12	829.6	248	1.16	38.34
River	-1300	PF 40% release	80.98	826.63	829.4	277	1.28	35.99
River	0	PF 50% release	101.23	864.84	866.59	175	1.97	40.72
River	-100	PF 50% release	101.23	864.01	865.81	180	2.02	42.44
River	-200	PF 50% release	101.23	863.18	865.09	191	1.79	50.86
River	-300	PF 50% release	101.23	862.35	863.65	130	2.65	53.71
River	-400	PF 50% release	101.23	857.51	859.07	156	3.12	32.86
River	-500	PF 50% release	101.23	852.66	854.31	165	3.23	29.62
River	-600	PF 50% release	101.23	847.82	849.44	162	3.14	32.26
River	-700	PF 50% release	101.23	844.13	845.75	162	3.07	34.49
River	-800	PF 50% release	101.23	840.44	842.02	158	3	36.83
River	-900	PF 50% release	101.23	836.75	838.17	142	2.75	48.11
River	-1000	PF 50% release	101.23	833.54	835.1	156	3.05	34.97
River	-1100	PF 50% release	101.23	830.33	831.84	151	3.13	32.68
River	-1200	PF 50% release	101.23	827.12	829.87	275	1.26	39.78
River	-1300	PF 50% release	101.23	826.63	829.67	304	1.38	37.21
River	0	PF 100% release	202.45	864.84	867.28	244	2.5	46.36
River	-100	PF 100% release	202.45	864.01	866.45	244	2.55	49.65
River	-200	PF 100% release	202.45	863.18	865.65	247	2.31	59.4
River	-300	PF 100% release	202.45	862.35	864.08	173	3.23	59.39
River	-400	PF 100% release	202.45	857.51	859.66	215	3.8	36.76
River	-500	PF 100% release	202.45	852.66	854.96	230	3.88	34.15
River	-600	PF 100% release	202.45	847.82	850.04	222	3.89	34.29

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-700	PF 100% release	202.45	844.13	846.33	220	3.78	37.14
River	-800	PF 100% release	202.45	840.44	842.58	214	3.63	41.51
River	-900	PF 100% release	202.45	836.75	838.64	189	3.27	56.77
River	-1000	PF 100% release	202.45	833.54	835.67	213	3.69	39.87
River	-1100	PF 100% release	202.45	830.33	832.44	211	3.79	36.96
River	-1200	PF 100% release	202.45	827.12	830.94	382	1.61	45.34
River	-1300	PF 100% release	202.45	826.63	830.71	408	1.77	41.91

**Chela HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	11.11	864.84	865.53	69	0.86	31.95
River	-100	PF 10% release	11.11	864.01	864.73	72	1.04	29.86
River	-200	PF 10% release	11.11	863.18	864.06	88	0.8	31.62
River	-300	PF 10% release	11.11	862.35	862.89	54	1.65	25.02
River	-400	PF 10% release	11.11	857.51	858.15	64	1.79	19.42
River	-500	PF 10% release	11.11	852.66	853.32	66	1.82	18.45
River	-600	PF 10% release	11.11	847.82	848.5	68	1.85	17.75
River	-700	PF 10% release	11.11	844.13	844.8	67	1.84	18.02
River	-800	PF 10% release	11.11	840.44	841.09	65	1.82	18.63
River	-900	PF 10% release	11.11	836.75	837.35	60	1.68	22.19
River	-1000	PF 10% release	11.11	833.54	834.2	66	1.6	20.92
River	-1100	PF 10% release	11.11	830.33	830.94	61	1.75	21.01
River	-1200	PF 10% release	11.11	827.12	828.1	98	0.61	30.53
River	-1300	PF 10% release	11.11	826.63	827.85	122	0.78	23.36
River	0	PF 15% release	16.66	864.84	865.64	80	1.01	32.85
River	-100	PF 15% release	16.66	864.01	864.85	84	1.16	31.44
River	-200	PF 15% release	16.66	863.18	864.18	100	0.92	34.32
River	-300	PF 15% release	16.66	862.35	862.99	64	1.78	29.49
River	-400	PF 15% release	16.66	857.51	858.26	75	1.95	22.77
River	-500	PF 15% release	16.66	852.66	853.44	78	1.96	21.81
River	-600	PF 15% release	16.66	847.82	848.62	80	1.98	21.01
River	-700	PF 15% release	16.66	844.13	844.92	79	1.97	21.3
River	-800	PF 15% release	16.66	840.44	841.21	77	1.97	21.94
River	-900	PF 15% release	16.66	836.75	837.45	70	1.82	26.1
River	-1000	PF 15% release	16.66	833.54	834.31	77	1.8	24.14
River	-1100	PF 15% release	16.66	830.33	831.04	71	1.9	24.69
River	-1200	PF 15% release	16.66	827.12	828.3	118	0.69	31.57
River	-1300	PF 15% release	16.66	826.63	828.07	144	0.84	27.62
River	0	PF 20% release	22.21	864.84	865.74	90	1.13	33.64
River	-100	PF 20% release	22.21	864.01	864.94	93	1.27	32.56
River	-200	PF 20% release	22.21	863.18	864.29	111	1.02	36.22
River	-300	PF 20% release	22.21	862.35	863.06	71	1.89	32.98
River	-400	PF 20% release	22.21	857.51	858.35	84	2.06	25.6
River	-500	PF 20% release	22.21	852.66	853.54	88	2.08	24.28
River	-600	PF 20% release	22.21	847.82	848.72	90	2.1	23.56
River	-700	PF 20% release	22.21	844.13	845.02	89	2.09	23.9
River	-800	PF 20% release	22.21	840.44	841.31	87	2.09	24.62
River	-900	PF 20% release	22.21	836.75	837.53	78	1.94	29.26

