

APPENDICES

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Section 1: Introduction appendices

Appendix 1.1 Definitions of the BFI

Above ground biomass: All biomass of living vegetation, both woody and herbaceous, above the soil including stems, stumps, branches, bark, seeds, and foliage (FAO 2018).

Below Ground Biomass: All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter (FAO 2018).

Dead Wood: All non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country (FAO 2018).

Carbon in Above Ground Biomass: Carbon in all living biomass above the soil, including stems, stumps, branches, bark, seeds, and foliage (FAO 2018).

Carbon in Below Ground Biomass: Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded, because these often cannot be distinguished empirically from soil organic matter or litter (FAO 2018).

Carbon in Litter: Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm), lying dead in various states of decomposition above the mineral or organic soil (FAO 2018).

Coarse Woody Debris: Includes downed, dead tree and shrub boles, large limbs, and other woody pieces that are ≥ 8 cm in diameter and severed from their original source of growth (BFD 2016).

Dead Tree: A tree is regarded as dead tree if it does not have any living branches. Trees that are alive but so badly damaged that cannot grow in the next growing season (e.g. trees felled by storm) are regarded as dead trees (BFD 2016).

Exotic Species: A tree species occurring outside its natural range (past or present) and having dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans) (FAO 2018).

Fine Woody Debris: Includes downed, dead branches, twigs, and small tree or shrub boles <8 cm in diameter that are not attached to a living or standing dead source (BFD 2016).

Soil Carbon: Organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series (FAO 2018).

Forest: Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use (FAO 2018).

Down Woody Debris: Includes downed, dead tree and shrub boles, large limbs, and other woody pieces that are ≥ 8 cm in diameter and severed from their original source of growth (BFD 2016).

Growing stock: Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches (FAO 2018).

Litter: Remains of fallen leaves or needles, dead ground vegetation, parts of tree bark and thin branches lying on the ground (BFD 2016).

Native Species: A tree species occurring within its natural range (past or present) and dispersal potential (i.e. within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans) (FAO 2018).

Naturally Regenerated Forest: Forest predominantly composed of trees established through natural regeneration (FAO 2018).

Standing dead tree: Dead standing tally trees, and partially separated boles of dead tally trees, do not have to be self-supported. They may be supported by other trees, branches, or their crown. Portions of boles on dead trees that are separated greater than 50 percent (either above or below the point of diameter measurement), are considered severed. For woodland species with multiple stems, a tree is considered down if more than 2/3 of the volume is no longer attached or upright (BFD 2016).

Regeneration and Recruitment: It is the act or process of regenerating.

Seedling: The regenerating trees species having <2cm DBH.

Other Wooded Land: Land not classified as "Forest", spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use (FAO 2018).

Other Land: All land that is not classified as "Forest" or "Other wooded land" (FAO 2018).

Disturbance: Damage caused by any factor (biotic or abiotic) that adversely affects the vigor and productivity of the forest and which is not a direct result of human activities (FAO 2018).

Tree: A woody perennial with a single main stem (DBH ≥ 10 cm), or in the case of coppice with several stems, having a more or less definite crown (FAO 2018).

Trees Outside Forest: Any tree occurring in the Other Land class (FAO, 2018) (see Table 3.1).

Appendix 1.2 Comparisons of the BFI with NFA 2005

Variable	Domain	NFA 2007	BFI 2019	BFI Modified ¹
Area, ha	Forest	1443000	1884019	
	Total	14757000	14757000	
Volume, m ³ /ha	Forest	48	67	59
	Total	14	29	26
Volume, million m ³	Forest	70	131	140
	Total	212	384	377
Biomass, t/ha	Forest	193	68	203
	Total	57	29	88
Biomass, million m ³	Forest	278	132	477
	Total	846	387	1294
Avg DBH, cm	Total	20.1	24.1	
Avg Height, m	Total	9.0	11.9	
Number of species	Forest	129	265	
	Total	258	379	

¹“BFI Modified” are estimates derived from the same equation for volume and biomass expansion factor used in the NFA (MoEF and FAO 2007). They are included for a more direct comparison with the BFI which uses multiple allometric equations.

Appendix 1.3 Brief history of forest assessments in Bangladesh

Inventory period	Institution/Authors	Coverage	Procedure	Output
1769-73	Messrs. Ritchie, Richards and Martin	Only the largest waterways were recorded.	Field survey	Maps (scale: 2.54 cm = 8.05 km)
1821-23 & 1829	Lt. Princep, Lt. Hodges	The boundary between forest and cultivation was outlined.	Field survey	Maps (scale: 1.27 cm = 1.61 km)
1851-55 & 1855-59	Mr. James Ellison	Sundarbans – 24 Parganas district and Khulna, Bagerhat, Satkhira.	Field survey	Maps
1905-09	Bengal Survey Department	Sundarbans	Field survey	Map (scale: 2.54 cm = 1.61 km)
1924	Mr. Curtis	Sundarbans	Field survey	Map (scale 1:31,380)
1958-59	FORESTAL (Forestry and Engineering International Limited, Canada)	Sundarbans	Aerial photos	Forest cover maps (scale: 5.08 cm = 8.05 km), volume, yields, species for wood supply for the proposed newsprint mill at Khulna
1961-63	FORESTAL (Forestry and Engineering International Limited, Canada)	Sangu-Matamuhuri Reserved Forests- Kassalong &	Aerial photos	Inventory report of of timber and bamboo of these forests

Inventory period	Institution/Authors	Coverage	Procedure	Output
		Rankhiang Reserve Forests		
1964	Hunting Survey Corporation Limited of Canada – FORESTAL)	Hill Forests – Kassalong and Rankhiang Reserve Forests	Aerial photos	Stand and stock tables. Topo maps at 1:15,840 and forest cover maps
1980-81	Mr. Hammermaster-FAO/UNDP Village Forest Inventory,	Surveyed 267 village units (all Districts except Chittagong Hills)	Field survey	Report on growing stock of village forests and bamboo, non-wood value trees
1981-82	Forest Inventory Division of the Forest Research Institute - Chittagong	Kaptai	Random sampling 1% of total area	Report on area, stocking, major species of pulpwood Plantation.
1983-1984	FAO/UNDP under 'Assistance to the Forestry Sector of Bangladesh' Project	Sangu and Matamuhuri Reserve Forests- Kassalong & Rankhiang reserves; Sitapahar Reserved Forests	Aerial photos at (scale 1:50,000)	Forest type delineation: (i) shifting cultivation (ii) seemingly exploitable high forest
1984	Overseas Development Administration (ODA)	Sundarbans –	Aerial photos	forest type maps (scale 1:50,000); incidence of top dying of Sundri species (scale 1:10,000); report on main species, stems per ha. mean and total volume. Stand projections and regeneration. soil sampling.
1984	FAO/UNDP	Sitapahar Reserve	Aerial photos (scale 1:30,000)	Report on forest type: plantations and natural forests
1984	FAO/UNDP	Chittagong and Cox's Bazar Forest Divisions	Aerial photos (scale 1:15,000)	Report on area, number of trees per ha. (dbh classes), bamboo.
1995-96	Mandela Agricultural Sustainable Ecosystems International, Corp.	2 Forest Divisions: Sylhet and Coastal Afforestation	SPOT satellite images (scale 1:50,000) Bands: 1 (0.5-0.59 μ m)	Report on forest Area Change, Natural Forest, Plantations, Reed Forest, Non-forest areas

Inventory period	Institution/Authors	Coverage	Procedure	Output
	Philippines under GOB/WB Forest Resources Management Project		2 (0.61-0.69 μm) 3 (0.79-0.89 μm)	
1997	Mandela Agricultural Development Corporation and Forest Department, Ministry of Environment and Forests, Bangladesh	8 forest division covered	SPOT satellite images and aerial photos (scale 1:15,000)	Report on natural forests, plantations, forest area change, total volume, commercial value, forest ownership
1999-2000	Bangladesh Forest Department under "Forest Inventory of the Sal Forests of Bangladesh"	Sal Forests of Central and Northwest Bangladesh (Dhaka, Tangail, Mymensingh Divisions)	5287 plots over approx. 46,000 ha.	Report on species, dbh, height, regeneration, management classes
2005-2007	Bangladesh Forest Department, MoEF, FAO & SPARRSO	National Forest and Tree Resources Assessment.	Systematically laid 299 tracts all over the country were identified within 10 zones. Plots and subplots were identified within a tract. Land use classification system was prepared based on Landsat TM imageries from 2005	First national level inventory; report prepared on land use classes, forest area, forest ownership, trees outside forest, forest products, volume, species, biodiversity and regeneration, social and economic aspects.
2008	Bangladesh Forest Research Institute (BFRI)	Chunati Wildlife Sanctuary (WS) Carbon Inventory	Field data and growing stock models as developed by the Forest Inventory Division of BFRI. Seven land-use categories were used. Carbon sequestration rates were then estimated by following the methods as developed under CDM/IPCC procedures.	Report on growing stock, soil organic carbon, above-ground biomass, below-ground biomass, and on-ground biomass.

Inventory period	Institution/Authors	Coverage	Procedure	Output
2009	Bangladesh Forest Department under the USAID-funded Integrated Protected Area Co-management (IPAC) project	Sundarbans Reserve Forest	The last SRF inventory, conducted in the 1990s, sampled approximately 1200 plots situated on a systematic grid at 1-minute intervals of latitude/longitude. Considering constraints 150 plots were sampled. Measured trees, non-tree vegetation, dead wood, and soil.	Estimations of carbon density and carbon stocks.
2011	Bangladesh Forest Department under the USAID-funded Integrated Protected Area Co-management (IPAC) project	Six protected areas: Teknaf WS, Inani NP, Medakachapia NP, Fasiakhali WS, Dudpukuria-Dhopachari WS, and in Sitakunda eco-park	The grid maps of the six areas were used in carrying out the soils survey in the core zones. Two soil samples from the soil depth of 0-15 cm and 16-20 cm were taken from each of the subplots of all the plots with augur. A core sample is taken near the center.	Report on soil carbon to 20cm depth.
2014	Bangladesh Forest Department and Winrock International under USAID supported CREL project	Eight protected areas: Khadimnagar NPO, Lawachara NP, Satchari NP, Rema-Kalenga WS, Modhupur National NP, Kaptai National NP, Chunati WS and Himchari NP.	Concentric circular plots were systematically laid out at 30"X30" intervals. Data were recorded at 2m, 4m, 10m and 17.84m radii plots. Data collected from a total of 377 sample plots covering 34,376 ha and analyzed using MS Excel.	The CO ₂ (Mg/ha) estimates were made for five carbon pools, e.g. Trees (seedlings, saplings and live trees), dead wood (standing and lying deadwoods), non-tree vegetation (herbs, shrubs, cane, bamboo, liana etc), litters and soil.
2015	Bangladesh Forest Department and Winrock International under USAID supported Climate-Resilient Ecosystems and Livelihoods (CREL) project	5 protected areas: Baroiyadhala NP, Hazarikhil WS, NijhimDweep NP, Tengragiri WS and Ratargul Special Biodiversity Conservation Area.	Data were recorded at 2m, 4m, 10m and 17.84m radii plots. Data collected from a total of 214 sample plots covering 12,976.25 ha and analyzed using MS Excel.	The CO ₂ (Mg/ha) estimates were made for five carbon pools, e.g. Trees (seedlings, saplings and live trees), dead wood (standing and lying deadwoods), non-tree vegetation (herbs, shrubs, cane, bamboo, liana etc.), litters and soil.

(Source: FAO 2007; Akhter, 2013; Costello et al. 2016)

Section 2: BFI process appendices

Appendix 2.1 2015 Land Cover Map classes and corresponding FRA classes

Land Cover 2015	BFI Land Cover Classes	FRA class
Bamboo Forest	Bamboo Forest	Forest
Forest Plantation	Forest Plantation	Forest
Hill Forest	Hill Forest	Forest
Mangrove Forest	Mangrove Forest	Forest
Mangrove Plantation	Mangrove Plantation	Forest
Plain Land Forest (Sal Forest)	Plain Land Forest (Sal Forest)	Forest
Rubber Plantation	Rubber Plantation	Forest
Shrubs with scattered trees	Shrubs with scattered trees	Forest
Swamp Forest	Swamp Forest	Forest
Air Port	Air Port	Other Land
Baor	Baor	Other Land
Brackish Water Aquaculture	Brackish Water Aquaculture	Other Land
Brickfield	Brickfield	Other Land
Built-Up Non-Linear	Built-Up Non-Linear	Other Land
Dump Sites/ Extraction Sites	Dump Sites/ Extraction Sites	Other Land
Fresh Water Aquaculture	Fresh Water Aquaculture	Other Land
Herb Dominated Area	Herb Dominated Area	Other Land
Lake	Lake	Other Land
Mud Flats or Intertidal Area	Mud Flats or Intertidal Area	Other Land
Multiple Crop	Permanent crop	Other Land
Orchards and Other Plantations (Shrub)	Orchards and Other Plantations (Shrub)	Other Land
Orchards and Other Plantations (Trees)	Orchards and Other Plantations (Trees)	Other Land
Perennial Beels/Haors	Perennial Beels/Haors	Other Land
Ponds	Ponds	Other Land
River Banks	River Banks	Other Land
Rivers and Khals	Rivers and Khals	Other Land
Rural Settlement	Rural Settlement	Other Land
Salt Pans	Salt Pans	Other Land
Sand	Sand	Other Land
Shifting Cultivation	Shifting Cultivation	Other Land
Single Crop	Permanent crop	Other Land
Swamp Reed Land	Swamp Reed Land	Other Land
Swamp Plantation	Swamp Plantation	Other Wooded Land

Appendix 2.2 Questionnaire of the socio-economic survey



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
BANGLADESH FOREST DEPARTMENT
Bana Bhaban, Agargaon, Dhaka

NATIONAL SOCIOECONOMIC SURVEY IN FORESTRY
HOUSEHOLD (HH) MODULE

8. NATIONAL SOCIOECONOMIC SURVEY IN FORESTRY: QUESTIONNAIRE FOR HOUSEHOLD (HH) MODULE

8.1. AREA IDENTIFICATION

VARIABLES	CODES						
8.1.1. HH unique number							
8.1.2. Interview date (DD-MM-YY)							
8.1.3. Division							
8.1.4. District							
8.1.5. Upazila							
8.1.6. Union							
8.1.7. Mauza							
8.1.8. Ward							
8.1.9. Village							
8.1.10. Zone							
8.1.11. Stratum							
8.1.12. Forest Division							
8.1.13. Forest Range							
8.1.14. Forest Beat							
8.1.15. HH survey point							
8.1.16. GPS Coordinate	Latitude (N)						

	Longitude (E)						
8.1.17. Starting time of interview (HH:MM)							
8.1.18. Name of interviewer							

8.2. DEMOGRAPHIC INFORMATION

8.2.1. Name of the respondent.....

8.2.2. Age of the respondent..... (in years)

8.2.3. Gender of the respondent 1= Male 2= Female 3= Third gender

8.2.4. Which ethnic group does the HH belong to?

<input type="checkbox"/> 1=Bagdi	<input type="checkbox"/> 11=Hajong	<input type="checkbox"/> 21=Mahali	<input type="checkbox"/> 31=Pahan	<input type="checkbox"/> 41=Tripura
<input type="checkbox"/> 2=Barman	<input type="checkbox"/> 12=Garo	<input type="checkbox"/> 22=Mahato	<input type="checkbox"/> 32=Pahari	<input type="checkbox"/> 42=Usui
<input type="checkbox"/> 3=Bawm	<input type="checkbox"/> 13=Karmakar	<input type="checkbox"/> 23=Malo	<input type="checkbox"/> 33=Palia	<input type="checkbox"/> 96=Other (please specify)
<input type="checkbox"/> 4=Bengali	<input type="checkbox"/> 14=Khasia	<input type="checkbox"/> 24=Manupuri	<input type="checkbox"/> 34=Pangan	
<input type="checkbox"/> 5=Bhumali	<input type="checkbox"/> 15=Kheyang	<input type="checkbox"/> 25=Marma	<input type="checkbox"/> 35=Pangkhoa	
<input type="checkbox"/> 6=Bhumij	<input type="checkbox"/> 16=Khumu	<input type="checkbox"/> 26=Malpahari	<input type="checkbox"/> 36=Rabidas	
<input type="checkbox"/> 7=Bonaj	<input type="checkbox"/> 17=Koch	<input type="checkbox"/> 27=Mro or Murong	<input type="checkbox"/> 37=Rajbangshii	
<input type="checkbox"/> 8=Chak	<input type="checkbox"/> 18=Kole	<input type="checkbox"/> 28=Munda	<input type="checkbox"/> 38=Rakhain	
<input type="checkbox"/> 9=Chakma	<input type="checkbox"/> 19=Lahra	<input type="checkbox"/> 9=Mushhor	<input type="checkbox"/> 39=Santal	
<input type="checkbox"/> 10=Dalu	<input type="checkbox"/> 20=Lushai	<input type="checkbox"/> 30=Oraon	<input type="checkbox"/> 40=Tanchangya	

8.2.5. How many members are there in this HH? People

8.2.6. What is the age distribution of your HH members according to gender?

Gender	Age class			
	<15 years	15-29 years	30- 64 years	>64 years
<input type="checkbox"/> 1=Male				
<input type="checkbox"/> 2=Female				
<input type="checkbox"/> 3=Third gender				

8.3. BIODIVERSITY AND CONSERVATION

8.3.1. Are there any **plant species** that were abundantly available in the past, but rarely seen now-a-days in your union?

0=No (then please ask question 8.3.3.1)

1=Yes (then please ask the question 8.3.2-8.3.3)

99=Do not know (then please ask question 8.3.3.1)

<p>8.3.2. What are the plant species not found abundantly like before in the union? (please write down the maximum five local names)</p>	<p>8.3.3. In your opinion, what are the main reasons of reduction in number of these species? 1=Land use change 2=Over harvesting 3=Lack of proper management 4=Natural disasters 96= Others (please specify)</p>
1.	
2.	
3.	
4.	
5.	

8.3.3.1. Are there any **plant species** that were not abundant in the past, but now are common in your union?

0=No (then please ask question 8.3.3.4)

1=Yes (then please ask the question 8.3.3.2-8.3.3.3)

99=Do not know (then please ask question 8.3.3.4)

<p>8.3.3.2. What are the plant species not abundant in the past but now are common? (please write down the maximum five local names)</p>	<p>8.3.3.3. In your opinion, what are the main reasons for the increase in these plant species? 1=Reduced extraction of plant species 2=Tree planting 3=Proper management 4=Less natural disturbance 96= Others (please specify)</p>
1.	
2.	
3.	
4.	
5.	

8.3.3.4. Have there been any changes in the area of tree cover on your land in the past ten years?

0= No changes (then please ask question 8.3.3.7)

1= Increased (then please ask the question 8.3.3.5)

2= Decreased (then please ask the question 8.3.3.6)

99=Do not know (then please ask question 8.3.3.7)

8.3.3.5. What are the reasons for increasing the tree cover?	8.3.3.6. What are the reasons for decreasing the tree cover?
--	--

<i>(please write down the maximum five reasons)</i>	<i>(please write down the maximum five reasons)</i>
1.	
2.	
3.	
4.	
5.	

8.3.3.7. In your opinion, how will tree cover change in the next ten years on your land?

- 0=No changes *(then please ask question 8.3.4)*
- 1=Increase *(then please ask the question 8.3.3.8)*
- 2= Decrease *(then please ask the question 8.3.3.9)*
- 99=Do not know *(then please ask question 8.3.4)*

8.3.3.8. What will be the reasons for increasing tree cover in the next ten years on your land? <i>(please write down the maximum five reasons)</i>	8.3.3.9. What will be the reasons for decreasing the tree cover in the next five years on your land? <i>(please write down the maximum five reasons)</i>
1.	
2.	
3.	
4.	
5.	

8.3.4. Are there any **animal species** that were **abundantly** available in the past, but rarely seen now-a-days in your union?

- 0=No *(then please ask question 8.3.7)*
- 1=Yes *(then please ask the question 8.3.5-8.3.6)*
- 99=Do not know *(then please ask question 8.3.7)*

8.3.5. What are the animal species not found abundantly like before in the union? <i>(please write down the maximum five local names)</i>	8.3.6. In your opinion, what are the main reasons of reduction in number of these species? 1=Loss of habitat 2=Hunting 3=Lack of proper management 4=Natural disasters 96= Others <i>(please specify)</i>
1.	
2.	
3.	

4.	
5.	

8.3.7. Are there any **animal species** that were **not abundant** in the past, but now are common in your union?

- 0=No (*then please ask question 8.4.1*)
- 1=Yes (*then please ask the question 8.3.8-8.3.9*)
- 99=Do not know (*then please ask question 8.4.1.*)

8.3.8. What are the animals not abundant in the past but now are common? <i>(please write down the maximum five local names)</i>	8.3.9. In your opinion, what are the main reasons for the increase in these animals? <i>1=Improved habitat for animals 2=Less poaching and hunting 3=Proper management including law enforcement 4=Less natural disasters 96= Others (please specify)</i>
1.	
2.	
3.	
4.	
5.	

8.4 DISTURBANCES, FOREST DEGRADATION AND RESILIENCE

8.4.1. Are there any disturbances that have affected trees and forest resources in your union in past ten years?

- 0=No (*then please ask question 8.5.1*)
- 1=Yes (*then please ask question 8.4.2*)
- 99= Don't know (*then please ask question 8.5.1*)

8.4.2. What types of disturbances have occurred in your union?

- 1=Human made (*then please ask questions 8.4.3-8.4.5*)
- 2=Natural (*then please ask questions 8.4.6- 8.4.8*)

Human made disturbances

8.4.3. What are the human made disturbances that have occurred in your union? <i>(Please read out the below options and make the respondent understand these)</i>	8.4.4. What is the severity of disturbances? <i>1=Very low, 2=Low, 3=Medium, 4=High, 5=Very high</i>	8.4.5. Where have these disturbances occurred? <i>(Please note down the code of land cover class according to manual)</i>
<input type="checkbox"/> 1=Encroachment		
<input type="checkbox"/> 2=Illegal logging		

8.4.3. What are the human made disturbances that have occurred in your union? <i>(Please read out the below options and make the respondent understand these)</i>	8.4.4. What is the severity of disturbances? <i>1=Very low, 2=Low, 3=Medium, 4=High, 5=Very high</i>	8.4.5. Where have these disturbances occurred? <i>(Please note down the code of land cover class according to manual)</i>
<input type="checkbox"/> 3=Legal conversion of forest land to other uses		
<input type="checkbox"/> 4= Excessive collection of fuelwood		
<input type="checkbox"/> 5=Excessive collection of NWFP		
<input type="checkbox"/> 6= Grazing		
<input type="checkbox"/> 7= Fire		
<input type="checkbox"/> 8= Oil spills		
<input type="checkbox"/> 9= Gas exploration		
<input type="checkbox"/> 10=Sand/stone quarry		
<input type="checkbox"/> 11= Hill cutting		
<input type="checkbox"/> 12= Other mining activities		
<input type="checkbox"/> 13=Infrastructure development (e.g. building, road, bridge and dam)		
<input type="checkbox"/> 96= Others (please specify)		

Natural disturbances

8.4.6. What are the natural disturbances that have occurred in your union? <i>(Please read out the below options and make the respondent understand these)</i>	8.4.7. What is the severity of disturbances? <i>1=Very low, 2=Low, 3=Medium, 4=High, 5=Very high</i>	8.4.8. Where have these disturbances occurred? <i>(Please note down the code of land cover class according to manual or land cover map)</i>
<input type="checkbox"/> 1 = Excessive rainfall		
<input type="checkbox"/> 2 = Landslide/river erosion		
<input type="checkbox"/> 3 = Waterlogging		
<input type="checkbox"/> 4 = Flooding		
<input type="checkbox"/> 5 = Cyclone/tidal surges		

<input type="checkbox"/> 6 = Siltation		
<input type="checkbox"/> 7 = Drought		
<input type="checkbox"/> 8 = Earthquakes		
<input type="checkbox"/> 9 = Pest and diseases		
<input type="checkbox"/> 10 = Increased salinity		
<input type="checkbox"/> 96=Others (please specify)		

8.5 ECONOMICS AND LIVELIHOOD

8.5.1. Does your HH **collect** forest and tree products or **generate income** from them in the past 12 months?

- 0= No, (then please ask question 8.5.41)
- 1=Yes (then please ask question 8.5.2)

8.5.2. What is the nature of products collected or income generated?

- 1= Primary tree and forest products (i.e. traditionally collected from tree and forest resources i.e. provisioning services), (then please ask question 8.5.3)
- 2= Processed tree and forest products, (then please ask the questions 8.5.19)
- 3= Employment in an institution or business related to tree and forest activities, (then please ask questions 8.5.40)

Primary tree and forest products (i.e. traditionally collected from tree and forest resources i.e., provisioning ecosystem services)

8.5.3. What are the tree and forest products collected by your HH?	8.5.4. What was the amount your HH collected in the past 12 months? (quantity/year)	8.5.5. How many members of your HH are involved in the collection of primary tree and forest products? (numbers)	8.5.6. How many months a year does your HH usually collect these products? (If more than one member involved in tree and forest products collection, then calculate total months and write the average month) (months/year)	8.5.7. How many days a month do your HH members collect the primary forest products? (If more than one member involved in tree and forest products collection, then calculate total days and write the average day) days/month	8.5.8. How many hours a day does HH members spend in collecting forest products? (If more than one member involved in tree and forest products collection, then calculate total hour and write the average hour) hours/day	8.5.9. Have your HHs sold any collected tree and forest products? 0=No, please go to 8.5.14 1=Yes, please continue to question no. 8.5.10	8.5.10. What amount is usually sold in the past 12 months? (quantity/year)	8.5.11. How many months a year does your HH sell? (month/year)	8.5.12. What is the unit price? (BDT/unit)	8.5.13. What is the cost of selling (including transportation and other costs)? (BDT/month)	8.5.14. From where has your HH primarily collected the products? (Please note down the code of land cover class according to manual or land cover map)	8.5.15. What is the ownership of the land from where the product was collected? 1=Private-Owned by individuals or families 2=Forest Department 3=Government- other institutions 4=Community institutions 96=Other (please specify) 99=Unknown
Materials												
<input type="checkbox"/> 1=Timber	..... cft											
<input type="checkbox"/> 2 = Poles	..... No.											
<input type="checkbox"/> 3 = Barks	..... Kg.											
<input type="checkbox"/> 4 = Bamboo	..... No.											
<input type="checkbox"/> 5 = Cane	..... No											
<input type="checkbox"/> 6=Lianas and vines	.....k g											
<input type="checkbox"/> 7=Brooms	.....bundl e											
<input type="checkbox"/> 8=Thatching materials	.....bundl e											
<input type="checkbox"/> 9=Reeds	.....bundl e											

8.5.3. What are the tree and forest products collected by your HH?	8.5.4. What was the amount your HH collected in the past 12 months? (quantity/year)	8.5.5. How many members of your HH are involved in the collection of primary tree and forest products? (numbers)	8.5.6. How many months a year does your HH usually collect these products? (If more than one member involved in tree and forest products collection, then calculate total months and write the average month) (months/year)	8.5.7. How many days a month do your HH members collect the primary forest products? (If more than one member involved in tree and forest products collection, then calculate total days and write the average day) days/month	8.5.8. How many hours a day does HH members spend in collecting forest products? (If more than one member involved in tree and forest products collection, then calculate total hour and write the average hour) hours/day	8.5.9. Have your HHs sold any collected tree and forest products? 0=No, please go to 8.5.14 1=Yes, please continue to question no. 8.5.10	8.5.10. What amount is usually sold in the past 12 months? (quantity/year)	8.5.11. How many months a year does your HH sell? (month/year)	8.5.12. What is the unit price? (BDT/unit)	8.5.13. What is the cost of selling (including transportation and other costs)? (BDT/month)	8.5.14. From where has your HH primarily collected the products? (Please note down the code of land cover class according to manual or land cover map)	8.5.15. What is the ownership of the land from where the product was collected? 1=Private-Owned by individuals or families 2=Forest Department 3=Government- other institutions 4=Community institutions 96=Other (please specify) 99=Unknown
<input type="checkbox"/> 10=Nypa (golpata)	.....bundle											
<input type="checkbox"/> 11=Bee wax	.....kg											
<input type="checkbox"/> 12=Ornamental plants	.....No.											
<input type="checkbox"/> 13= Medicinal plants	.....kg											
<input type="checkbox"/> 14= Murta/patipata	.....bundle											
<input type="checkbox"/> 15= Lac	.....kg											
<input type="checkbox"/> 16 = Tree seedlings	.....No.											
<input type="checkbox"/> 17=Fodder	.....kg											

8.5.3. What are the tree and forest products collected by your HH?	8.5.4. What was the amount your HH collected in the past 12 months? (quantity/year)	8.5.5. How many members of your HH are involved in the collection of primary tree and forest products? (numbers)	8.5.6. How many months a year does your HH usually collect these products? (If more than one member involved in tree and forest products collection, then calculate total months and write the average month) (months/year)	8.5.7. How many days a month do your HH members collect the primary forest products? (If more than one member involved in tree and forest products collection, then calculate total days and write the average day) days/month	8.5.8. How many hours a day does HH members spend in collecting forest products? (If more than one member involved in tree and forest products collection, then calculate total hour and write the average hour) hours/day	8.5.9. Have your HHs sold any collected tree and forest products? 0=No, please go to 8.5.14 1=Yes, please continue to question no. 8.5.10	8.5.10. What amount is usually sold in the past 12 months? (quantity/year)	8.5.11. How many months a year does your HH sell? (month/year)	8.5.12. What is the unit price? (BDT/unit)	8.5.13. What is the cost of selling (including transportation and other costs)? (BDT/month)	8.5.14. From where has your HH primarily collected the products? (Please note down the code of land cover class according to manual or land cover map)	8.5.15. What is the ownership of the land from where the product was collected? 1=Private-Owned by individuals or families 2=Forest Department 3=Government- other institutions 4=Community institutions 96=Other (please specify) 99=Unknown
<input type="checkbox"/> 18= Seeds	.....kg											
Energy												
<input type="checkbox"/> 19=Fuelwood	.....kg											
<input type="checkbox"/> 20=Leaves, twigs and branch	.....kg											
<input type="checkbox"/> 21= Other energy (Please specify)	.....kg											
Nutrition												
<input type="checkbox"/> 22=Fruits	.....kg											
<input type="checkbox"/> 23=Bamboo shoots	.....kg											

8.5.3. What are the tree and forest products collected by your HH?	8.5.4. What was the amount your HH collected in the past 12 months? (quantity/year)	8.5.5. How many members of your HH are involved in the collection of primary tree and forest products? (numbers)	8.5.6. How many months a year does your HH usually collect these products? (If more than one member involved in tree and forest products collection, then calculate total months and write the average month) (months/year)	8.5.7. How many days a month do your HH members collect the primary forest products? (If more than one member involved in tree and forest products collection, then calculate total days and write the average day) days/month	8.5.8. How many hours a day does HH members spend in collecting forest products? (If more than one member involved in tree and forest products collection, then calculate total hour and write the average hour) hours/day	8.5.9. Have your HHs sold any collected tree and forest products? 0=No, please go to 8.5.14 1=Yes, please continue to question no. 8.5.10	8.5.10. What amount is usually sold in the past 12 months? (quantity/year)	8.5.11. How many months a year does your HH sell? (month/year)	8.5.12. What is the unit price? (BDT/unit)	8.5.13. What is the cost of selling (including transportation and other costs)? (BDT/month)	8.5.14. From where has your HH primarily collected the products? (Please note down the code of land cover class according to manual or land cover map)	8.5.15. What is the ownership of the land from where the product was collected? 1=Private-Owned by individuals or families 2=Forest Department 3=Government- other institutions 4=Community institutions 96=Other (please specify) 99=Unknown
<input type="checkbox"/> 24=Mushrooms	.....kg											
<input type="checkbox"/> 25= Root tubers	.....kg											
<input type="checkbox"/> 26= Other vegetables	.....kg											
<input type="checkbox"/> 27= Spices	.....kg											
<input type="checkbox"/> 28= Wild meat	.....kg											
<input type="checkbox"/> 29= Other animal products	.....unit											
<input type="checkbox"/> 30=Fish	.....kg											
<input type="checkbox"/> 31=Shrimp	.....kg											

8.5.3. What are the tree and forest products collected by your HH?	8.5.4. What was the amount your HH collected in the past 12 months? (quantity/year)	8.5.5. How many members of your HH are involved in the collection of primary tree and forest products? (numbers)	8.5.6. How many months a year does your HH usually collect these products? (If more than one member involved in tree and forest products collection, then calculate total months and write the average month) (months/year)	8.5.7. How many days a month do your HH members collect the primary forest products? (If more than one member involved in tree and forest products collection, then calculate total days and write the average day) days/month	8.5.8. How many hours a day does HH members spend in collecting forest products? (If more than one member involved in tree and forest products collection, then calculate total hour and write the average hour) hours/day	8.5.9. Have your HHs sold any collected tree and forest products? 0=No, please go to 8.5.14 1=Yes, please continue to question no. 8.5.10	8.5.10. What amount is usually sold in the past 12 months? (quantity/year)	8.5.11. How many months a year does your HH sell? (month/year)	8.5.12. What is the unit price? (BDT/unit)	8.5.13. What is the cost of selling (including transportation and other costs)? (BDT/month)	8.5.14. From where has your HH primarily collected the products? (Please note down the code of land cover class according to manual or land cover map)	8.5.15. What is the ownership of the land from where the product was collected? 1=Private-Owned by individuals or families 2=Forest Department 3=Government- other institutions 4=Community institutions 96=Other (please specify) 99=Unknown
□32=Shrimp fry	.....n o.											
□33=Crabs	.....k g											
□34=Honey	.....k g											
□35=Wax	.....k g											
96=Other (specify)	.....k g											

8.5.16. What is the age distribution of HH members involved in collecting primary forest products according to gender?

Gender	Age class			
	<15 years	15-29 years	30– 64 years	>64 years
<input type="checkbox"/> 1=Male				
<input type="checkbox"/> 2=Female				
<input type="checkbox"/> 3=Third gender				

8.5.17. What are the wild animals hunted by your HH members? (please check the options 28 and 29 at *question no. 8.5.3*). Please write down the names of three most hunted wild species.