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-1000	PF 20% release	22.21	833.54	834.39	85	1.96	26.72
River	-1100	PF 20% release	22.21	830.33	831.13	80	2.01	27.66
River	-1200	PF 20% release	22.21	827.12	828.47	135	0.75	32.44
River	-1300	PF 20% release	22.21	826.63	828.25	162	0.88	30.12
River	0	PF 25% release	27.77	864.84	865.82	98	1.23	34.34
River	-100	PF 25% release	27.77	864.01	865.03	102	1.36	33.59
River	-200	PF 25% release	27.77	863.18	864.38	120	1.11	37.86
River	-300	PF 25% release	27.77	862.35	863.13	78	1.98	36.08
River	-400	PF 25% release	27.77	857.51	858.43	92	2.15	27.99
River	-500	PF 25% release	27.77	852.66	853.61	95	2.23	24.8
River	-600	PF 25% release	27.77	847.82	848.8	98	2.22	25.65
River	-700	PF 25% release	27.77	844.13	845.1	97	2.21	26.02
River	-800	PF 25% release	27.77	840.44	841.39	95	2.16	27.04
River	-900	PF 25% release	27.77	836.75	837.61	86	2	32.19
River	-1000	PF 25% release	27.77	833.54	834.45	91	2.15	27.46
River	-1100	PF 25% release	27.77	830.33	831.2	87	2.13	28.16
River	-1200	PF 25% release	27.77	827.12	828.61	149	0.81	33.19
River	-1300	PF 25% release	27.77	826.63	828.41	178	0.93	30.95
River	0	PF 30% release	33.32	864.84	865.9	106	1.32	34.98
River	-100	PF 30% release	33.32	864.01	865.12	111	1.43	34.52
River	-200	PF 30% release	33.32	863.18	864.46	128	1.18	39.34
River	-300	PF 30% release	33.32	862.35	863.19	84	2.05	38.81
River	-400	PF 30% release	33.32	857.51	858.5	99	2.24	29.13
River	-500	PF 30% release	33.32	852.66	853.68	102	2.35	25.27
River	-600	PF 30% release	33.32	847.82	848.88	106	2.28	27.71
River	-700	PF 30% release	33.32	844.13	845.17	104	2.28	28.01
River	-800	PF 30% release	33.32	840.44	841.46	102	2.26	28.97
River	-900	PF 30% release	33.32	836.75	837.67	92	2.09	34.47
River	-1000	PF 30% release	33.32	833.54	834.51	97	2.29	28.16
River	-1100	PF 30% release	33.32	830.33	831.26	93	2.26	28.6
River	-1200	PF 30% release	33.32	827.12	828.74	162	0.86	33.88
River	-1300	PF 30% release	33.32	826.63	828.55	192	0.97	31.71
River	0	PF 40% release	44.43	864.84	866.04	120	1.47	36.14
River	-100	PF 40% release	44.43	864.01	865.26	125	1.56	36.19
River	-200	PF 40% release	44.43	863.18	864.6	142	1.32	41.83
River	-300	PF 40% release	44.43	862.35	863.29	94	2.16	43.67
River	-400	PF 40% release	44.43	857.51	858.6	109	2.47	29.84
River	-500	PF 40% release	44.43	852.66	853.8	114	2.56	26.12
River	-600	PF 40% release	44.43	847.82	849	118	2.43	30.75
River	-700	PF 40% release	44.43	844.13	845.3	117	2.45	29.84
River	-800	PF 40% release	44.43	840.44	841.58	114	2.39	32.01
River	-900	PF 40% release	44.43	836.75	837.77	102	2.27	38.21
River	-1000	PF 40% release	44.43	833.54	834.62	108	2.47	29.53
River	-1100	PF 40% release	44.43	830.33	831.37	104	2.46	29.41
River	-1200	PF 40% release	44.43	827.12	828.98	186	0.95	35.13
River	-1300	PF 40% release	44.43	826.63	828.79	216	1.05	33.04
River	0	PF 50% release	55.54	864.84	866.17	133	1.59	37.19
River	-100	PF 50% release	55.54	864.01	865.39	138	1.67	37.66
River	-200	PF 50% release	55.54	863.18	864.72	154	1.43	44.04
River	-300	PF 50% release	55.54	862.35	863.38	103	2.27	47.62

River	Ch d/s of Chela Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-400	PF 50% release	55.54	857.51	858.71	120	2.62	30.53
River	-500	PF 50% release	55.54	852.66	853.91	125	2.75	26.88
River	-600	PF 50% release	55.54	847.82	849.1	128	2.61	31.08
River	-700	PF 50% release	55.54	844.13	845.4	127	2.6	31.2
River	-800	PF 50% release	55.54	840.44	841.68	124	2.54	33.1
River	-900	PF 50% release	55.54	836.75	837.88	113	2.35	41.96
River	-1000	PF 50% release	55.54	833.54	834.73	119	2.61	30.8
River	-1100	PF 50% release	55.54	830.33	831.47	114	2.65	30.1
River	-1200	PF 50% release	55.54	827.12	829.19	207	1.02	36.21
River	-1300	PF 50% release	55.54	826.63	829	237	1.13	34.15
River	0	PF 100% release	111.07	864.84	866.67	183	2.03	41.37
River	-100	PF 100% release	111.07	864.01	865.89	188	2.08	43.3
River	-200	PF 100% release	111.07	863.18	865.16	198	1.85	52.09
River	-300	PF 100% release	111.07	862.35	863.7	135	2.71	54.76
River	-400	PF 100% release	111.07	857.51	859.13	162	3.2	33.3
River	-500	PF 100% release	111.07	852.66	854.38	172	3.31	30.13
River	-600	PF 100% release	111.07	847.82	849.51	169	3.23	32.49
River	-700	PF 100% release	111.07	844.13	845.81	168	3.15	34.78
River	-800	PF 100% release	111.07	840.44	842.09	165	3.08	37.52
River	-900	PF 100% release	111.07	836.75	838.22	147	2.81	49.1
River	-1000	PF 100% release	111.07	833.54	835.16	162	3.13	35.75
River	-1100	PF 100% release	111.07	830.33	831.9	157	3.22	33.13
River	-1200	PF 100% release	111.07	827.12	830	288	1.3	40.43
River	-1300	PF 100% release	111.07	826.63	829.79	316	1.43	37.76