1..... 2..... 3.....

8.5.18. Which tree and forests products does your HH mostly depend for livelihood?

Please mention five most important tree and forest products

1..... 2..... 3..... 4.....5.....

Processed tree and forest products

8.5.19. What types of processed products of your HH produced in past 12 months?	8.5.20. How much of these products has been produced in the past 12 months? Quantity/	8.5.21. How many members of your HH are involved in processing the products? (numbers) month/yr	8.5.22. How many months in a year do your HH members process?	8.5.23. How many days a month do they process? day/month	8.5.24. How many hours a day does each HH member spend in processing? hour/day	8.5.25. Do your HH need to buy any raw materials (e.g. timber, cane) for producing these products? <input type="checkbox"/> 0=No, go to question 8.5.27 <input type="checkbox"/> 1=Yes, go to question no. 8.5.26	8.5.26. If yes, what is the cost of raw materials? (BDT/month)	8.5.27. Have you hired any labour for making or processing products? <input type="checkbox"/> 0=No, go to question 8.5.29 <input type="checkbox"/> 1=Yes, go to the question 8.5.28	8.5.28. If you hire labour for processing/selling, how much do you pay per month? BDT/month	8.5.29. Do your HH sold processed products in the past 12 months? <input type="checkbox"/> 0=No, go to question 8.5.38 <input type="checkbox"/> 1=Yes, go to question no. 8.5.30	8.5.30. How much of these products has been sold in the past 12 months? Quantity/	8.5.31. How many members of your HH are involved in selling of processed products? (numbers)	8.5.32. How many months in a year do your HH members sell? month/yr	8.5.33. How many days a month do they sell? day/month	8.5.34. How many hours a day does HH member spend in selling? hour/day	8.5.35. What is the approximate income from selling those products? (BDT/month)	8.5.36. Do you HH require transportation and others costs for selling the processing products? <input type="checkbox"/> 0=No, go to question 8.5.38 <input type="checkbox"/> 1=Yes, go to the question 8.5.37	8.5.37. If there are any transportation and other costs involved with selling, how much are they? (BDT/month)
<input type="checkbox"/> 1= Charcoal	.....kg																	
<input type="checkbox"/> 2= Wooden furniture	.....No																	
<input type="checkbox"/> 3= Wooden agricultural appliances	.....No																	
<input type="checkbox"/> 4= Handicrafts	.....No																	
<input type="checkbox"/> 5= Ash	.....kg																	
<input type="checkbox"/> 96= Others (please	..... Unit																	

8.5.19. What types of processed products of your HH produced in past 12 months?	8.5.20. How much of these products has been produced in the past 12 months? Quantity/	8.5.21. How many members of your HH are involved in processing the products?. (numbers)	8.5.22. How many months in a year do your HH members process? month/yr	8.5.23. How many days a month do they process? day/month	8.5.24. How many hours a day does each HH member spend in processing? hour/day	8.5.25. Do your HH need to buy any raw materials (e.g. timber, cane) for producing these products? <input type="checkbox"/> 0=No, go to question 8.5.27 <input type="checkbox"/> 1=Yes, go to question no. 8.5.26	8.5.26. If yes, what is the cost of raw materials? (BDT/month)	8.5.27. Have you hired any labour for making or processing products? <input type="checkbox"/> 0=No, go to question 8.5.29 <input type="checkbox"/> 1=Yes, go to the question 8.5.28	8.5.28. If you hire labour for processing/selling, how much do you pay per month? BDT/month	8.5.29. Do your HH sold processed products in the past 12 months? <input type="checkbox"/> 0=No, go to question 8.5.38 <input type="checkbox"/> 1=Yes, go to question no. 8.5.30	8.5.30. How much of these products has been sold in the past 12 months? Quantity/	8.5.31. How many members of your HH are involved in selling of processed products? (numbers)	8.5.32. How many months in a year do your HH members sell? month/yr	8.5.33. How many days a month do they sell? day/month	8.5.34. How many hours a day does HH member spend in selling? hour/day	8.5.35. What is the approximate income from selling those products? (BDT/month)	8.5.36. Do you HH require transportation and others costs for selling the processing products? <input type="checkbox"/> 0=No, go to question 8.5.38 <input type="checkbox"/> 1=Yes, go to the question 8.5.37	8.5.37. If there are any transportation and other costs involved with selling, how much are they? (BDT/month)
specify)																		

8.5.38. What is the age distribution of HH members involved in processing processed products according to gender?

Gender	Age class			
	<15 years	15-29 years	30– 64 years	>64 years
<input type="checkbox"/> 1=Male				
<input type="checkbox"/> 2=Female				
<input type="checkbox"/> 3=Third gender				

8.5.39. What is the age distribution of HH members involved in selling of processed products according to gender?

Gender	Age class			
	<15 years	15-29 years	30– 64 years	>64 years
<input type="checkbox"/> 1=Male				
<input type="checkbox"/> 2=Female				
<input type="checkbox"/> 3=Third gender				

Employment in tree and forest related activities

8.5.40. How many members of your HH are employed by an institution or business related to trees and forests? *(Please record the total number of HH involved, gender, age, numbers of months employed per year and average monthly salary)*

8.5.40.1. Total number of HH employed	8.5.40.2. Gender <input type="checkbox"/> 1=Male <input type="checkbox"/> 2=Female <input type="checkbox"/> 3=Third gender	8.5.40.3. Age (in years)	8.5.40.4. Number of months employed per year (months/yr)	8.5.40.5. Average monthly salary BDT/month

8.5.41. Do you have any other income sources other than tree and forests related?

- 0=No, please go to question 8.5.43 1=Yes, please go to the question no. 8.5.42

8.5.42. If yes, what is the approximate monthly income of your HH from other sources?.....BDT/month?

8.5.42.1. What are the other sources of income do you have?	8.5.42.2. How much money did you earn in the past 12 months?
<input type="checkbox"/> 1=Agricultural-crops	
<input type="checkbox"/> 2=Agriculture-fish	

<input type="checkbox"/> 3=Agriculture-poultry	
<input type="checkbox"/> 4=Livestock's	
<input type="checkbox"/> 5=Daily/wage labour	
<input type="checkbox"/> 6=Salary job other than tree and forest related	
<input type="checkbox"/> 7=Business other than forest related	
<input type="checkbox"/> 8=Remittance	
<input type="checkbox"/> 9=Social safety nets	
<input type="checkbox"/> 96=Others (specify)	

HH dependence on trees and forests for energy (Including buying of fuel wood energy)

8.5.43. What types of energy are used by your HH for cooking and heating?	8.5.44. How much is consumed each month by your HH? (quantity/month)	8.5.45. Does your HH buy any energy for own and other purposes? <input type="checkbox"/> 0= No, go to question 8.5.47 <input type="checkbox"/> 1 = Yes, please proceed question no. 8.5.46	8.5.46. How much money is required per month for buying the HH energy? (BDT/month)
<input type="checkbox"/> 1=Firewood	.....kg		
<input type="checkbox"/> 2=Leaves and other tree biomass	.....kg		
<input type="checkbox"/> 3 =Charcoal	.....kg		
<input type="checkbox"/> 4=Briquette	.....kg		
<input type="checkbox"/> 5= LP Gas	..... kg		
<input type="checkbox"/> 6=Kerosene	.....kg		
<input type="checkbox"/> 7=Biogas	.....kg		
<input type="checkbox"/> 8. Cow dung	.....kg		
<input type="checkbox"/> 9. Agricultural residues	.....kg		
<input type="checkbox"/> 96=Other (specify)	..... unit		

8.5.47. If your HH uses firewood, leaves and other tree biomass (options 1 and 2 in answer to 8.5.43) for cooking and heating, how dependent you are on them?

1= Use them very little, 2 = Use them about half the time, 3= Use them most of the time, 4 = Always use them

Tree and forest service's other than income, food and energy

8.5.48. What other benefits do you receive from tree and forest resources on your land excluding cash income, food and energy in the past 12 months? <i>(Please read out the below options and make the respondent understand these)</i>	8.5.49. Of the services that your household has benefitted from, please rank the three most important.
<input type="checkbox"/> 1= Freshwater/water conservation	
<input type="checkbox"/> 2= Livestock grazing	
<input type="checkbox"/> 3= Shade	
<input type="checkbox"/> 4= Soil quality and fertility	
<input type="checkbox"/> 5= Erosion control	
<input type="checkbox"/> 6= Natural windbreak	
<input type="checkbox"/> 7= Tourism	
<input type="checkbox"/> 8= Recreation	
<input type="checkbox"/> 9= Aesthetic	
<input type="checkbox"/> 10= Religious/Spiritual	
<input type="checkbox"/> 11= Medicinal	
<input type="checkbox"/> 12= Pollution control	
<input type="checkbox"/> 96=Others (specify)	

8.6. MEASURING PROGRESS TOWARDS SFM

Conflicts related to trees and forests

8.6.1. Have you observed any conflicts related to land and forest tenure in your union in past 12 months?

- 0=No *(then please ask question 8.6.5)*
- 1=Yes *(then please ask questions 8.6.2- 8.6.4)*

8.6.2. What are the conflicts usually associated with?	8.6.3. What is the frequency of conflicts? <input type="checkbox"/> 1=1 time/yr <input type="checkbox"/> 2=2 times/yr <input type="checkbox"/> 3=3 times/yr <input type="checkbox"/> 4=4 times/yr <input type="checkbox"/> 5= < 4 times/yr	8.6.4. Who normally solves the conflicts? 0=Nobody solves, conflicts remained unsolved 1=Community leader 2=BFD officials 3=Local administration 4=Police 5=Local government 96=Other (please specify)
<input type="checkbox"/> 1= Land ownership		
<input type="checkbox"/> 2= Access to tree and forest resources		
<input type="checkbox"/> 3= Forest land boundary related disputes		
<input type="checkbox"/> 96= Other (please specify ----)		

Compliance with laws and regulations related to forests and tree resources

8.6.5. Have you observed any penalties for violation of forest-related rules in past 12 months?

0=No (*then please ask question 8.6.9*)

1=Yes (*then please ask questions 8.6.6-8.6.8*)

8.6.6. In your observation, what are the common penalties in your union?	8.6.7. In your opinion, what is the overall level of forest law enforcement in your union?	8.6.8. Who ensures law enforcement?
<input type="checkbox"/> 1=Fine <input type="checkbox"/> 2=Permanent exclusion from resource use/collection <input type="checkbox"/> 3= Jail term <input type="checkbox"/> 96=Other (please specify-----)	<input type="checkbox"/> 0= No law enforcement <input type="checkbox"/> 1=Very Weak <input type="checkbox"/> 2=Weak <input type="checkbox"/> 3=Moderately strong <input type="checkbox"/> 4=Strong <input type="checkbox"/> 5= Very strong <input type="checkbox"/> 99=Don't know	<input type="checkbox"/> 0=Nobody <input type="checkbox"/> 1=Community leader <input type="checkbox"/> 2=BFD officials <input type="checkbox"/> 3=Local administration <input type="checkbox"/> 4=Police <input type="checkbox"/> 5=Local government <input type="checkbox"/> 96=Other (please specify ----)

Participation in tree and forest management

8.6.9. Are there any community or co-managed forests in your union?	<input type="checkbox"/> 0=No (<i>then please ask question 8.6.16</i>) <input type="checkbox"/> 1=Yes (<i>then please ask question 8.6.10</i>)
8.6.10. Is your HH members involved with community or co-management of forests?	<input type="checkbox"/> 0=No (<i>then please ask question 8.6.12</i>) <input type="checkbox"/> 1=Yes (<i>then please ask question 8.6.11</i>)
8.6.11. How many years has your HH been involved in community or co-management of forests?	..... years
8.6.12. How far is the community or co-management of forests from your house?	.....Kilometre (km)
8.6.13. Have you got any benefits through involving in tree and forest management/co-management?	<input type="checkbox"/> 0=No (<i>then please ask question 8.6.16</i>) <input type="checkbox"/> 1=Yes (<i>then please ask question 8.6.14</i>)
8.6.14. If yes, what types of benefits did you receive?	<input type="checkbox"/> 1=Cash, please ask question no. 8.6.15 <input type="checkbox"/> 2=Trainings

	<input type="checkbox"/> 3=Exposure visits <input type="checkbox"/> 4= In kind support on alternative income generation activities <input type="checkbox"/> 96=Others (please specify)
8.6.15. How much money does your HH received since involved in community or co-management forests?	.....BDT

Social forestry-managed by forest department

8.6.16. Are you involved with any social forestry activities?	<input type="checkbox"/> 0=No (<i>then please ask question 8.6.21</i>) <input type="checkbox"/> 1=Yes (<i>then please continue to ask questions from 8.6.17</i>)
8.6.17. How many years have you been involved in social forestry activities?	..... years
8.6.18. How far is the community or co-management of forests from your house?	.....Kilometre (km)
8.6.19. What types of benefits did you receive from social forestry?	<input type="checkbox"/> 1=Cash, go to the question no 8.6.20 <input type="checkbox"/> 2=Dead leaves and branches <input type="checkbox"/> 96=Others (please specify) ---
8.6.20. How much money does your HH received since involved in social forestry?	..... BDT

Support from the Bangladesh Forest Department

8.6.21. Has your HH received any tree seedlings from the Bangladesh Forest Department in past 12 months?

- 0=No (*then please ask question 8.6.25*)
1=Yes (*then please continue to ask questions from 8.6.22*)

8.6.22. How many species of seedlings did your HH receive?	8.6.23. How many seedlings did your HH receive?	8.6.24. What kind of other supports (apart from seedlings) does your HH need to increase tree cover on your land and outside? <i>(please mention <u>three</u> most important ones)</i>	8.6.25. Have you bought any seedlings with your own money? 0=No, go to 8.6.27 1=Yes, go to 8.6.26	8.6.26. How much money was spent for buying tree seedlings for plantation?
		1----- 2----- 3-----		.....BDT/yr

Progress towards achieving SFM - Support for tree and forest management

8.6.27. Does your HH receive support from any organization for tree and forest management?	<input type="checkbox"/> 0=No (<i>then please ask question 8.6.30</i>) <input type="checkbox"/> 1=Yes (<i>then please ask questions 8.6.28 – 8.6.29</i>)
8.6.28. What types of supports does your HH usually receive?	<input type="checkbox"/> 1=Training on raising nursery <input type="checkbox"/> 2=Training on tree planting <input type="checkbox"/> 3=Training on tree and forest management <input type="checkbox"/> 4=Training in forest product collection and processing <input type="checkbox"/> 5=Free seedlings <input type="checkbox"/> 6=Cash <input type="checkbox"/> 96=Other (please specify-----)
8.6.29. Which organization does your HH receive support from?	<input type="checkbox"/> 1=Forest Department <input type="checkbox"/> 2= Local Government (Pourashava, upazila and union parishad) <input type="checkbox"/> 3= Other government organizations <input type="checkbox"/> 4= Private sector <input type="checkbox"/> 96=Other (please specify-----)
8.6.30. What are the three most important tree species you prefer for planting?	1----- 2----- 3-----

8.7 OWNERSHIP

HH land ownership

8.7.1. Does your HH have any lands?

- 0=No, please proceed to the question 8.8.1
 1=Yes, please proceed the question no.8.7.2-8.7.3

8.7.2. What types of lands does your HH have?	8.7.3. What is the approximate size of the land? (decimal)
<input type="checkbox"/> 1= Own homestead land	
<input type="checkbox"/> 2= Leased or rented homestead land	
<input type="checkbox"/> 3= Own tree and bamboo plantations outside of homestead land	
<input type="checkbox"/> 4= Leased or rented tree and bamboo plantations outside of homestead land	
<input type="checkbox"/> 5= Own agricultural land	
<input type="checkbox"/> 6= Leased, rented or share-cropped agricultural land	

<input type="checkbox"/> 96=Other (please specify-----)	
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8.8 ZONE SPECIFIC QUESTIONS

The Sundarbans and Coastal Zone: Protective functions of trees and forests – value of forests and plantations against protection from tropical storms

For control HHs (i.e. that are located in areas where there are no Sundarbans or coastal plantations), please ask questions 8.8.1, 8.8.3 and 8.8.4

For treatment HHs (i.e. that are located in areas where there are the Sundarbans or coastal plantations), please ask questions 8.8.2 - 8.8.4.