**Nyepin HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition**

River	Ch d/s of Nyepin Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0 (dam site)	PF 10% release	1.05	1015.19	1015.7	51	0.49	8.42
River	-100	PF 10% release	1.05	1014.86	1015.54	68	0.43	7.26
River	-200	PF 10% release	1.05	1014.8	1015.11	31	1.25	5.39
River	-300	PF 10% release	1.05	1012.51	1012.88	37	0.95	6.01
River	-400	PF 10% release	1.05	1011.09	1011.54	45	1.03	4.51
River	-500	PF 10% release	1.05	1009.35	1009.58	23	1.07	8.72
River	-600	PF 10% release	1.05	1007.68	1008.19	51	0.49	8.42
River	0 (dam site)	PF 15% release	1.58	1015.19	1015.8	61	0.51	10.05
River	-100	PF 15% release	1.58	1014.86	1015.64	78	0.49	8.3
River	-200	PF 15% release	1.58	1014.8	1015.17	37	1.36	6.32
River	-300	PF 15% release	1.58	1012.51	1012.95	44	1.02	7.1
River	-400	PF 15% release	1.58	1011.09	1011.61	52	1.17	5.2
River	-500	PF 15% release	1.58	1009.35	1009.62	27	1.16	10.25
River	-600	PF 15% release	1.58	1007.68	1008.27	59	0.55	9.74
River	0 (dam site)	PF 20% release	2.1	1015.19	1015.88	69	0.54	11.33
River	-100	PF 20% release	2.1	1014.86	1015.71	85	0.54	9.11
River	-200	PF 20% release	2.1	1014.8	1015.21	41	1.44	7.09
River	-300	PF 20% release	2.1	1012.51	1013	49	1.07	7.97
River	-400	PF 20% release	2.1	1011.09	1011.66	57	1.28	5.74
River	-500	PF 20% release	2.1	1009.35	1009.65	30	1.23	11.49

River	Ch d/s of Nyepin Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-600	PF 20% release	2.1	1007.68	1008.33	65	0.6	10.76
River	0 (dam site)	PF 30% release	3.15	1015.19	1016.01	82	0.58	13.39
River	-100	PF 30% release	3.15	1014.86	1015.83	97	0.63	10.38
River	-200	PF 30% release	3.15	1014.8	1015.28	48	1.56	8.34
River	-300	PF 30% release	3.15	1012.51	1013.09	58	1.15	9.46
River	-400	PF 30% release	3.15	1011.09	1011.75	66	1.46	6.57
River	-500	PF 30% release	3.15	1009.35	1009.7	35	1.32	13.56
River	-600	PF 30% release	3.15	1007.68	1008.43	75	0.68	12.41
River	0 (dam site)	PF 40% release	4.2	1015.19	1016.11	92	0.61	15.04
River	-100	PF 40% release	4.2	1014.86	1015.93	107	0.69	11.4
River	-200	PF 40% release	4.2	1014.8	1015.34	54	1.65	9.35
River	-300	PF 40% release	4.2	1012.51	1013.16	65	1.21	10.64
River	-400	PF 40% release	4.2	1011.09	1011.81	72	1.6	7.25
River	-500	PF 40% release	4.2	1009.35	1009.74	39	1.4	15.21
River	-600	PF 40% release	4.2	1007.68	1008.51	83	0.74	13.73
River	0 (dam site)	PF 50% release	5.25	1015.19	1016.19	100	0.64	16.43
River	-100	PF 50% release	5.25	1014.86	1016	114	0.75	12.25
River	-200	PF 50% release	5.25	1014.8	1015.39	59	1.73	10.22
River	-300	PF 50% release	5.25	1012.51	1013.23	72	1.25	11.68
River	-400	PF 50% release	5.25	1011.09	1011.87	78	1.72	7.82
River	-500	PF 50% release	5.25	1009.35	1009.78	43	1.47	16.61
River	-600	PF 50% release	5.25	1007.68	1008.58	90	0.79	14.85
River	0 (dam site)	PF 100% release	10.5	1015.19	1016.5	131	0.74	21.52
River	-100	PF 100% release	10.5	1014.86	1016.29	143	0.96	15.34
River	-200	PF 100% release	10.5	1014.8	1015.58	78	1.99	13.48
River	-300	PF 100% release	10.5	1012.51	1013.47	96	1.4	15.61
River	-400	PF 100% release	10.5	1011.09	1012.07	98	2.17	9.83
River	-500	PF 100% release	10.5	1009.35	1009.92	57	1.69	21.9
River	-600	PF 100% release	10.5	1007.68	1008.82	114	0.97	18.92

**Nyepin HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition**

River	Ch d/s of Nyepin Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0 (dam site)	PF 10% release	4.45	1015.19	1016.13	94	0.62	15.39
River	-100	PF 10% release	4.45	1014.86	1015.95	109	0.71	11.63
River	-200	PF 10% release	4.45	1014.8	1015.36	56	1.67	9.57
River	-300	PF 10% release	4.45	1012.51	1013.18	67	1.22	10.9
River	-400	PF 10% release	4.45	1011.09	1011.83	74	1.63	7.39
River	-500	PF 10% release	4.45	1009.35	1009.75	40	1.42	15.57
River	-600	PF 10% release	4.45	1007.68	1008.53	85	0.75	14.01
River	0 (dam site)	PF 15% release	6.68	1015.19	1016.29	110	0.67	18.06
River	-100	PF 15% release	6.68	1014.86	1016.1	124	0.82	13.24
River	-200	PF 15% release	6.68	1014.8	1015.45	65	1.82	11.25
River	-300	PF 15% release	6.68	1012.51	1013.31	80	1.3	12.92

River	Ch d/s of Nyepin Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-400	PF 15% release	6.68	1011.09	1011.94	85	1.87	8.46
River	-500	PF 15% release	6.68	1009.35	1009.82	47	1.54	18.32
River	-600	PF 15% release	6.68	1007.68	1008.66	98	0.85	16.15
River	0 (dam site)	PF 20% release	8.9	1015.19	1016.42	123	0.72	20.19
River	-100	PF 20% release	8.9	1014.86	1016.22	136	0.9	14.53
River	-200	PF 20% release	8.9	1014.8	1015.53	73	1.92	12.63
River	-300	PF 20% release	8.9	1012.51	1013.41	90	1.37	14.56
River	-400	PF 20% release	8.9	1011.09	1012.02	93	2.05	9.32
River	-500	PF 20% release	8.9	1009.35	1009.88	53	1.64	20.5
River	-600	PF 20% release	8.9	1007.68	1008.76	108	0.92	17.86
River	0 (dam site)	PF 30% release	13.36	1015.19	1016.63	144	0.79	23.59
River	-100	PF 30% release	13.36	1014.86	1016.41	155	1.04	16.57
River	-200	PF 30% release	13.36	1014.8	1015.66	86	2.08	14.85
River	-300	PF 30% release	13.36	1012.51	1013.57	106	1.47	17.18
River	-400	PF 30% release	13.36	1011.09	1012.17	108	2.31	10.75
River	-500	PF 30% release	13.36	1009.35	1009.97	62	1.78	24.11
River	-600	PF 30% release	13.36	1007.68	1008.92	124	1.04	20.58
River	0 (dam site)	PF 40% release	17.81	1015.19	1016.79	160	0.85	26.28
River	-100	PF 40% release	17.81	1014.86	1016.55	169	1.16	18.14
River	-200	PF 40% release	17.81	1014.8	1015.77	97	2.19	16.74
River	-300	PF 40% release	17.81	1012.51	1013.69	118	1.58	19.15
River	-400	PF 40% release	17.81	1011.09	1012.3	121	2.44	12.09
River	-500	PF 40% release	17.81	1009.35	1010.05	70	1.88	27.07
River	-600	PF 40% release	17.81	1007.68	1009.05	137	1.14	22.75
River	0 (dam site)	PF 50% release	22.26	1015.19	1016.93	174	0.89	28.58
River	-100	PF 50% release	22.26	1014.86	1016.68	182	1.25	19.49
River	-200	PF 50% release	22.26	1014.8	1015.86	106	2.29	18.3
River	-300	PF 50% release	22.26	1012.51	1013.79	128	1.66	20.87
River	-400	PF 50% release	22.26	1011.09	1012.41	132	2.55	13.22
River	-500	PF 50% release	22.26	1009.35	1010.12	77	1.96	29.63
River	-600	PF 50% release	22.26	1007.68	1009.17	149	1.22	24.6
River	0 (dam site)	PF 100% release	44.52	1015.19	1017.44	225	1.07	36.96
River	-100	PF 100% release	44.52	1014.86	1017.14	228	1.61	24.36
River	-200	PF 100% release	44.52	1014.8	1016.2	140	2.65	24.05
River	-300	PF 100% release	44.52	1012.51	1014.2	169	1.93	27.39
River	-400	PF 100% release	44.52	1011.09	1012.83	174	2.93	17.43
River	-500	PF 100% release	44.52	1009.35	1010.35	100	2.35	33.73
River	-600	PF 100% release	44.52	1007.68	1009.57	189	1.5	31.33