8.8.1. Where are HH's assets (e.g. house, agricultural land, livestock, trees, fish ponds and shrimp farm) located in relation to the coast line?

1= Within one kilometre (km), 2 = Between one and two km 3= Between two and three km, 4 = Beyond three km (to be verified in the land cover class map)

8.8.2. Where are HH's assets (e.g. house, agricultural land, livestock, trees, fish ponds and shrimp farm) located in relation to the inner boundary of the Sundarbans or coastal plantations?

1= Within one kilometre (km), 2 = Between one and two km 3= Between two and three km, 4 = Beyond three km (to be verified in the land cover class map)

8.8.3. Are there any cyclones that damages your HH assets in the past 10 years?

0=No, please proceed to the question 8.8.6

1=Yes, please proceed the question no.8.8.4.-8.8.5

8.8.4. What damages/losses have occurred to HH's assets due to cyclone?	8.8.5. What was the economic cost of damages/losses due to cyclone in last 10 years?
---	--

<input type="checkbox"/> 0=No loss or damages	
<input type="checkbox"/> 1=Loss of/damage to house	..... BDT
<input type="checkbox"/> 2=Loss of agricultural crops	..... BDT
<input type="checkbox"/> 3=Loss of/damage to trees	..... BDT
<input type="checkbox"/> 4=Loss of/damage to fish ponds	..... BDT
<input type="checkbox"/> 5=Loss of /damage to shrimp farms	..... BDT
<input type="checkbox"/> 6=Loss of livestock	..... BDT
<input type="checkbox"/> 96= Other losses or damages	..... BDT

Sundarbans zone: Economics and livelihood – Pass permit for collection of primary forest products

8.8.6. Do you need to pass permit for collecting primary forest products?

0= No 1 = Yes, (then please ask questions 8.8.7 - 8.8.9)

8.8.7. For which products that your HH require pass permit? <i>(If tree and forest product codes are not mentioned in the manual please write the name of products)</i>	8.8.8. How many times have you collected products in past 12 months? (times/yr)	8.8.9. How much is the pass permit per trip?
1.		-----BDT/trip
2.		-----BDT/trip
3.		-----BDT/trip
4.		-----BDT/trip

5.-----		-----BDT/trip
6.-----		-----BDT/trip
7.-----		-----BDT/trip
8.-----		-----BDT/trip
9.-----		-----BDT/trip
10. -----		-----BDT/trip

Hill, Coastal and Sundarbans Zone: Economics and livelihood - value of potable water

8.8.10. What are the sources of your HH's drinking water?	8.8.11. Where are the locations of your water sources? <i>(please note down the code of land cover class code according to manual or map)</i>	8.8.12. How many members of your HH collect water? (no. of member)	8.8.13. How many months a year (in total) do they collect? (months/yr)	8.8.14. How many days a month do they collect? (days/month)	8.8.15. On average, how many hours a day does HH members spend in collection? (hours/day)	8.8.16. On average, how much water does HH members collect per day? (liters/day)	8.8.17. If any of your HH member need to transport the collected water home, how much is the transportation cost? (BDT/month)
---	--	---	---	--	--	---	--

<input type="checkbox"/> 1= Seepage water from hills							
<input type="checkbox"/> 2 = Natural streams							
<input type="checkbox"/> 3= Wells							
<input type="checkbox"/> 4 = Ponds							
<input type="checkbox"/> 5 = Rain water							
<input type="checkbox"/> 96=Other sources (Please specify)							

8.8.18. Do you need to treat the collected water before drinking?

0=No 1=Yes (then please ask questions 8.8.19 - 8.8.20)

8.8.19. How does your HH treat the collected water?	8.8.20. What is the cost of treatment, if any?
<input type="checkbox"/> 0= No money is required	
<input type="checkbox"/> 1= Natural means (e.g. using stones and sand)	.....BDT/0 litre
<input type="checkbox"/> 2=Using chemicals	.....BDT/10 litre
<input type="checkbox"/> 96=By other means (Please specify)	.....BDT/10 litre

9. Picture of HH location

Please take a photo of the location of HH, if allowed

9.1. Picture taken: 0=No 1=Yes

9.2. Interviewer comments (if any):

9.3. End time of interview (HH:MM):

Reviewed by: Signature:

Name:

Position:

Date:

Appendix 2.3 Aboveground volume equations

SN	Species	Volume models
1	<i>Acacia auriculiformis</i>	$\text{Log (Volume)} = -11.506528 + 1.973377 * \text{Log (GBH)} + 0.623823 * \text{Log (Height)}$
2	<i>Acacia mangium</i>	$\text{Log (Volume)} = -10.7488 + 2.2178 * \text{Log (GBH)}$
3	<i>Acacia nilotica</i>	$\text{Log (Volume)} = -11.875835 + 1.8823999 * \text{Log (GBH)} + 1.0819988 * \text{Log (Height)}$
4	<i>Albizia saman</i>	$\text{Log (Volume)} = -11.37623 + 2.26924 * \text{Log (GBH)}$
5	<i>Albizia richardiana</i>	$\text{Log (Volume)} = -10.996396 + 2.247808 * \text{Log (GBH)}$
6	<i>Albizia procera</i>	$\text{Log (Volume)} = -11.6632 + 1.941989 * \text{Log (GBH)} + 0.754839 * \text{Log (Height)}$
7	<i>Albizia spp</i>	$\text{Log (Volume)} = -11.19651 + 1.85690 * \text{Log (GBH)} + 0.67878 * \text{Log (Height)}$
8	<i>Aphanamixis polystachya</i>	$\text{Log (Volume)} = -11.25528 + 1.98544 * \text{Log (GBH)} + 0.47163 * \text{Log (Height)}$
9	<i>Artocarpus chaplasha</i>	$\text{Log (Volume)} = -8.9449526 + 1.82851 * \text{Log (DBH)} + 0.735381 * \text{Log (Height)}$
10	<i>Artocarpus heterophyllus</i>	$\text{Log (Volume)} = -10.99533 + 1.80823 * \text{Log (GBH)} + 0.68951 * \text{Log (Height)}$
11	<i>Avicennia officinalis</i>	$\text{Volume} = 0.0089 + 0.0000264 * \text{DBH}^2 * \text{Height}$
12	<i>Azadirachta indica</i>	$\text{Log (Volume)} = -11.42823 + 1.89235 * \text{Log (GBH)} + 0.71493 * \text{Log (Height)}$
13	<i>Breonia chinensis</i>	$\text{Log (Volume)} = -10.4647 + 2.3911 * \text{Log (DBH)} + 0.6373 * \text{Log (Height)}$
14	<i>Dalbergia sissoo</i>	$\text{Log (Volume)} = -12.5189939 + 1.9800535 * \text{Log (GBH)} + 1.0775148 * \text{Log (Height)}$
15	<i>Dipterocarpus turbinatus</i>	$\text{Log (Volume)} = -8.5116354 + 2.35556 * \text{Log (DBH)}$
16	<i>Eucalyptus camaldulensis</i>	$\text{Log (Volume)} = -9.3520 + 1.8055 * \text{Log (DBH)} + 0.8590 * \text{Log (height)}$ Here, DBH <=18cm
17	<i>Eucalyptus camaldulensis</i>	$\text{Volume} = 0.076339 - 0.00058066 * (\text{Height}) + 0.000016216 * (\text{GBH})^2 + 0.0000032565 * (\text{GBH})^2 * (\text{Height})$ Here, DBH >18cm
18	<i>Gmelina arborea</i>	$\text{Log (Volume)} = -8.4687076 + 1.63502 * \text{Log (DBH)} + 0.784847 * \text{Log (Height)}$
19	<i>Hevea brasiliensis</i>	$\text{Log (Volume)} = -11.2768 + 1.8795 * \text{Log (GBH)} + 0.6928 * \text{Log (Height)}$
20	<i>Lagerstroemia speciosa</i>	$\text{Log (Volume)} = -9.6744 + 2.1065 * \text{Log (DBH)} + 0.6675 * \text{Log (Height)}$
21	<i>Lannea coromandelica</i>	$\text{Log (Volume)} = -11.519102 + 2.01724 * \text{Log (GBH)} + 0.56356 * \text{Log (Height)}$
22	<i>Mangifera indica</i>	$\text{Log (Volume)} = -11.25377 + 1.96697 * \text{Log (GBH)} + 0.52237 * \text{Log (Height)}$
23	<i>Pinus caribaea</i>	$\text{Log (Volume)} = -9.39412 + 1.867386 * \text{Log (DBH)} + 0.839034 * \text{Log (Height)}$
24	<i>Pinus caribaea</i>	$\text{Log (Volume)} = -11.5317 + 1.867386 * \text{Log (GBH)} + 0.839034 * \text{Log (Height)}$
25	<i>Senna siamea</i>	$\text{Log (Volume)} = -11.6557 + 1.871 * \text{Log (GBH)} + 0.897 * \text{Log (Height)}$

SN	Species	Volume models
26	<i>Shorea robusta</i>	$\text{Log (Volume)} = -12.0554 + 2.5178944 * \text{Log (GBH)}$
27	<i>Sonneratia apetala</i>	$\text{Log (Volume)} = -9.29715 + 1.70514 * \text{Log (DBH)} + 0.95088 * \text{Log (Height)}$
28	<i>Swietenia macrophylla</i>	$\text{Log (Volume)} = -11.27102 + 1.88064 * \text{Log (GBH)} + 0.64629 * \text{Log (Height)}$
29	<i>Syzygium cumini</i>	$\text{Log (Volume)} = -11.24854 + 2.24804 * \text{Log (GBH)}$
30	<i>Tectona grandis</i>	$\text{Volume} = 0.000465 * \text{DBH}^{(1.58)} * \text{Height}^{(1.603)}$
31	<i>Terminalia arjuna</i>	$\text{Log (Volume)} = -11.3794 + 1.896423 * \text{Log (GBH)} + 0.653558 * \text{Log (Height)}$
32	<i>Xylocarpa xylocarpa</i>	$\text{Log (Volume)} = -9.4303 + 2.0988 * \text{Log (DBH)} + 0.6042 * \text{Log (Height)}$

Appendix 2.4 Aboveground biomass equations

SN	Species	AE Equation for biomass estimation
1	<i>Sonneratia apetala</i>	$\ln Y_{agb} = 1.7608 + 2.0077 \ln(D) + 0.2981 \ln(H)$
2	<i>Excoecaria agallocha</i>	$\log Y_{agb} = -0.8572 + 1.0996 \log D^2$
3	<i>Acacia auriculiformis</i>	$\log(\sqrt{Y}) = -0.475 + 0.614 \log D^2$
4	<i>Acacia mangium</i>	$\log(\sqrt{Y_{agb}}) = -0.497 + 0.606 \log D^2$
5	<i>Heritiera fomes</i>	$\ln Y_{agb} = -2.1324 + 2.3895 \ln(D) + 0.1367 \ln(H)$
6	<i>Shorea robusta</i>	$\ln Y_{agb} = -3.3592 + 2.1830 \ln(D) + 0.6787 \ln(H)$
7	<i>Gmelina arborea</i>	$\ln Y_{agb} = -3.028 + 0.925 \times \ln(D^2 H)$
8	Sal zone	$\ln Y_{agb} = -2.46 + 2.17 \ln D + 0.367 \ln H + 0.161 \ln \rho$
9	Sundarbans zone	$\ln Y_{agb} = -1.956299 + 2.163361 \ln D + 0.375219 \ln H + 0.689466 \ln \rho$
10	Village zone	$\ln Y_{agb} = -6.0325 + 1.9715 \ln D + 0.8193 \ln \rho$
11	Hill zone	$\ln Y_{agb} = -6.9531 + 0.8250 \ln(D^2 H \rho)$

Appendix 2.5 Aboveground carbon equations

SN	Zone	Equation
1	<i>Acacia auriculiformis</i>	$\log_{10} (\nu\text{Carbon in AGB}) = -0.630 + 0.614 * \log_{10}(D^2)$
2	<i>Acacia mangium</i>	$\log_{10} (\nu\text{Carbon in TAGB}) = -0.652 + 0.607 * \log_{10} (D^2)$
3	<i>Heritiera fomes</i>	$\ln (C_AGB) = -2.7488 + 2.4723 * \ln (D)$
4	<i>Shorea robusta</i>	$\ln (\text{Carbon in TAGB}) = -3.9802 + 2.1660 * \ln (D) + 0.6984 * \ln (H),$
5	<i>Sonneratia apetala</i>	$\ln (\text{Carbon in TAGB}) = -2.5035 + 2.0042 * \ln (D) + 0.3188 * \ln (H)$
6	Hill zone	$\ln (\text{Carbon in TAGB}) = -7.7129 + 0.8268 * \ln (D^2 * H * WD)$
7	Sundarbans zone	$\ln (\text{Carbon in TAGB}) = -7.5236 + 2.1628 * \ln (D) + 0.3834 * \ln (H) + 0.7004 * \ln (WD).$
8	Sal zone	$\ln (\text{Carbon in TAGB}) = -3.014 + 2.206 * \ln (D) + 0.302 * \ln (H) + 0.262 * \ln (WD)$

Appendix 2.6 Belowground biomass equations

SN	Zone or species or component	Allometric equation	Reference
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1	Hill, Sal and Village zones	$Y_{bgb} = \exp[-1.0587 + 0.8836 \ln (Y_{agb})]$	Pearson et al. (2007)
2	Sundarbans zone	$Y_{bgb} = 0.199 \times \rho^{0.899} \times (D)^{2.22}$	Komiyama et al. (2008)
3	all bamboos (except <i>Bambusa vulgaris</i>)	$Y_{bgb} = Y_{agb} \times 0.05$	Stokes et al. (2007)
4	<i>Bambusa vulgaris</i>	$Y_{bgb} = Y_{agb} \times 0.26$	Lobovikov et al. (2007)
5	live stumps	$Y_{bgb} = \frac{0.00001 \times D^{2.529}}{1000}$	Hjelm (2015)

Section 4: Biological diversity and conservation appendices

Appendix 4.1.1 (a): Tree basal area per families and Zones

Family	Basal area (m ² /ha)	Total basal area (million m ²)	Distribution of basal area into Zones				
			BA_CZ	BA_HZ	BA_SZ	BA_SuZ	BA_VZ
Anacardiaceae	0.44	5.93	0.28	0.28	0.43		0.49
Annonaceae	0.01	0.19	0.01	0.00	0.01		0.02
Apocynaceae	0.01	0.20	0.00	0.07	0.00	0.01	0.01
Aquifoliaceae	0.00	0.01					
Araliaceae	0.00	0.00		0.00			0.00
Arecaceae	0.69	9.33	1.45	0.12	0.62	0.02	0.78
Asclepiadaceae	0.00	0.01		0.00			0.00
Bignoniaceae	0.01	0.19		0.10	0.00		0.00
Bixaceae	0.00	0.00		0.00	0.00		0.00
Bombacaceae	0.04	0.48	0.01	0.07	0.03		0.03
Boraginaceae	0.00	0.03		0.01			0.00
Burseraceae	0.02	0.21	0.01	0.10	0.02		0.00
Caesalpiniaceae	0.03	0.36	0.03	0.05	0.02	0.15	0.02
Capparaceae	0.00	0.01		0.00			0.00
Caprifoliaceae	0.00	0.01		0.01			
Casuarinaceae	0.00	0.01	0.02			0.00	0.00
Celastraceae	0.00	0.03		0.02			
Clusiaceae	0.01	0.18	0.00	0.10			0.00
Combretaceae	0.03	0.34	0.00	0.16	0.01		0.01
Datisceae	0.00	0.06		0.04			
Dilleniaceae	0.01	0.09	0.01	0.03	0.00		0.00
Dipterocarpaceae	0.09	1.17		0.24	1.32		0.01
Ebenaceae	0.02	0.30	0.03	0.00	0.00		0.03

Elaeocarpaceae	0.01	0.17		0.03	0.05		0.01
Euphorbiaceae	0.39	5.24	0.90	0.37	0.58	8.32	0.05
Fabaceae	0.03	0.37	0.03	0.01	0.01	0.00	0.03
Fagaceae	0.03	0.38		0.18	0.00	0.02	0.01
Flacourtiaceae	0.00	0.01		0.00	0.00		0.00
Juglandaceae	0.00	0.06	0.00	0.03			0.00
Lauraceae	0.01	0.12	0.00	0.05	0.00		0.00
Lecythidaceae	0.01	0.13	0.00	0.00	0.04		0.01
Lythraceae	0.01	0.16	0.01	0.06	0.01		0.01
Magnoliaceae	0.00	0.01		0.00			0.00
Malvaceae	0.01	0.08	0.02	0.02		0.01	0.00
Melastomataceae	0.00	0.02	0.04				
Meliaceae	0.48	6.47	0.18	0.19	0.35	1.06	0.53
Mimosaceae	0.62	8.37	1.25	0.71	1.20		0.57
Moraceae	0.28	3.81	0.17	0.76	0.71		0.20
Moringaceae	0.02	0.31	0.00	0.01	0.01		0.03
Myrsinaceae	0.00	0.02		0.00		0.00	0.00
Myrtaceae	0.22	2.95	0.04	0.16	0.12		0.25
Nyssaceae	0.00	0.01		0.01			
Ochnaceae	0.00	0.02		0.01			0.00
Oleaceae	0.00	0.03		0.01			0.00
Other	0.01	0.17	0.01	0.04	0.01	0.12	0.01
Oxalidaceae	0.00	0.05	0.00	0.00	0.00		0.00
Pinaceae	0.00	0.01			0.00		0.00
Poaceae	0.00	0.03	0.00	0.00	0.01	0.01	0.00
Podocarpaceae	0.00	0.01		0.00			0.00
Proteaceae	0.00	0.00					0.00
Punicaceae	0.00	0.00					0.00
Rhamnaceae	0.00	0.07	0.00	0.00	0.02		0.00
Rhizophoraceae	0.06	0.85	0.00	0.03	0.00	1.98	0.00

Rosaceae	0.00	0.00	0.00	0.00			
Rubiaceae	0.05	0.67	0.02	0.19	0.03		0.03
Rutaceae	0.03	0.41	0.01	0.03	0.06		0.03
Sabiaceae	0.01	0.09		0.05	0.00		
Sapindaceae	0.02	0.30		0.02	0.03		0.02
Sapotaceae	0.00	0.01		0.00			0.00
Simaroubaceae	0.00	0.00		0.00			
Sonneratiaceae	0.17	2.32	4.15	0.07	0.00	0.18	0.00
Staphyleaceae	0.00	0.00		0.00			
Sterculiaceae	0.32	4.33	0.04	0.09	0.02	9.61	0.03
Symplocaceae	0.00	0.00		0.00			
Tamaricaceae	0.00	0.02	0.03				0.00
Theaceae	0.02	0.24		0.14	0.00		
Thymelaeaceae	0.00	0.03		0.02	0.00		0.00
Tiliaceae	0.01	0.14	0.00	0.07	0.01	0.00	0.00
Ulmaceae	0.01	0.12		0.02	0.00		0.01
Urticaceae	0.00	0.01		0.01			
Verbenaceae	0.23	3.04	0.08	1.42	0.14	0.80	0.02

Appendix 4.1.1 (b): Tree basal area by species and Zones

Species	Basal area (m2/ha)	Total basal area (million m2)	Distribution of basal area into Zones				
			BA_CZ	BA_HZ	BA_SZ	BA_SuZ	BA_VZ
Mangifera indica	0.378423	5.09	0.22	0.15	0.42		0.44
Swietenia mahagoni	0.328809	4.42	0.13	0.05	0.26		0.40
Heritiera fomes	0.288760	3.88		0.01		9.61	
Excoecaria agallocha	0.281668	3.79	0.86			8.29	0.00
Areca catechu	0.258059	3.47	0.84	0.03	0.01		0.29

Cocos nucifera	0.239145	3.22	0.45	0.01	0.06		0.28
Samanea saman	0.230472	3.10	0.97	0.00	0.11		0.25
Artocarpus heterophyllus	0.174115	2.34	0.13	0.21	0.66		0.15
Sonneratia apetala	0.155126	2.09	3.95			0.16	0.00
Acacia auriculiformis	0.129241	1.74	0.01	0.22	0.98		0.08
Tectona grandis	0.126615	1.70	0.00	0.91	0.08		0.01
Borassus flabellifer	0.118204	1.59	0.07	0.00	0.45		0.13
Eucalyptus camaldulensis	0.111333	1.50	0.00	0.00	0.04		0.14
Albizia richardiana	0.082924	1.12	0.04	0.02	0.01		0.10
Phoenix sylvestris	0.065837	0.89	0.08	0.01	0.11		0.07
Shorea robusta	0.057347	0.77		0.01	1.31		0.01
Gmelina arborea	0.050520	0.68	0.00	0.34	0.06		0.01
Ceriops decandra	0.049942	0.67	0.00			1.66	
Albizia procera	0.049934	0.67	0.03	0.16	0.01		0.04
Albizia lebbeck	0.048629	0.65	0.12	0.07	0.01		0.05
Eucalyptus alba	0.041215	0.55	0.01	0.01	0.03		0.05
Swietenia macrophylla	0.039678	0.53					0.05
Bombax ceiba	0.033265	0.45	0.01	0.06	0.03		0.03
Trewia nudiflora	0.030509	0.41	0.00	0.01	0.05		0.03
Hevea brasiliensis	0.030413	0.41		0.10	0.47		
Albizia chinensis	0.030381	0.41	0.01	0.08	0.02		0.02
Syzygium cumini	0.029432	0.40	0.00	0.03	0.04		0.03
Lannea coromandelica	0.028777	0.39	0.02	0.01	0.01		0.03
Neolamarckia cadamba	0.028736	0.39	0.01	0.05	0.02		0.03
Azadirachta indica	0.027575	0.37	0.00	0.01	0.02		0.03
Avicennia officinalis	0.025914	0.35	0.05			0.80	

Macaranga denticulata	0.022846	0.31		0.18	0.02		
Ficus carica	0.021540	0.29	0.00	0.13	0.00		0.01
Acacia mangium	0.021120	0.28	0.00	0.10	0.03		0.01
Artocarpus chama	0.017943	0.24	0.00	0.12	0.01		0.00
Schima wallichii	0.017100	0.23		0.14			
Litchi chinensis	0.016846	0.23		0.00	0.02		0.02
Helicteres papilio	0.016835	0.23	0.01	0.01	0.01		0.02
Dipterocarpus alatus	0.016772	0.23		0.14			
Xylocarpus mekongensis	0.016577	0.22				0.55	
Spondias pinnata	0.015203	0.20	0.01	0.01	0.00		0.02
Other unknowntree	0.014341	0.19	0.01	0.04	0.01	0.12	0.01
Anogeissus acuminata	0.014295	0.19		0.11	0.01		0.00
Ficus benghalensis	0.013586	0.18		0.04	0.01		0.01
Dalbergia sissoo	0.013008	0.17					0.02
Moringa oleifera	0.012840	0.17		0.00	0.01		0.02
Albizia lucidior	0.012115	0.16	0.02	0.01	0.01		0.01
Aglaia spectabilis	0.011488	0.15	0.00	0.01	0.01		0.01
Stereospermum tetragonum	0.011208	0.15		0.09			
Quercus oxyodon	0.011118	0.15		0.09			
Citrus maxima	0.010861	0.15	0.00	0.02	0.01		0.01
Aphanamixis polystachya	0.010635	0.14	0.02	0.03	0.01		0.01
Elaeocarpus floribundus	0.010605	0.14		0.02	0.05		0.01
Diospyros malabarica	0.010353	0.14	0.00		0.00		0.01
Tamarindus indica	0.010172	0.14	0.01	0.00	0.01		0.01
Diospyros blancoi	0.010148	0.14	0.03				0.01

Garuga pinnata	0.010142	0.14	0.01	0.06			0.00
Aglaia cucullata	0.009905	0.13				0.31	0.00
Callicarpa arborea	0.009901	0.13		0.08			0.00
Aglaia chittagonga	0.009839	0.13	0.00	0.01	0.02		0.01
Duabanga grandiflora	0.009678	0.13		0.07	0.00		0.00
Ficus lamponga	0.009421	0.13	0.00	0.07			0.00
Barringtonia acutangula	0.009325	0.13	0.00		0.04		0.01
Moringa concanensis	0.008881	0.12	0.00	0.00	0.00		0.01
Chukrasia tabularis	0.008657	0.12		0.06	0.03		0.00
Trema orientalis	0.008539	0.11		0.02	0.00		0.01
Ficus altissima	0.008475	0.11	0.01	0.05	0.02		0.00
Cleistocalyx nervosum	0.008154	0.11	0.00	0.02			0.01
Sonneratia caseolaris	0.007749	0.10	0.19			0.02	
Bruguiera sexangula	0.007727	0.10				0.26	
Castanopsis indica	0.007630	0.10		0.06	0.00		0.00
Ficus hispida	0.007627	0.10	0.00	0.05			0.00
Swintonia floribunda	0.007478	0.10		0.06			
Syzygium praecox	0.007371	0.10	0.00	0.05			0.00
Corypha taliera	0.007338	0.10		0.06			
Lagerstroemia thorelii	0.007305	0.10	0.00	0.03	0.01		0.00
Albizia odoratissima	0.007282	0.10	0.01	0.05	0.00		0.00
Aegle marmelos	0.007280	0.10	0.00	0.00	0.03		0.01
Psidium guajava	0.007278	0.10	0.01	0.00	0.01		0.01
Dipterocarpus turbinatus	0.006878	0.09		0.05			0.00
Streblus asper	0.006724	0.09	0.02	0.00	0.00		0.01
Grewia nervosa	0.006417	0.09	0.00	0.05	0.00		0.00

Polyalthia longifolia	0.006381	0.09	0.00		0.00		0.01
Pongamia pinnata	0.006209	0.08	0.00			0.00	0.01
Terminalia bellirica	0.005962	0.08		0.04	0.00		0.00
Hymenodictyon orixense	0.005913	0.08	0.00	0.05			0.00
Xylocarpus granatum	0.005911	0.08				0.20	
Castanopsis castanicaarpa	0.005774	0.08		0.00			0.01
Pterygota alata	0.005763	0.08	0.03	0.00			0.01
Cerbera odollam	0.005748	0.08		0.05		0.00	
Annona reticulata	0.005720	0.08	0.00	0.00	0.00		0.01
Garcinia xanthochymus	0.005621	0.08		0.05			
Protium serratum	0.005550	0.07		0.04	0.01		
Vitex glabrata	0.005457	0.07		0.04			0.00
Ficus religiosa	0.005449	0.07	0.00				0.01
Senna siamea	0.005036	0.07		0.04			0.00
Ziziphus jujuba	0.004838	0.07	0.00	0.00	0.02		0.00
Eucalyptus citriodora	0.004813	0.06	0.00	0.00			0.01
Leucaena leucocephala	0.004807	0.06	0.01	0.00	0.00		0.01
Syzygium firmum	0.004743	0.06		0.04			0.00
Glycosmis pentaphylla	0.004614	0.06		0.00	0.01		0.01
Tetrameles nudiflora	0.004584	0.06		0.04			
Ficus elastica	0.004569	0.06		0.04			0.00
Litsea monopetala	0.004516	0.06	0.00	0.03			0.00
Engelhardtia spicata	0.004470	0.06	0.00	0.03			0.00
Neonauclea sessilifolia	0.004461	0.06		0.04			
Holigarna caustica	0.004452	0.06		0.04			

<i>Sterculia foetida</i>	0.004446	0.06		0.03			0.00
<i>Artocarpus lacucha</i>	0.004405	0.06	0.01	0.01	0.01		0.00
<i>Dillenia indica</i>	0.004386	0.06	0.01	0.01			0.00
<i>Mesua ferrea</i>	0.004203	0.06		0.03			0.00
<i>Micromelum minutum</i>	0.003969	0.05		0.00			0.01
<i>Cynometra ramiflora</i>	0.003902	0.05		0.00		0.13	
<i>Ficus racemosa</i>	0.003723	0.05		0.03	0.00		0.00
<i>Swietenia sp.</i>	0.003665	0.05	0.01				0.00
<i>Caryota mitis</i>	0.003622	0.05		0.00			0.00
<i>Meliosma pinnata</i>	0.003571	0.05		0.03	0.00		
<i>Holarrhena pubescens</i>	0.003563	0.05		0.00			0.00
<i>Averrhoa carambola</i>	0.003536	0.05	0.00	0.00	0.00		0.00
<i>Melia azedarach</i>	0.003477	0.05	0.01	0.00			0.00
<i>Aidia sp.</i>	0.003401	0.05		0.03			
<i>Putranjiva roxburghii</i>	0.003236	0.04					0.00
<i>Haldina cordifolia</i>	0.003156	0.04		0.01	0.01		0.00
<i>Mallotus philippensis</i>	0.003114	0.04	0.01				0.00
<i>Sterculia villosa</i>	0.003083	0.04		0.02			
<i>Acacia nilotica</i>	0.002995	0.04	0.02				0.00
<i>Meliosma simplicifolia</i>	0.002958	0.04		0.02			
<i>Anacardium occidentale</i>	0.002677	0.04	0.03	0.01			0.00
<i>Hibiscus macrophyllus</i>	0.002677	0.04		0.02			
<i>Aquilaria agallocha</i>	0.002588	0.03		0.02	0.00		0.00
<i>Haematoxylon campechianum</i>	0.002582	0.03	0.01	0.00	0.00		0.00
<i>Alstonia neriifolia</i>	0.002533	0.03		0.00			0.00

Vitex pinnata	0.002480	0.03		0.02			0.00
Ficus virens	0.002445	0.03		0.00	0.01		0.00
Erythrina fusca	0.002356	0.03	0.02	0.00	0.00		0.00
Bombax insigne	0.002353	0.03		0.01	0.01		0.00
Antidesma khasianum	0.002349	0.03	0.00	0.00	0.01		0.00
Dillenia pentagyna	0.002267	0.03		0.02	0.00		0.00
Dipterocarpus gracilis	0.002253	0.03		0.01	0.00		0.00
Dalbergia ovata	0.002244	0.03	0.00				0.00
Glochidion lanceolarium	0.002214	0.03	0.00	0.01		0.01	
Terminalia arjuna	0.002189	0.03		0.00	0.01		0.00
Gardenia coronaria	0.002169	0.03	0.00	0.02	0.00		0.00
Vitex peduncularis	0.002146	0.03		0.02			0.00
Bambusa vulgaris	0.002095	0.03	0.00	0.00	0.01	0.01	0.00
Terminalia citrina	0.002072	0.03	0.00	0.00	0.00		0.00
Phyllanthus emblica	0.002066	0.03		0.01	0.01		0.00
Elaeocarpus tectorius	0.002064	0.03		0.00	0.00		0.00
Garcinia cowa	0.002048	0.03	0.00	0.01			0.00
Euonymus pendulus	0.002039	0.03		0.02			
Lagerstroemia speciosa	0.001973	0.03		0.01			0.00
Erythrina stricta	0.001961	0.03	0.01	0.00	0.00		0.00
Cassia fistula	0.001830	0.02	0.01	0.00	0.01		0.00
Brownlowia elata	0.001777	0.02		0.01			
Gossypium arboreum	0.001751	0.02	0.00	0.00			0.00
Plumeria alba	0.001741	0.02		0.01			
Hopea odorata	0.001687	0.02		0.01			0.00
Croton joufra	0.001678	0.02	0.01	0.00			0.00
Dimocarpus longan	0.001592	0.02					0.00

Murraya koenigii	0.001583	0.02		0.00			0.00
Mangifera longipes	0.001537	0.02	0.00	0.01			0.00
Rhizophora apiculata	0.001508	0.02		0.01	0.00	0.01	
Memecylon edule	0.001501	0.02	0.04				
Syzygium malaccense	0.001500	0.02	0.01				0.00
Harpullia cupanioides	0.001493	0.02					0.00
Millingtonia hortensis	0.001475	0.02			0.00		0.00
Carallia sp.	0.001461	0.02		0.01		0.01	
Cordia grandis	0.001458	0.02		0.01			0.00
Avicennia alba	0.001449	0.02	0.02			0.01	0.00
Delonix regia	0.001420	0.02	0.00	0.00			0.00
Aglaia odoratissima	0.001366	0.02		0.00			0.00
Drypetes eglandulosa	0.001344	0.02		0.01	0.00		0.00
Sterculia parviflora	0.001300	0.02		0.01			
Grewia asiatica	0.001280	0.02		0.00	0.01		0.00
Bruguiera gymnorhiza	0.001261	0.02			0.00	0.04	
Tamarix indica	0.001218	0.02	0.03				0.00
Toona ciliata	0.001205	0.02		0.00			0.00
Olea dioica	0.001190	0.02		0.01			
Syzygium aqueum	0.001171	0.02		0.00			0.00
Ochna wallichii	0.001157	0.02		0.01			0.00
Cinnamomum tamala	0.001152	0.02		0.00			0.00
Castanopsis tribuloides	0.001068	0.01		0.01			
Ficus benjamina	0.001065	0.01					0.00
Knema bengalensis	0.001063	0.01		0.01			
Casuarina equisetifolia	0.001047	0.01	0.02			0.00	0.00
Spondias purpurea	0.001036	0.01					0.00