**Nyepin HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition**

River	Ch d/s of Nyepin Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0 (dam site)	PF 10% release	2.44	1015.19	1015.93	74	0.55	12.05
River	-100	PF 10% release	2.44	1014.86	1015.75	89	0.57	9.56
River	-200	PF 10% release	2.44	1014.8	1015.24	44	1.49	7.52
River	-300	PF 10% release	2.44	1012.51	1013.03	52	1.1	8.49
River	-400	PF 10% release	2.44	1011.09	1011.69	60	1.34	6.04
River	-500	PF 10% release	2.44	1009.35	1009.67	32	1.27	12.21
River	-600	PF 10% release	2.44	1007.68	1008.37	69	0.63	11.35
River	0 (dam site)	PF 15% release	3.66	1015.19	1016.06	87	0.59	14.23
River	-100	PF 15% release	3.66	1014.86	1015.88	102	0.66	10.9
River	-200	PF 15% release	3.66	1014.8	1015.31	51	1.61	8.84
River	-300	PF 15% release	3.66	1012.51	1013.13	62	1.18	10.04
River	-400	PF 15% release	3.66	1011.09	1011.78	69	1.53	6.93
River	-500	PF 15% release	3.66	1009.35	1009.72	37	1.37	14.38
River	-600	PF 15% release	3.66	1007.68	1008.47	79	0.71	13.08
River	0 (dam site)	PF 20% release	4.89	1015.19	1016.16	97	0.63	15.98
River	-100	PF 20% release	4.89	1014.86	1015.98	112	0.73	11.98
River	-200	PF 20% release	4.89	1014.8	1015.38	58	1.71	9.93
River	-300	PF 20% release	4.89	1012.51	1013.21	70	1.24	11.33
River	-400	PF 20% release	4.89	1011.09	1011.85	76	1.68	7.64
River	-500	PF 20% release	4.89	1009.35	1009.77	42	1.45	16.14
River	-600	PF 20% release	4.89	1007.68	1008.55	87	0.77	14.48
River	0 (dam site)	PF 30% release	7.33	1015.19	1016.33	114	0.69	18.73
River	-100	PF 30% release	7.33	1014.86	1016.13	127	0.84	13.64
River	-200	PF 30% release	7.33	1014.8	1015.48	68	1.84	11.7
River	-300	PF 30% release	7.33	1012.51	1013.34	83	1.32	13.42
River	-400	PF 30% release	7.33	1011.09	1011.96	87	1.92	8.74
River	-500	PF 30% release	7.33	1009.35	1009.84	49	1.58	18.97
River	-600	PF 30% release	7.33	1007.68	1008.69	101	0.87	16.69
River	0 (dam site)	PF 40% release	9.77	1015.19	1016.47	128	0.73	20.94
River	-100	PF 40% release	9.77	1014.86	1016.26	140	0.93	14.99
River	-200	PF 40% release	9.77	1014.8	1015.56	76	1.96	13.1
River	-300	PF 40% release	9.77	1012.51	1013.44	93	1.38	15.14
River	-400	PF 40% release	9.77	1011.09	1012.05	96	2.12	9.6
River	-500	PF 40% release	9.77	1009.35	1009.9	55	1.66	21.3
River	-600	PF 40% release	9.77	1007.68	1008.79	111	0.95	18.45
River	0 (dam site)	PF 50% release	12.21	1015.19	1016.58	139	0.77	22.79
River	-100	PF 50% release	12.21	1014.86	1016.36	150	1.01	16.09
River	-200	PF 50% release	12.21	1014.8	1015.63	83	2.04	14.35
River	-300	PF 50% release	12.21	1012.51	1013.53	102	1.44	16.62
River	-400	PF 50% release	12.21	1011.09	1012.13	104	2.28	10.35
River	-500	PF 50% release	12.21	1009.35	1009.95	60	1.74	23.3
River	-600	PF 50% release	12.21	1007.68	1008.88	120	1.02	19.95

River	Ch d/s of Nyepin Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Flow depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0 (dam site)	PF 100% release	24.43	1015.19	1016.99	180	0.92	29.58
River	-100	PF 100% release	24.43	1014.86	1016.74	188	1.3	20.09
River	-200	PF 100% release	24.43	1014.8	1015.9	110	2.33	18.99
River	-300	PF 100% release	24.43	1012.51	1013.84	133	1.7	21.64
River	-400	PF 100% release	24.43	1011.09	1012.46	137	2.6	13.72
River	-500	PF 100% release	24.43	1009.35	1010.15	80	2	30.61
River	-600	PF 100% release	24.43	1007.68	1009.21	153	1.25	25.41

**Hiya HE Project - Flow depth, flow velocity and flow top width for lean discharge release condition**

River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	2	840.16	840.68	52	1.62	4.72
River	-100	PF 10% release	2	837.1	837.62	52	1.61	4.85
River	-200	PF 10% release	2	834.05	834.59	54	1.36	5.4
River	-300	PF 10% release	2	832.5	833.13	63	1.27	5
River	-400	PF 10% release	2	830.95	831.29	34	1.3	9.12
River	-500	PF 10% release	2	826.76	827.02	26	1.13	13.87
River	-600	PF 10% release	2	820.43	820.8	37	1.36	7.96
River	-700	PF 10% release	2	814.09	814.51	42	1.45	6.69
River	-800	PF 10% release	2	807.76	808.16	40	1.43	6.95
River	0	PF 15% release	3.01	840.16	840.77	61	1.76	5.57
River	-100	PF 15% release	3.01	837.1	837.71	61	1.75	5.71
River	-200	PF 15% release	3.01	834.05	834.69	64	1.47	6.39
River	-300	PF 15% release	3.01	832.5	833.23	73	1.44	5.75
River	-400	PF 15% release	3.01	830.95	831.35	40	1.41	10.73
River	-500	PF 15% release	3.01	826.76	827.06	30	1.23	16.31
River	-600	PF 15% release	3.01	820.43	820.86	43	1.48	9.36
River	-700	PF 15% release	3.01	814.09	814.58	49	1.57	7.87
River	-800	PF 15% release	3.01	807.76	808.23	47	1.55	8.2
River	0	PF 20% release	4.01	840.16	840.85	69	1.87	6.24
River	-100	PF 20% release	4.01	837.1	837.79	69	1.83	6.44
River	-200	PF 20% release	4.01	834.05	834.77	72	1.54	7.21
River	-300	PF 20% release	4.01	832.5	833.3	80	1.58	6.34
River	-400	PF 20% release	4.01	830.95	831.4	45	1.5	12.03
River	-500	PF 20% release	4.01	826.76	827.1	34	1.3	18.29
River	-600	PF 20% release	4.01	820.43	820.91	48	1.57	10.49
River	-700	PF 20% release	4.01	814.09	814.64	55	1.66	8.84
River	-800	PF 20% release	4.01	807.76	808.29	53	1.64	9.19
River	0	PF 25% release	5.01	840.16	840.91	75	1.95	6.82
River	-100	PF 25% release	5.01	837.1	837.85	75	1.93	7
River	-200	PF 25% release	5.01	834.05	834.84	79	1.59	7.91
River	-300	PF 25% release	5.01	832.5	833.36	86	1.7	6.83
River	-400	PF 25% release	5.01	830.95	831.44	49	1.57	13.14
River	-500	PF 25% release	5.01	826.76	827.13	37	1.37	19.93
River	-600	PF 25% release	5.01	820.43	820.96	53	1.64	11.48
River	-700	PF 25% release	5.01	814.09	814.69	60	1.73	9.69
River	-800	PF 25% release	5.01	807.76	808.34	58	1.71	10.06