Schleichera oleosa	0.001035	0.01		0.01	0.00		0.00
Baccaurea ramiflora	0.001009	0.01		0.00	0.01		0.00
Lagerstroemia macrocarpa	0.000970	0.01		0.01			
Calophyllum polyanthum	0.000968	0.01	0.00	0.01			
Oroxylum indicum	0.000922	0.01		0.01			0.00
Acacia catechu	0.000922	0.01		0.00	0.00		0.00
Hibiscus tiliaceus	0.000903	0.01	0.00			0.01	0.00
Ficus hirta	0.000900	0.01		0.00			0.00
Phoebe pallida	0.000894	0.01		0.01			0.00
Vitex quinata	0.000883	0.01		0.00			0.00
Derris robusta	0.000852	0.01		0.00	0.00		0.00
Castanopsis lanceifolia	0.000848	0.01		0.00		0.02	
Boehmeria glomerulifera	0.000826	0.01		0.01			
Morinda citrifolia	0.000819	0.01					0.00
Citrus aurantium	0.000819	0.01		0.01			0.00
Excoecaria indica	0.000811	0.01				0.01	0.00
Crateva magna	0.000797	0.01		0.00			0.00
Phyllanthus acidus	0.000789	0.01		0.00	0.00		0.00
Pajanelia longifolia	0.000786	0.01		0.01			
Olea sp.	0.000784	0.01					0.00
Rhizophora mucronata	0.000781	0.01		0.01			
Firmiana colorata	0.000777	0.01		0.00	0.01		0.00
Calotropis gigantea	0.000775	0.01		0.00			0.00
Dipterocarpus tuberculatus	0.000773	0.01		0.01			
Maesa indica	0.000771	0.01					0.00

Actinodaphne angustifolia	0.000768	0.01		0.01			
Mallotus roxburghianus	0.000767	0.01		0.00			0.00
Sapium indicum	0.000766	0.01	0.01	0.00			0.00
Castanopsis armata	0.000764	0.01		0.01			
Sambucus javanica	0.000763	0.01		0.01			
Lagerstroemia parviflora	0.000741	0.01		0.01			
Azadirachta sp.	0.000738	0.01					0.00
Chaetocarpus castanocarpus	0.000734	0.01		0.01			
Nyssa javanica	0.000727	0.01		0.01			
Diospyros ramiflora	0.000718	0.01		0.00			0.00
Intsia bijuga	0.000713	0.01		0.00		0.02	
Mitragyna rotundifolia	0.000712	0.01		0.00			0.00
Bridelia tomentosa	0.000708	0.01		0.00			0.00
Aporosa aurea	0.000676	0.01	0.00	0.00			0.00
Annona squamosa	0.000664	0.01	0.00				0.00
Syzygium claviflorum	0.000652	0.01		0.00			0.00
Calophyllum inophyllum	0.000635	0.01					0.00
Phoenix sp.	0.000601	0.01				0.02	
Manilkara zapota	0.000595	0.01					0.00
Flacourtia jangomas	0.000585	0.01		0.00	0.00		0.00
Litsea glutinosa	0.000585	0.01		0.00			0.00
Alstonia scholaris	0.000584	0.01		0.00			0.00
Alphonsea ventricosa	0.000583	0.01		0.00			0.00
Limonia acidissima	0.000579	0.01		0.00			0.00
Grewia serrulata	0.000561	0.01		0.00			

Michelia champaca	0.000560	0.01		0.00			0.00
Ficus semicordata	0.000557	0.01		0.00			0.00
Litsea semecarpifolia	0.000546	0.01		0.00			
Terminalia alata	0.000542	0.01					0.00
Dipterocarpus costatus	0.000536	0.01		0.00			
Eurya acuminata	0.000535	0.01		0.00	0.00		
Thespesia populnea	0.000529	0.01	0.01				
Cedrela cumingianus	0.000524	0.01		0.00	0.01		0.00
Mangifera sylvatica	0.000523	0.01					0.00
Acacia farnesiana	0.000520	0.01	0.00		0.00		0.00
Alstonia macrophylla	0.000502	0.01	0.00	0.00			0.00
Butea monosperma	0.000492	0.01		0.00	0.00		0.00
Lawsonia inermis	0.000474	0.01	0.01				0.00
Diospyros nigricans	0.000464	0.01		0.00			0.00
Pinus kesiya	0.000463	0.01			0.00		0.00
Podocarpus neriifolius	0.000447	0.01		0.00			0.00
Diospyros montana	0.000430	0.01	0.00				0.00
Syzygium megacarpum	0.000425	0.01		0.00			
Dodonaea viscosa	0.000424	0.01		0.00			
Bambusa jaintiana	0.000420	0.01		0.00	0.00		0.00
Ardisia sp.	0.000417	0.01		0.00			0.00
Albizia sp.	0.000414	0.01					0.00
Premna bengalensis	0.000407	0.01		0.00			
Dillenia scabrella	0.000393	0.01		0.00			
Milium velutina	0.000390	0.01		0.00	0.00		0.00
Caryota urens	0.000390	0.01					0.00

Lepisanthes senegalensis	0.000375	0.01		0.00	0.00		
Lithocarpus elegans	0.000368	0.00		0.00			
Lagerstroemia indica	0.000367	0.00		0.00			
Cassia roxburghii	0.000365	0.00					0.00
Syzygium tetragonum	0.000361	0.00					0.00
Ilex umbellulata	0.000358	0.00		0.00			
Carallia brachiata	0.000355	0.00		0.00			0.00
Cryptocarya amygdalina	0.000352	0.00		0.00			
Bouea oppositifolia	0.000342	0.00		0.00			0.00
Morinda angustifolia	0.000330	0.00		0.00			
Kleinhovia hospita	0.000328	0.00					0.00
Picrasma javanica	0.000325	0.00		0.00			
Walsura robusta	0.000324	0.00		0.00			
Terminalia chebula	0.000321	0.00		0.00			
Lithocarpus acuminatus	0.000316	0.00		0.00			
Averrhoa bilimbi	0.000311	0.00			0.00		0.00
Citrus medica	0.000307	0.00	0.00	0.00	0.00		0.00
Ilex godajam	0.000305	0.00		0.00			
Vatica lanceifolia	0.000293	0.00					0.00
Schleichera sp.	0.000292	0.00		0.00			
Cassia bakeriana	0.000283	0.00		0.00			0.00
khaya anthotheca	0.000280	0.00					0.00
Mitragyna parvifolia	0.000273	0.00		0.00			0.00
Antidesma acidum	0.000271	0.00		0.00	0.00		
Dendrocnide sinuata	0.000271	0.00		0.00			
Lagerstroemia tomentosa	0.000268	0.00		0.00			

Bixa orellana	0.000265	0.00		0.00	0.00		0.00
Citrus reticulata	0.000253	0.00		0.00			
Dysoxylum binectariferum	0.000252	0.00		0.00			
Cordia dichotoma	0.000244	0.00					0.00
Turpinia pomifera	0.000237	0.00		0.00			
Diospyros toposia	0.000237	0.00					0.00
Aporosa wallichii	0.000236	0.00		0.00			
Ehretia serrata	0.000232	0.00		0.00			0.00
Cerbera manghas	0.000232	0.00		0.00	0.00	0.01	
Prunus ceylanica	0.000227	0.00	0.00	0.00			
Murraya paniculata	0.000225	0.00					0.00
Pterospermum acerifolium	0.000224	0.00		0.00			0.00
Calliandra umbrosa	0.000222	0.00		0.00			
Symplocos racemosa	0.000220	0.00		0.00			
Syzygium formosum	0.000208	0.00					0.00
Saraca indica	0.000207	0.00					0.00
Lepisanthes rubiginosa	0.000206	0.00		0.00	0.00		0.00
Erythrina variegata	0.000205	0.00	0.00	0.00			
Erythrina suberosa	0.000202	0.00		0.00			
Pithecellobium dulce	0.000202	0.00	0.01				
Terminalia catappa	0.000202	0.00		0.00			0.00
Trevesia palmata	0.000189	0.00		0.00			
Lithocarpus polystachyus	0.000189	0.00		0.00			
Sapium insigne	0.000181	0.00		0.00			
Glochidion assamicum	0.000177	0.00		0.00			
Polyalthia obliqua	0.000177	0.00					0.00

Lepisanthes tetraphylla	0.000177	0.00		0.00			
Abroma augusta	0.000176	0.00		0.00			0.00
Anisoptera scaphula	0.000169	0.00		0.00			
Morus alba	0.000168	0.00					0.00
Artocarpus sp.	0.000168	0.00					0.00
Balanostreblus ilicifolius	0.000165	0.00		0.00	0.00		
Erythrina sp.	0.000156	0.00					0.00
Garuga floribunda	0.000156	0.00		0.00			0.00
Vatica sp.	0.000151	0.00		0.00			
Madhuca longifolia	0.000144	0.00					0.00
Cassia javanica	0.000142	0.00		0.00			
Tectona sp.	0.000140	0.00					0.00
Semecarpus subpanduriformis	0.000137	0.00		0.00			0.00
Jatropha curcas	0.000132	0.00			0.00		
Mimusops elengi	0.000131	0.00					0.00
Acacia longifolia	0.000131	0.00			0.00		
Saraca asoca	0.000130	0.00					0.00
Epiprinus sp.	0.000129	0.00					0.00
Lithocarpus sp.	0.000126	0.00		0.00			
Licuala peltata	0.000123	0.00		0.00			
Croton tiglium	0.000122	0.00					0.00
Ficus subincisa	0.000121	0.00					0.00
Syzygium oblatum	0.000119	0.00		0.00	0.00		0.00
Sapium sebiferum	0.000115	0.00		0.00			
Glochidion multiloculare	0.000114	0.00	0.00	0.00			
Careya arborea	0.000114	0.00		0.00			

Glochidion sphaerogynum	0.000112	0.00		0.00			
Scaphium scaphigerum	0.000110	0.00		0.00			
Drypetes assamica	0.000109	0.00		0.00			
Allophylus cobbe	0.000104	0.00		0.00			0.00
Clausena heptaphylla	0.000101	0.00					0.00
Pterospermum semisagittatum	0.000099	0.00		0.00			0.00
Aleurites moluccana	0.000099	0.00					0.00
Litsea panamanja	0.000099	0.00		0.00			
Citrus limon	0.000097	0.00	0.00				0.00
Glochidion arborescens	0.000090	0.00		0.00			
Vitex negundo	0.000087	0.00		0.00			
Palaquium polyanthum	0.000084	0.00		0.00			
Syzygium ramosissimum	0.000081	0.00		0.00			
Bhesa robusta	0.000079	0.00		0.00			
Grewia tiliifolia	0.000079	0.00					0.00
Celastrus stylosus	0.000076	0.00		0.00			
Alseodaphne petiolaris	0.000074	0.00		0.00			
Sonneratia griffithii	0.000073	0.00	0.00				
Ochna squarrosa	0.000069	0.00		0.00			
Elaeocarpus varunua	0.000066	0.00		0.00			
Syzygium sp.	0.000064	0.00		0.00			
Garcinia morella	0.000064	0.00		0.00			
Clausena excavata	0.000062	0.00		0.00			

Aegiceras corniculatum	0.000061	0.00				0.00	
Ixora subsessilis	0.000059	0.00		0.00			
Euphorbia antiquorum	0.000058	0.00			0.00		
Adenantha pavonina	0.000055	0.00			0.00		
Quercus gomeziana	0.000054	0.00		0.00			
Macropanax oreophilus	0.000050	0.00		0.00			
Ficus auriculata	0.000050	0.00		0.00			
Syzygium cymosum	0.000050	0.00	0.00	0.00			
Trema tomentosa	0.000049	0.00			0.00		
Sonneratia alba	0.000049	0.00	0.00				
Elaeocarpus rugosus	0.000048	0.00		0.00			
Flacourtia indica	0.000046	0.00		0.00			
Plumeria obtusa	0.000045	0.00		0.00			
Canarium resiniferum	0.000045	0.00			0.00		
Bridelia squamosa	0.000043	0.00			0.00		
Tarenna campaniflora	0.000043	0.00		0.00			
Camellia sp.	0.000043	0.00		0.00			
Thyrsostachys oliveri	0.000042	0.00			0.00		
Helicia excelsa	0.000037	0.00					0.00
Celastrus paniculatus	0.000037	0.00		0.00			
Mischocarpus pentapetalus	0.000036	0.00		0.00			
Miliusa longiflora	0.000035	0.00		0.00			
Dalbergia reniformis	0.000033	0.00			0.00		
Punica granatum	0.000031	0.00					0.00
Meyna spinosa	0.000030	0.00	0.00	0.00			
Pterocarpus indicus	0.000028	0.00		0.00			0.00

Caesalpinia cucullata	0.000025	0.00		0.00			
Persea bombycina	0.000023	0.00		0.00			
Dysoxylum excelsum	0.000020	0.00			0.00		
Pavetta indica	0.000019	0.00		0.00			
Carissa carandas	0.000011	0.00				0.00	

Appendix 4.1.1 (c): Basal area of trees by land cover classes and Zones

Land Cover Classes	Basal Area (m ² /ha)	Total basal area (Million m ²)	Distribution of basal area into Zones (m ² /ha)				
			CZ	HZ	SZ	SuZ	VZ
Bamboo Forest	0.84	4201.026		0.84			
Built-Up Non-Linear	4.77	397154.8	8.47		1.29		5.01
Brickfield	0.42	10610.67			0		0.43
Sand	0.03	3683.734					0.03
Brackish Water Aquaculture	0.01	536.8406					0.01
Plain Land Forest (Sal Forest)	14.61	616150.5			14.16		19.39
Hill Forest	9.38	5804857		9.40			7.43
Mangrove Plantation	15.80	2605475	15.80				
Forest Plantation	8.85	830004.7		9.60	8.04		0
Rubber Plantation	9.82	487552.6		7.35	14.59		
Fresh Water Aquaculture	0.45	50032	2.40				0.39
Herb Dominated Area	0.37	21140.62	0		0.20		0.41

Mangrove Forest	22.26	8970793				22.26	
Orchards and Other Plantations (Shrub)	4.63	452237.6		3.45			14.69
Orchards and Other Plantations (Trees)	9.61	1904049		3.58	11.14		9.85
Multiple Crop	0.91	2890650	0.46	1.94	1.46		0.88
Single Crop	0.80	3653607	0.45	1.55	1.93		0.76
Ponds	2.71	21799.43			9.44		0
River Banks	2.73	64588.5		4.86	3.36	48.63	1.03
Rural Settlement	10.18	29448157	14.90	8.14	8.63		10.1206
Shifting Cultivation	3.44	105076.2		3.44			
Shrubs with scattered trees	4.27	2440884	15.46	4.26	2.39		0
Swamp Reed Land	5.29	52574					5.29

Appendix 4.1.2 (a): Tree density and size characteristics per major families and zones

Family	Density (Stem/ha)	Tree density distribution among zones					DBH (cm)			Height (m)		
		CZ	HZ	SZ	SuZ	VZ	Min	Mean	Max	Min	Mean	Max
Anacardiaceae	20	21	11	11		22	2	27.07	150.2	1.5	10.07	45.3
Annonaceae	2	3	1	0.3		3	2	14.93	43.5	1.9	8.8	20.2
Apocynaceae	2	0.1	14	0.1	2	0.3	2	15.41	73	1.75	9.29	28.3

Aquifoliaceae	0.02		0.1				18.9	25.58	39.3	8.7	14.5	21.4	
Araliaceae	0.05		0.4				4.1	13.37	18.9	4.2	7.37	10.6	
Arecaceae	35	110	9	7	25	37	2	21.09	74.2	1.31	11.06	36.32	
Asclepiadaceae	0.02		0.01				0.02	14.3	34.27	63.3	9.4	14.2	22.7
Bignoniaceae	2		11	0.1			0.3	2.1	23.05	109	2.1	11.14	27.2
Bixaceae	0.02		0.03	0.2			0.01	10	13.58	17.6	3.5	6.35	8.8
Bombacaceae	1	0.04	1	0.5			1	5.2	37.51	190	3.5	15.35	33.8
Boraginaceae	0.3		2				0.04	3.2	15.81	33.7	3.3	9.29	18.2
Burseraceae	1	1	7	1			0.1	2	23.76	85.5	1.4	11.09	28.6
Caesalpiniaceae	3	2	5	1	69	1	2	2	17.61	80	1.8	9.21	26.4
Capparaceae	0.1		0.4				0.03	2.2	19.26	41.2	2.1	8.27	11.2
Caprifoliaceae	0.2		1					2.4	11.11	20.9	2.1	7.13	9.7
Casuarinaceae	0.1	1			0.1	0.1	6.3	6.3	14.82	32.5	3	12.56	16
Celastraceae	0.1		1				4	4	26.45	53.7	4.8	11.9	17.8
Clusiaceae	1	2	7				0.5	2.1	26.61	68.4	1.9	15.31	33.1
Combretaceae	2		16	0.3			0.3	2.1	26.09	102	2	11.28	35.2
Datisceae	0.2		2				5.9	5.9	43.07	134.6	5.2	16.05	31
Dilleniaceae	1	2	3	0.2			0.4	2.5	25.35	80.5	1.5	10.46	26.13
Dipterocarpaceae	5		11	76			1	2	23.51	144.5	1.8	13.35	45.3
Ebenaceae	4	6	0.1	0.03			5	2	13.28	47	2.21	9.06	17.6
Elaeocarpaceae	1		1	1			1	2.6	27.68	85.6	2.9	12.98	32.5
Euphorbiaceae	96	527	71	17	2138	4	2	2	11.31	75.4	1.5	7.54	30.8
Fabaceae	1	3	1	1	0.1	2	2	2	25.02	65	2.87	11.6	26.6
Fagaceae	2		11	0.1	12	0.4	2	2	24.24	93.3	1.8	13.32	32.6
Flacourtiaceae	0.02		0.2	0.2				11.5	16.81	27	5.61	10.32	15.5
Juglandaceae	0.3	0.1	2				0.002	2.5	31.37	71.6	2.4	15.16	28.7
Lauraceae	2	0.1	11				1	2.1	16.96	76	1.9	8.74	24.2
Lecythidaceae	0.3		0.1	0.5			0.4	4.1	28	72	2.3	6.52	34
Lythraceae	1	1	3	0.2			1	2.3	26.67	63.8	2.1	12.42	26.4

Magnoliaceae	0.04		0.2			0.01	10	15.81	48.6	8.7	14.82	32.5
Malvaceae	1	2	1		15	0.1	2	18.33	66.3	2.1	10.32	22.8
Melastomataceae	1	35					2	3.47	7.8	2.1	3.67	7.21
Meliaceae	42	30	11	25	263	39	2	19.18	95.7	1.4	10.75	40.8
Mimosaceae	30	38	64	72		23	2	26.6	110.8	1.5	13.78	37.5
Moraceae	19	26	80	20		9	2	23.89	275	1.45	9.76	38.2
Moringaceae	2	0.1	1	0.2		2	2.8	20.16	65.5	2	8.5	32.8
Myrsinaceae	0.3		2		4	0.04	2	11.29	43	2.35	7.84	21.58
Myrtaceae	17	5	18	10		18	2	19.78	141.7	1.35	13.23	41.1
Nyssaceae	0.04		0.3				10.2	15.48	19.2	6.9	8.66	11.4
Ochnaceae	0.2		1				2.5	17.93	45.2	2.3	8.59	18.17
Oleaceae	1		5			0.04	2.1	11.09	50.5	2.4	7.38	17.3
Other	2	3	4	2	9	1	2.2	20.03	103.2	1.4	10.21	39
Oxalidaceae	0.2	0.1	0.04	0.1		0.3	6.2	16.97	39.3	4.1	7.9	16.7
Pinaceae	0.04			0.01		0.04	11.1	16.8	35	2.5	7.8	11.3
Poaceae	0.1	0.1		0.2	0.02	0.1	10.1	24.33	59.5	3	7.19	20.2
Podocarpaceae	0.02		0.01			0.02	13.8	27.6	53	5.1	14.63	33.5
Proteaceae	0.1					0.1	2.3	2.3	2.3	1.8	1.8	1.8
Punicaceae	0.1					0.1	2.1	2.1	2.1	2.2	2.2	2.2
Rhamnaceae	0.1	0.02	0.1	1		0.1	10.4	21.69	34.1	4.5	7.21	12.4
Rhizophoraceae	77	5	2	0.1	2566	0.01	2	3.75	119.8	1.4	3.61	34
Rosaceae	0.1	0.2	1				3.4	9.48	18.5	3.1	6.5	11.1
Rubiaceae	3	2	17	2		1	2	24.95	119.6	1.58	11.84	28.8
Rutaceae	3	3	6	6		3	2	17.03	97.8	1.4	7.47	22.3
Sabiaceae	1		10				2	15.17	73.9	2.1	9.23	25.5
Sapindaceae	2		3	1		2	2	19.65	57	1.5	8.18	21
Sapotaceae	0.04		0.03			0.05	10.4	20.49	34.8	5.2	10.1	14.6
Simaroubaceae	0.1		1				2.3	9.26	28.4	2.8	5.3	9.4
Sonneratiaceae	5	114	1	0.1	2	0.1	2	28.48	174.5	1.8	16.59	48

Staphyleaceae	0.01		0.1				13	25.87	51.1	5.7	8.23	12.9
Sterculiaceae	55	3	10	1	1744	1	2	13.39	117	1.4	9.47	27.8
Symplocaceae	0.004		0.04				24.2	27.6	31	10.7	13.9	17.1
Tamaricaceae	1	19					2.2	4.26	7.6	2.1	3.82	6.1
Theaceae	1		7				2.1	26.93	88.4	1.7	12.26	28.35
Thymelaeaceae	0.5		3	1		0.1	2.9	14.84	59.6	1.8	6.8	21.7
Tiliaceae	3	1	18	4		0.1	2	16.15	77.8	1.5	8.56	32
Ulmaceae	2		8	0.3		1	2	13.96	64.1	1.4	8.12	23
Urticaceae	0.5		4				2.5	10.61	55	2.4	4.98	15.2
Verbenaceae	20	2	151	7	11	1	1.8	19.74	164	1.4	10.78	31.6

Appendix 4.1.2 (b): Tree density along with their DBH and height per species and Zones

Species	Tree and sapling density (Stem/ha)	Tree density (Stem/ha)	Distribution of tree density among zones					DBH (cm)			Height (m)		
			CZ	HZ	SZ	SuZ	VZ	Min	Mean	Max	Min	Mean	Max
Abroma augusta	0.01	0.01		0.04				13.7	27.4	36.2	8	12.9	16.49
Acacia auriculiformis	15	5	1	39	65		10	2	15.23	61.4	1.6	11.56	32.5
Acacia catechu	0.03	0.03		0.03	0.1		0.02	10.5	20.42	34.7	5	10.67	20.3
Acacia farnesiana	0.03	0.03	0.2		0.1		0.02	10.5	14.24	17.2	4.5	10.56	14.3
Acacia longifolia	0.01	0.01			0.2			16.1	16.3	16.5	10	11.25	12.5
Acacia mangium	2	1	0.1	11	3		1	2	16.04	44.8	2.25	11.98	27
Acacia nilotica	0.3	0.1	1				0.3	2.1	21.68	49.4	1.8	7.65	17.9
Actinodaphne angustifolia	0.1	0.002		1				2.9	40.18	76	4.1	13.66	24.2
Adenantha pavonina	0.001	0.001			0.01			35.5	35.5	35.5	14.4	14.4	14.4

<i>Aegiceras corniculatum</i>	0.1					4		2	2.4	3.1	2.35	3.04	3.3
<i>Aegle marmelos</i>	1	0.2	0.1	0.3	3		1	2.5	20.44	74.9	2.1	8.32	16.9
<i>Aglaia chittagonga</i>	1	0.4	4	2	3		1	2.56	15.72	42.5	1.5	8.54	17
<i>Aglaia cucullata</i>	7	0.1				230	0.002	2	4.88	65	1.46	4.22	17.8
<i>Aglaia odoratissima</i>	0.2	0.03		0.03			0.3	7.6	12.43	18	3.69	5.69	9.1
<i>Aglaia spectabilis</i>	1	0.4		1	0.3		1	3.3	20.84	60	3.1	11.74	21.36
<i>Aidia sp.</i>	0.1	0.1		1				6.26	25.9	63.4	3.97	12.41	27.7
<i>Albizia chinensis</i>	1	0.3	0.2	3	0.4		0.2	2	39.27	91.6	1.5	16.32	30.23
<i>Albizia lebbeck</i>	1	1	3	1	0.1		1	4.5	32.8	78	3.1	14.51	25.9
<i>Albizia lucidior</i>	1	0.2	2	2	0.3		0.3	2	27.23	62.3	2.1	13.34	28.9
<i>Albizia odoratissima</i>	0.2	0.1	0.02	1	0.2		0.02	3.5	32.11	81	4.1	14.25	34.5
<i>Albizia procera</i>	1	1	2	5	0.3		1	2.5	31.35	98.2	1.7	15.82	32.5
<i>Albizia richardiana</i>	4	2	4	1	1		5	2	27.26	95.2	2.2	15.96	30.6
<i>Albizia sp.</i>	0.01	0.01					0.01	12.8	31.55	50.3	14.2	14.35	14.5
<i>Aleurites moluccana</i>	0.01	0.01					0.01	12.1	12.1	12.1	15	15	15
<i>Allophylus cobbe</i>	0.01	0.01		0.1				12.1	13.3	14.5	8.3	8.7	9.1
<i>Alphonsea ventricosa</i>	0.2	0.01		1			0.1	3.1	7.78	13.3	4	5.42	9.2
<i>Alseodaphne petiolaris</i>	0.04	0.004		0.3				2.9	7.9	12.9	3.2	7.5	11.8
<i>Alstonia macrophylla</i>	0.02	0.02	0.1	0.03			0.01	16.3	19.53	21.8	8.5	11.27	12.7
<i>Alstonia neriifolia</i>	0.1	0.04		0.3			0.1	3.1	29.99	67	2.5	12.65	18.3
<i>Alstonia scholaris</i>	0.1	0.02		0.1			0.1	2.3	19.66	52	2.3	10.02	19.3
<i>Anacardium occidentale</i>	0.1	0.1	1	0.5			0.03	9.2	20.94	40.2	5.5	11.62	19.3

Anisoptera scaphula	0.01	0.01		0.1				10.7	20.87	37	7.9	10.23	13.4
Annona reticulata	1	0.3	2	0.03	0.1		1	2	13.61	35.1	2.1	7.37	17.5
Annona squamosa	0.03	0.03	0.1				0.03	10.8	17.4	25	4.6	8.98	13.3
Anogeissus acuminata	1	0.2		12	0.2		0.1	2.1	25.73	76.2	2	11.58	27.7
Antidesma acidum	0.2	0.01		2	0.2			2.7	5.83	14	2.8	4.49	10.75
Antidesma khasianum	0.3	0.04	1	0.1	1		0.3	2.3	23.13	45.2	2.2	11.51	20.7
Aphanamixis polystachya	1	0.3	3	2	0.2		1	2.3	23.3	84.8	1.7	12.61	32
Aporosa aurea	1	0.01	1	6			0.01	2	3.24	10.5	1.8	2.88	7.1
Aporosa wallichii	0.3			2				2.9	3.35	3.9	3.2	3.4	4.1
Aquilaria agallocha	0.5	0.1		3	1		0.1	2.9	14.84	59.6	1.8	6.8	21.7
Ardisia sp.	0.2	0.001		2				3.6	10.99	43	4.5	8.42	21.58
Areca catechu	27	20	100	3	1		30	3	11.77	69.6	1.7	11.32	22.1
Artocarpus chama	1	0.3	0.02	6	0.4		0.3	2.2	30.38	125.8	2.5	14.72	33.9
Artocarpus heterophyllus	6	4	22	6	17		5	2	26.6	78.2	2.1	9.93	33.2
Artocarpus lacucha	0.3	0.2	0.3	1	0.2		0.3	2	19.92	62.3	2.3	9.88	25.1
Artocarpus sp.	0.002	0.002					0.002	37.4	37.4	37.4	15.6	15.6	15.6
Averrhoa bilimbi	0.02	0.02					0.02	13.2	15.05	16.9	6.5	7.1	7.7
Averrhoa carambola	0.2	0.1	0.1	0.04	0.1		0.3	6.2	17.15	39.3	4.1	7.97	16.7
Avicennia alba	0.02	0.02	0.4			0.02	0.01	24	32.47	61.3	7.5	13.55	17
Avicennia officinalis	0.4	0.3	2			11		2.1	41.74	164	2.5	12.84	23

<i>Azadirachta indica</i>	2	1	0.2	1	1		3	2.4	16.28	46.7	1.9	9.04	16.7
<i>Azadirachta sp.</i>	0.02	0.02					0.02	12.2	26.4	41.9	5.2	13.3	17.8
<i>Baccaurea ramiflora</i>	0.3	0.04		2	2		0.01	2.9	11.69	39.8	1.6	5.92	14.7
<i>Balanostreblus ilicifolius</i>	0.01	0.01		0.03	0.1			10.7	23.23	47	4.2	7.87	12.4
<i>Bambusa jaintiana</i>	0.002	0.002					0.002	59.2	59.2	59.2	10	10	10
<i>Bambusa vulgaris</i>	0.1	0.1	0.1		0.2	0.02	0.1	10.1	20.88	59.5	3	6.61	20.2
<i>Barringtonia acutangula</i>	0.3	0.2			0.5		0.4	4.1	29.04	72	2.3	6.31	34
<i>Bhesa robusta</i>	0.01	0.01		0.1				10.4	11.6	12.8	5.6	7.85	10.1
<i>Bixa orellana</i>	0.02	0.02		0.03	0.2		0.01	10	13.58	17.6	3.5	6.35	8.8
<i>Boehmeria glomerulifera</i>	0.5			4				2.5	4.4	6.5	2.4	3.55	5.7
<i>Bombax ceiba</i>	1	0.4	0.04	1	0.4		1	5.2	38.06	190	4.1	15.59	33.8
<i>Bombax insigne</i>	0.05	0.05		0.1	0.1		0.04	12.4	32.62	67.1	3.5	13.22	24.5
<i>Borassus flabellifer</i>	1	1	1	0.03	4		1	9.5	41.35	73	1.31	10.64	20.8
<i>Bouea oppositifolia</i>	0.05	0.01		0.3			0.01	3.3	12.35	21.4	4.3	6.2	8.1
<i>Bridelia squamosa</i>	0.003	0.003			0.1			13.3	13.3	13.3	9.2	9.2	9.2
<i>Bridelia tomentosa</i>	0.01	0.01		0.1			0.002	21.1	27.88	37.6	11.2	13.2	14.6
<i>Brownlowia elata</i>	0.03	0.03		0.2				11.7	34.74	77.8	10	17.78	32
<i>Bruguiera gymnorrhiza</i>	0.05	0.05			0.1	1		10.4	20.59	44.8	4	8.03	17
<i>Bruguiera sexangula</i>	1	0.3				39		2	12.95	37.6	1.4	10.54	17.5
<i>Butea monosperma</i>	0.02	0.02			0.01		0.02	14.8	24.25	34	7.9	10.97	14.5

Caesalpinia cucullata	0.04			0.3				2.9	2.9	2.9	2.2	2.2	2.2
Calliandra umbrosa	0.004	0.004		0.03				27.6	27.6	27.6	9.2	9.2	9.2
Callicarpa arborea	1	0.3		10			0.1	2.1	15.46	56.7	1.8	9.02	30.5
Calophyllum inophyllum	0.2	0.01					0.2	3.8	9.27	17	10	12	14.5
Calophyllum polyanthum	0.2	0.003	2	1				2.1	23.06	64.9	2.4	12.84	27.3
Calotropis gigantea	0.02	0.02		0.01			0.02	14.3	34.27	63.3	9.4	14.2	22.7
Camellia sp.	0.1			1				2.5	2.68	2.85	2.5	3.4	4.3
Canarium resiniferum	0.003	0.003			0.1			13.5	13.5	13.5	16.3	16.3	16.3
Carallia brachiata	0.1	0.01		0.3			0.01	7.6	12.37	18.4	6.8	8.53	11.7
Carallia sp.	0.3	0.03		1		4		2.1	14.34	38.7	1.89	7.49	16.6
Careya arborea	0.01	0.01		0.1				11.3	11.4	11.5	9.1	9.9	10.5
Carissa carandas	0.03					1		2.1	2.1	2.1	2	2	2
Caryota mitis	0.1	0.1		0.1			0.1	12	20.85	33.3	3.1	10.14	16.3
Caryota urens	0.1	0.01					0.1	6.5	9.25	12	4.2	4.65	5.1
Cassia bakeriana	0.02	0.02					0.02	10.6	14.05	17.5	6.5	8.5	10.5
Cassia fistula	0.1	0.1	0.4	0.04	0.4		0.1	10.3	20.01	52.2	5.3	9.18	20
Cassia javanica	0.004	0.004		0.03				22.1	22.1	22.1	14.3	14.3	14.3
Cassia roxburghii	0.02	0.02					0.02	13.2	16.15	19.1	14.8	16.4	18
Castanopsis armata	0.02	0.02		0.2				14.9	24.8	42	7.1	11.69	20
Castanopsis castanicaarpa	0.4	0.3		0.4			0.4	4.1	16.86	48.1	1.95	12.1	19.9
Castanopsis indica	1	0.2		4	0.1		0.01	2.4	25.12	65.8	2	13.51	32.6
Castanopsis lanceifolia	0.4	0.01		0.1		12		2.1	13.01	45.5	2.8	7.53	22.5