River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 30% release	6.01	840.16	840.97	81	2.02	7.35
River	-100	PF 30% release	6.01	837.1	837.9	80	2	7.55
River	-200	PF 30% release	6.01	834.05	834.91	86	1.64	8.54
River	-300	PF 30% release	6.01	832.5	833.42	92	1.81	7.26
River	-400	PF 30% release	6.01	830.95	831.47	52	1.62	14.14
River	-500	PF 30% release	6.01	826.76	827.16	40	1.42	21.46
River	-600	PF 30% release	6.01	820.43	821	57	1.7	12.35
River	-700	PF 30% release	6.01	814.09	814.74	65	1.8	10.38
River	-800	PF 30% release	6.01	807.76	808.39	63	1.78	10.81
River	0	PF 40% release	8.02	840.16	841.07	91	2.12	8.28
River	-100	PF 40% release	8.02	837.1	838	90	2.1	8.5
River	-200	PF 40% release	8.02	834.05	835.02	97	1.72	9.63
River	-300	PF 40% release	8.02	832.5	833.51	101	1.99	7.99
River	-400	PF 40% release	8.02	830.95	831.54	59	1.72	15.86
River	-500	PF 40% release	8.02	826.76	827.2	44	1.49	24.14
River	-600	PF 40% release	8.02	820.43	821.07	64	1.8	13.85
River	-700	PF 40% release	8.02	814.09	814.82	73	1.89	11.72
River	-800	PF 40% release	8.02	807.76	808.46	70	1.89	12.12
River	0	PF 50% release	10.02	840.16	841.16	100	2.23	9.02
River	-100	PF 50% release	10.02	837.1	838.09	99	2.2	9.29
River	-200	PF 50% release	10.02	834.05	835.11	106	1.78	10.59
River	-300	PF 50% release	10.02	832.5	833.59	109	2.15	8.6
River	-400	PF 50% release	10.02	830.95	831.59	64	1.8	17.33
River	-500	PF 50% release	10.02	826.76	827.25	49	1.57	26.35
River	-600	PF 50% release	10.02	820.43	821.13	70	1.88	15.14
River	-700	PF 50% release	10.02	814.09	814.88	79	1.99	12.75
River	-800	PF 50% release	10.02	807.76	808.53	77	1.95	13.33
River	0	PF 100% release	20.05	840.16	841.47	131	2.56	11.91
River	-100	PF 100% release	20.05	837.1	838.4	130	2.52	12.26
River	-200	PF 100% release	20.05	834.05	835.45	140	2.05	13.96
River	-300	PF 100% release	20.05	832.5	833.89	139	2.62	11.02
River	-400	PF 100% release	20.05	830.95	831.8	85	2.05	23.01
River	-500	PF 100% release	20.05	826.76	827.39	63	1.88	30.7
River	-600	PF 100% release	20.05	820.43	821.35	92	2.16	19.99
River	-700	PF 100% release	20.05	814.09	815.13	104	2.29	16.82
River	-800	PF 100% release	20.05	807.76	808.77	101	2.26	17.51

Hiya HE Project - Flow depth, flow velocity and flow top width for Monsoon discharge release condition

River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m <sup>3</sup> /s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	8.5	840.16	841.1	94	2.14	8.47
River	-100	PF 10% release	8.5	837.1	838.02	92	2.15	8.66
River	-200	PF 10% release	8.5	834.05	835.04	99	1.73	9.9
River	-300	PF 10% release	8.5	832.5	833.53	103	2.04	8.12
River	-400	PF 10% release	8.5	830.95	831.55	60	1.73	16.3
River	-500	PF 10% release	8.5	826.76	827.22	46	1.51	24.74
River	-600	PF 10% release	8.5	820.43	821.08	65	1.82	14.17
River	-700	PF 10% release	8.5	814.09	814.83	74	1.93	11.93
River	-800	PF 10% release	8.5	807.76	808.48	72	1.9	12.42

River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 15% release	12.75	840.16	841.26	110	2.33	9.97
River	-100	PF 15% release	12.75	837.1	838.19	109	2.31	10.23
River	-200	PF 15% release	12.75	834.05	835.23	118	1.85	11.72
River	-300	PF 15% release	12.75	832.5	833.67	117	2.34	9.29
River	-400	PF 15% release	12.75	830.95	831.66	71	1.89	19.09
River	-500	PF 15% release	12.75	826.76	827.3	54	1.63	29.11
River	-600	PF 15% release	12.75	820.43	821.21	78	1.95	16.77
River	-700	PF 15% release	12.75	814.09	814.96	87	2.09	14.04
River	-800	PF 15% release	12.75	807.76	808.61	85	2.04	14.68
River	0	PF 20% release	17	840.16	841.39	123	2.46	11.18
River	-100	PF 20% release	17	837.1	838.32	122	2.44	11.48
River	-200	PF 20% release	17	834.05	835.37	132	1.95	13.18
River	-300	PF 20% release	17	832.5	833.8	130	2.55	10.27
River	-400	PF 20% release	17	830.95	831.74	79	2	21.44
River	-500	PF 20% release	17	826.76	827.35	59	1.78	30.54
River	-600	PF 20% release	17	820.43	821.3	87	2.07	18.8
River	-700	PF 20% release	17	814.09	815.07	98	2.22	15.75
River	-800	PF 20% release	17	807.76	808.71	95	2.16	16.47
River	0	PF 25% release	21.25	840.16	841.51	135	2.58	12.22
River	-100	PF 25% release	21.25	837.1	838.43	133	2.58	12.49
River	-200	PF 25% release	21.25	834.05	835.48	143	2.08	14.26
River	-300	PF 25% release	21.25	832.5	833.92	142	2.65	11.28
River	-400	PF 25% release	21.25	830.95	831.82	87	2.07	23.55
River	-500	PF 25% release	21.25	826.76	827.4	64	1.92	30.75
River	-600	PF 25% release	21.25	820.43	821.38	95	2.18	20.5
River	-700	PF 25% release	21.25	814.09	815.16	107	2.29	17.3
River	-800	PF 25% release	21.25	807.76	808.8	104	2.29	17.92
River	0	PF 30% release	25.5	840.16	841.61	145	2.69	13.11
River	-100	PF 30% release	25.5	837.1	838.53	143	2.67	13.43
River	-200	PF 30% release	25.5	834.05	835.59	154	2.17	15.29
River	-300	PF 30% release	25.5	832.5	834.03	153	2.75	12.11
River	-400	PF 30% release	25.5	830.95	831.88	93	2.16	25.24
River	-500	PF 30% release	25.5	826.76	827.45	69	2.03	30.96
River	-600	PF 30% release	25.5	820.43	821.45	102	2.26	22.04
River	-700	PF 30% release	25.5	814.09	815.24	115	2.4	18.53
River	-800	PF 30% release	25.5	807.76	808.88	112	2.35	19.37
River	0	PF 40% release	33.99	840.16	841.79	163	2.83	14.75
River	-100	PF 40% release	33.99	837.1	838.7	160	2.82	15.09
River	-200	PF 40% release	33.99	834.05	835.76	171	2.34	17.01
River	-300	PF 40% release	33.99	832.5	834.22	172	2.91	13.59
River	-400	PF 40% release	33.99	830.95	832	105	2.29	28.32
River	-500	PF 40% release	33.99	826.76	827.54	78	2.22	31.33
River	-600	PF 40% release	33.99	820.43	821.58	115	2.38	24.8
River	-700	PF 40% release	33.99	814.09	815.39	130	2.52	20.88
River	-800	PF 40% release	33.99	807.76	809.02	126	2.49	21.73
River	0	PF 50% release	42.49	840.16	841.94	178	2.96	16.13
River	-100	PF 50% release	42.49	837.1	838.86	176	2.93	16.56
River	-200	PF 50% release	42.49	834.05	835.92	187	2.46	18.55

River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-300	PF 50% release	42.49	832.5	834.37	187	3.06	14.82
River	-400	PF 50% release	42.49	830.95	832.09	114	2.41	30.06
River	-500	PF 50% release	42.49	826.76	827.63	87	2.36	31.69
River	-600	PF 50% release	42.49	820.43	821.69	126	2.49	27.13
River	-700	PF 50% release	42.49	814.09	815.5	141	2.64	22.81
River	-800	PF 50% release	42.49	807.76	809.13	137	2.6	23.75
River	0	PF 100% release	84.98	840.16	842.51	235	3.4	21.28
River	-100	PF 100% release	84.98	837.1	839.41	231	3.37	21.84
River	-200	PF 100% release	84.98	834.05	836.47	242	2.92	24.08
River	-300	PF 100% release	84.98	832.5	834.98	248	3.49	19.63
River	-400	PF 100% release	84.98	830.95	832.44	149	3	30.87
River	-500	PF 100% release	84.98	826.76	827.96	120	2.94	33.1
River	-600	PF 100% release	84.98	820.43	822.07	164	2.92	33.82
River	-700	PF 100% release	84.98	814.09	815.96	187	3.03	30.11
River	-800	PF 100% release	84.98	807.76	809.57	181	3.01	31.22

Hiya HE Project - Flow depth, flow velocity and flow top width for other four months discharge release condition

River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	0	PF 10% release	4.66	840.16	840.89	73	1.91	6.65
River	-100	PF 10% release	4.66	837.1	837.83	73	1.88	6.85
River	-200	PF 10% release	4.66	834.05	834.82	77	1.58	7.67
River	-300	PF 10% release	4.66	832.5	833.34	84	1.66	6.67
River	-400	PF 10% release	4.66	830.95	831.42	47	1.54	12.77
River	-500	PF 10% release	4.66	826.76	827.12	36	1.34	19.45
River	-600	PF 10% release	4.66	820.43	820.95	52	1.6	11.19
River	-700	PF 10% release	4.66	814.09	814.67	58	1.71	9.4
River	-800	PF 10% release	4.66	807.76	808.33	57	1.69	9.77
River	0	PF 15% release	6.99	840.16	841.02	86	2.08	7.81
River	-100	PF 15% release	6.99	837.1	837.95	85	2.06	8
River	-200	PF 15% release	6.99	834.05	834.96	91	1.68	9.09
River	-300	PF 15% release	6.99	832.5	833.46	96	1.9	7.64
River	-400	PF 15% release	6.99	830.95	831.51	56	1.68	15.01
River	-500	PF 15% release	6.99	826.76	827.18	42	1.45	22.84
River	-600	PF 15% release	6.99	820.43	821.04	61	1.74	13.15
River	-700	PF 15% release	6.99	814.09	814.78	69	1.85	11.04
River	-800	PF 15% release	6.99	807.76	808.42	66	1.83	11.48
River	0	PF 20% release	9.33	840.16	841.13	97	2.19	8.79
River	-100	PF 20% release	9.33	837.1	838.06	96	2.18	9
River	-200	PF 20% release	9.33	834.05	835.08	103	1.76	10.27
River	-300	PF 20% release	9.33	832.5	833.56	106	2.1	8.39
River	-400	PF 20% release	9.33	830.95	831.57	62	1.77	16.85
River	-500	PF 20% release	9.33	826.76	827.23	47	1.54	25.63
River	-600	PF 20% release	9.33	820.43	821.11	68	1.86	14.71
River	-700	PF 20% release	9.33	814.09	814.86	77	1.95	12.45
River	-800	PF 20% release	9.33	807.76	808.51	75	1.94	12.89
River	0	PF 25% release	11.66	840.16	841.22	106	2.29	9.61

River	Ch d/s of Hiya Dam axis (m)	Profile	Total discharge (m3/s)	Bed Elevation (m)	Water surface Elevation (m)	Water depth (cm)	Flow Velocity (m/s)	Flow Top Width (m)
River	-100	PF 25% release	11.66	837.1	838.15	105	2.27	9.87
River	-200	PF 25% release	11.66	834.05	835.19	114	1.81	11.31
River	-300	PF 25% release	11.66	832.5	833.64	114	2.28	9
River	-400	PF 25% release	11.66	830.95	831.63	68	1.84	18.48
River	-500	PF 25% release	11.66	826.76	827.28	52	1.6	28.11
River	-600	PF 25% release	11.66	820.43	821.18	75	1.92	16.17
River	-700	PF 25% release	11.66	814.09	814.93	84	2.05	13.54
River	-800	PF 25% release	11.66	807.76	808.58	82	2.03	14.1
River	0	PF 30% release	13.99	840.16	841.3	114	2.37	10.34
River	-100	PF 30% release	13.99	837.1	838.22	112	2.37	10.58
River	-200	PF 30% release	13.99	834.05	835.28	123	1.86	12.23
River	-300	PF 30% release	13.99	832.5	833.71	121	2.43	9.54
River	-400	PF 30% release	13.99	830.95	831.69	74	1.91	19.92
River	-500	PF 30% release	13.99	826.76	827.31	55	1.68	30.1
River	-600	PF 30% release	13.99	820.43	821.23	80	2.01	17.32
River	-700	PF 30% release	13.99	814.09	814.99	90	2.13	14.58
River	-800	PF 30% release	13.99	807.76	808.64	88	2.1	15.17
River	0	PF 40% release	18.65	840.16	841.44	128	2.53	11.55
River	-100	PF 40% release	18.65	837.1	838.36	126	2.49	11.91
River	-200	PF 40% release	18.65	834.05	835.42	137	2.01	13.59
River	-300	PF 40% release	18.65	832.5	833.85	135	2.58	10.7
River	-400	PF 40% release	18.65	830.95	831.78	83	2.02	22.35
River	-500	PF 40% release	18.65	826.76	827.37	61	1.83	30.63
River	-600	PF 40% release	18.65	820.43	821.33	90	2.12	19.48
River	-700	PF 40% release	18.65	814.09	815.11	102	2.25	16.36
River	-800	PF 40% release	18.65	807.76	808.75	99	2.22	17.04
River	0	PF 50% release	23.31	840.16	841.56	140	2.63	12.68
River	-100	PF 50% release	23.31	837.1	838.48	138	2.6	13.02
River	-200	PF 50% release	23.31	834.05	835.53	148	2.13	14.77
River	-300	PF 50% release	23.31	832.5	833.98	148	2.7	11.7
River	-400	PF 50% release	23.31	830.95	831.85	90	2.11	24.43
River	-500	PF 50% release	23.31	826.76	827.43	67	1.97	30.85
River	-600	PF 50% release	23.31	820.43	821.41	98	2.23	21.24
River	-700	PF 50% release	23.31	814.09	815.2	111	2.34	17.96
River	-800	PF 50% release	23.31	807.76	808.84	108	2.31	18.69
River	0	PF 100% release	46.63	840.16	842.01	185	3.01	16.74
River	-100	PF 100% release	46.63	837.1	838.92	182	2.99	17.17
River	-200	PF 100% release	46.63	834.05	835.98	193	2.52	19.17
River	-300	PF 100% release	46.63	832.5	834.45	195	3.1	15.43
River	-400	PF 100% release	46.63	830.95	832.13	118	2.48	30.15
River	-500	PF 100% release	46.63	826.76	827.66	90	2.45	31.83
River	-600	PF 100% release	46.63	820.43	821.73	130	2.53	28.16
River	-700	PF 100% release	46.63	814.09	815.56	147	2.69	23.69
River	-800	PF 100% release	46.63	807.76	809.19	143	2.65	24.67

Note: Distance -100 denotes location 100 m d/s of Kurang-II dam site. Same way all other locations may be read.