Castanopsis tribuloides	0.1	0.02		0.4				2	33.13	74.2	3.3	14.27	22.7
Casuarina equisetifolia	0.1	0.04	1			0.1	0.1	6.3	14.82	32.5	3	12.56	16
Cedrela cumingianus	0.1	0.01		0.4	1		0.002	2.5	18.9	30.7	2.3	8.93	14.2
Celastrus paniculatus	0.004	0.004		0.03				11.2	11.2	11.2	7.5	7.5	7.5
Celastrus stylosus	0.001	0.001		0.01				38.4	38.4	38.4	13.2	13.2	13.2
Cerbera manghas	0.1	0.01		0.3	0.1	1		2.1	8.98	13.4	3.2	6.98	11.8
Cerbera odollam	1	0.04		12		0.1		2	9.19	73	1.75	5.16	15.7
Ceriops decandra	76		5			2522		2	2.77	9.8	1.4	3.07	11.2
Chaetocarpus castanocarpus	0.1	0.01		1				4.9	11.9	19.6	3.9	5.93	7.7
Chukrasia tabularis	1	0.2		4	2		0.03	3.2	22.27	95.7	3.2	13.81	40.8
Cinnamomum tamala	0.4	0.01		1			0.5	2.5	6.8	20.8	2	4.03	7.2
Citrus aurantium	0.03	0.03		0.2			0.01	14.6	17.59	23.5	5.7	6.88	11.5
Citrus limon	0.1		3					3.1	3.27	3.4	1.9	2.2	2.4
Citrus maxima	2	0.4	0.2	2	1		2	2	14.01	39.5	1.4	6.05	11.5
Citrus medica	0.2	0.01		1	1		0.1	3.2	6.17	11.9	2.32	4.65	7.86
Citrus reticulata	0.1	0.01		1				2.1	7.75	13.2	2.2	5.65	7.1
Clausena excavata	0.04	0.004		0.3				2.7	7.25	11.8	5.4	5.8	6.2
Clausena heptaphylla	0.01	0.01					0.01	12.2	12.2	12.2	8.3	8.3	8.3
Cleistocalyx nervosum	1	0.2		1			1	3	24.5	63.6	3	12.8	28.2
Cocos nucifera	4	4	8	0.2	1		5	10	30.37	71.7	1.9	11.46	30.8
Cordia dichotoma	0.01	0.01					0.01	19	19	19	7.1	7.1	7.1
Cordia grandis	0.2	0.04		2			0.02	3.2	15.46	33.7	3.3	9.12	18.2
Corypha taliera	1	0.1		5				2.1	25.51	74.2	2.1	15.81	36.32

<i>Crateva magna</i>	0.1	0.03		0.4			0.03	2.2	19.26	41.2	2.1	8.27	11.2
<i>Croton joufra</i>	0.1	0.1	0.2	0.04			0.1	10.6	18.93	34.5	6.9	11.49	17
<i>Croton tiglium</i>	0.01	0.01					0.01	13.4	13.4	13.4	3.5	3.5	3.5
<i>Cryptocarya amygdalina</i>	0.3			2				2.3	3.75	4.9	3.1	3.84	4.3
<i>Cynometra ramiflora</i>	2	0.03				65		2	5.93	41.5	2.5	4.55	16
<i>Dalbergia ovata</i>	0.3	0.1	0.1				0.4	3.6	18.05	32.6	3.1	7.57	13.4
<i>Dalbergia reniformis</i>	0.003	0.003			0.1			11.6	11.6	11.6	9.6	9.6	9.6
<i>Dalbergia sissoo</i>	0.4	0.3					0.5	4	29.74	64.1	4.3	15.23	26.6
<i>Delonix regia</i>	0.1	0.03	0.1	1			0.03	3	19.64	41.9	4	10.19	17.8
<i>Dendrocnide sinuata</i>	0.001	0.001		0.01				47	51	55	13.4	14.3	15.2
<i>Derris robusta</i>	0.04	0.04		0.2	0.01		0.02	12	22	38.6	5.2	13.77	26
<i>Dillenia indica</i>	0.3	0.1	2	0.4			0.2	2.5	24.89	74.4	1.5	10.83	24.6
<i>Dillenia pentagyna</i>	0.4	0.03		2	0.2		0.1	3.4	23.57	80.5	3.1	9.47	26.13
<i>Dillenia scabrella</i>	0.01	0.01		0.04				12.3	42.8	60.5	6.6	14.27	18.6
<i>Dimocarpus longan</i>	0.1	0.1					0.1	12.5	18.85	27.1	11.3	14.5	21
<i>Diospyros blancoi</i>	4	0.3	5				4	2	9.09	35.4	2.21	8.61	16.9
<i>Diospyros malabarica</i>	1	0.4	0.1		0.03		1	4	19.35	47	2.9	9.61	17.6
<i>Diospyros montana</i>	0.1	0.02	1				0.01	2.5	11.78	22.3	4	8.73	12
<i>Diospyros nigricans</i>	0.2	0.01		0.1			0.2	2.1	13.14	25.2	3	8.74	17.6
<i>Diospyros ramiflora</i>	0.03	0.03					0.03	11.2	17.9	25.3	6	11.07	16.7
<i>Diospyros toposia</i>	0.002	0.002					0.002	44.4	44.4	44.4	15.5	15.5	15.5
<i>Dipterocarpus alatus</i>	1	0.1		6				2.1	47.46	144.5	1.8	21.19	41.6

Dipterocarpus costatus	0.1	0.001		1				2.1	32.85	62.4	4.1	20.78	45.3
Dipterocarpus gracilis	0.02	0.02		0.1	0.03		0.01	15.7	45.28	86.2	7.3	18.59	30.2
Dipterocarpus tuberculatus	0.01	0.01		0.1				17.1	34.04	71.9	14.3	18.16	19.8
Dipterocarpus turbinatus	0.1	0.1		1			0.002	10	38.77	122.5	6	21.31	40.4
Dodonaea viscosa	0.01	0.01		0.1				12.1	21.03	27.2	6.2	7.73	9.4
Drypetes assamica	0.001	0.001		0.01				46	46	46	18.6	18.6	18.6
Drypetes eglandulosa	0.3	0.03		2				2.2	19.77	49.5	1.8	10.95	24.3
Duabanga grandiflora	0.2	0.2		1	0.1		0.1	2.3	38.71	174.5	2.8	15.34	30.2
Dysoxylum binectariferum	0.002	0.002		0.02				35.67	40.16	42.8	8.1	13.39	16.1
Dysoxylum excelsum	0.03				1			2.8	2.8	2.8	3.8	3.8	3.8
Ehretia serrata	0.01	0.01					0.01	18.5	18.5	18.5	14.2	14.2	14.2
Elaeocarpus floribundus	1	0.2		1	1		1	2.6	28.65	85.6	2.9	13.15	32.5
Elaeocarpus rugosus	0.001	0.001		0.01				30.5	30.5	30.5	10.1	10.1	10.1
Elaeocarpus tectorius	0.1	0.1		0.1	0.2		0.04	11.4	23.82	36.3	6.2	12.49	27.3
Elaeocarpus varunua	0.004	0.004		0.03				15.1	15.1	15.1	11.6	11.6	11.6
Engelhardtia spicata	0.3	0.1	0.1	2			0.002	2.5	31.37	71.6	2.4	15.16	28.7
Epiprinus sp.	0.01	0.01					0.01	13.8	13.8	13.8	8.5	8.5	8.5
Erythrina fusca	0.2	0.04	2	0.3	0.01		0.1	3.1	22.94	65	3	6.73	13.5
Erythrina sp.	0.01	0.01					0.01	15.2	15.2	15.2	8.5	8.5	8.5

<i>Erythrina stricta</i>	0.1	0.1	0.3	0.05	1		0.1	4.7	22.67	48.2	3.4	10.83	20
<i>Erythrina suberosa</i>	0.001	0.001		0.01				32.6	43	53.4	13.6	18.35	23.1
<i>Erythrina variegata</i>	0.01	0.01	0.02	0.04				16	28.93	36.1	11.2	11.6	12.4
<i>Eucalyptus alba</i>	2	1	0.4	1	2		3	2.7	19.13	47.6	3.6	14.76	41.1
<i>Eucalyptus camaldulensis</i>	9	4	0.2		3		11	2	18.04	55.5	1.5	14.24	34.5
<i>Eucalyptus citriodora</i>	0.2	0.1	0.1	1			0.2	4.4	21.79	34.7	5.2	17.88	31.4
<i>Euonymus pendulus</i>	0.1	0.04		1				4	28.02	53.7	4.8	12.43	17.8
<i>Euphorbia antiquorum</i>	0.003	0.003			0.1			15.4	15.4	15.4	5.7	5.7	5.7
<i>Eurya acuminata</i>	0.02	0.02		0.2				11.9	18.21	30.1	2.1	10.11	13.5
<i>Excoecaria agallocha</i>	83	9	523			2111	0.1	2	9.61	46.7	1.5	6.96	22.4
<i>Excoecaria indica</i>	0.1	0.03				2	0.02	7.2	13.01	22.1	3	5.84	9.82
<i>Ficus altissima</i>	0.02	0.02	0.1	0.03	0.2		0.01	25.3	61.19	275	5.6	14.6	37.8
<i>Ficus auriculata</i>	0.004	0.004		0.03				13.1	13.1	13.1	7.2	7.2	7.2
<i>Ficus benghalensis</i>	0.03	0.03		0.04	0.1		0.03	19.7	77.11	200.2	7.3	15.84	38.2
<i>Ficus benjamina</i>	0.01	0.01					0.01	32.2	46.25	55.3	12.8	15.73	17.6
<i>Ficus carica</i>	6	1	0.1	37			2	2	11.46	78.5	1.7	6.52	27.9
<i>Ficus elastica</i>	1	0.2		8			0.01	2	11.38	23.01	2	7.37	13.6
<i>Ficus hirta</i>	0.1	0.01		0.03			0.1	7.3	26.38	36.3	6.5	12.55	16.4
<i>Ficus hispida</i>	1	0.3	2	7			0.3	2.2	14.91	81.2	1.45	8.7	25.4
<i>Ficus lamponga</i>	1	0.3		11			0.004	2.1	15.47	59.6	2.2	8.74	21.4
<i>Ficus racemosa</i>	1	0.1		4	0.1		0.002	2	21.01	69.5	2	10.64	31.5
<i>Ficus religiosa</i>	0.04	0.04	0.04				0.1	11.2	43.58	84.8	4.9	14.96	22.4
<i>Ficus semicordata</i>	0.1	0.02		0.1			0.1	4.3	14.54	31.6	1.8	7.81	10.8

<i>Ficus subincisa</i>	0.002	0.002					0.002	31.7	31.7	31.7	10.6	10.6	10.6
<i>Ficus virens</i>	0.03	0.03		0.04	0.1		0.03	15.4	40.09	95.2	3.8	11.29	16.1
<i>Firmiana colorata</i>	0.02	0.02		0.1	0.3		0.002	11.7	25.34	53.2	5.1	8.8	12.5
<i>Flacourtia indica</i>	0.004	0.004		0.03				12.6	12.6	12.6	5.61	5.61	5.61
<i>Flacourtia jangomas</i>	0.02	0.02		0.1	0.2			11.5	17.52	27	6.3	11.1	15.5
<i>Garcinia cowa</i>	0.4	0.04		2			0.2	2.3	21.48	58.4	3.1	11.17	23.76
<i>Garcinia morella</i>	0.004	0.004		0.03				14.8	14.8	14.8	4.5	4.5	4.5
<i>Garcinia xanthochymus</i>	0.3	0.1		2				2.1	25.89	57.6	2.3	16.25	33.1
<i>Gardenia coronaria</i>	0.3	0.1	0.1	2	1		0.01	2.1	17.47	56.2	3.42	9.12	28.4
<i>Garuga floribunda</i>	0.1	0.02		0.3			0.02	2	7.53	10.5	1.4	3.37	5.1
<i>Garuga pinnata</i>	1	0.2	1	4			0.1	2	26.4	85.5	2.1	10.95	21.5
<i>Glochidion arborescens</i>	0.04			0.3				5.5	5.5	5.5	3.8	3.8	3.8
<i>Glochidion assamicum</i>	0.04			0.3				7.7	7.7	7.7	2.9	2.9	2.9
<i>Glochidion lanceolarium</i>	1	0.05	0.3	1		25		2	12.91	49.8	2	6	17.2
<i>Glochidion multiloculare</i>	0.004	0.004		0.03				19.8	19.8	19.8	9.9	9.9	9.9
<i>Glochidion sphaerogynum</i>	0.001	0.001		0.01				46.5	46.5	46.5	14.6	14.6	14.6
<i>Glycosmis pentaphylla</i>	0.2	0.2		0.03	1		0.2	6.9	17.45	36.2	4.2	9	14.2
<i>Gmelina arborea</i>	3	1	0.1	18	2		0.4	2.05	26.14	117.1	2.1	12.64	31.6
<i>Gossypium arboreum</i>	0.03	0.03	0.02	0.02			0.03	10	33.44	66.3	2.1	15.28	22.8
<i>Grewia asiatica</i>	0.2	0.1		0.3	3		0.1	2.8	11.73	31.5	2.5	6.19	12.4
<i>Grewia nervosa</i>	2	0.2	1	18	0.4		0.01	2	13.36	56.6	1.5	7.27	24.4
<i>Grewia serrulata</i>	0.01	0.01		0.1				18.7	29.96	58.5	7	13.34	25.32

<i>Grewia tiliifolia</i>	0.01	0.01					0.01	10.8	10.8	10.8	8.1	8.1	8.1
<i>Haematoxylon campechianum</i>	0.1	0.1	0.2	0.01	0.1		0.1	10	19.59	40	4.9	10.22	25
<i>Haldina cordifolia</i>	0.1	0.1		1	0.2		0.03	6.2	23.16	50.7	6.2	10.07	20
<i>Harpullia cupanioides</i>	0.04	0.04					0.1	14.8	26.43	37.9	4.2	7.18	13.7
<i>Helicia excelsa</i>	0.1						0.1	2.3	2.3	2.3	1.8	1.8	1.8
<i>Helicteres papilio</i>	1	1	1	1	0.5		1	3.5	19.66	42.6	2.3	5.88	12.5
<i>Heritiera fomes</i>	52	10		2		1744		2	13.01	117	1.4	9.47	24.8
<i>Hevea brasiliensis</i>	1	1		4	9			6.3	27.26	65	3.5	13.7	22.3
<i>Hibiscus macrophyllus</i>	0.1	0.1		1				10.5	20.65	49.5	6	12.51	21.3
<i>Hibiscus tiliaceus</i>	0.5	0.03	0.2			15	0.03	2	6.07	16.5	3	4.45	8
<i>Holarrhena pubescens</i>	0.1	0.1		0.2			0.1	11.1	19.35	29.6	2.3	8.87	13.4
<i>Holigarna caustica</i>	0.2	0.1		2				3.6	31.12	66.2	4.1	15.84	32.5
<i>Hopea odorata</i>	0.1	0.04		1			0.01	2.4	19.62	70.3	3.1	12.23	29.6
<i>Hymenodictyon orixense</i>	0.1	0.1	0.2	1			0.002	11.6	38.99	105.1	3.1	14.18	28.8
<i>Ilex godajam</i>	0.01	0.01		0.1				19.4	22.65	25.9	12.5	12.85	13.2
<i>Ilex umbellulata</i>	0.01	0.01		0.1				18.9	27.53	39.3	8.7	15.6	21.4
<i>Intsia bijuga</i>	0.1	0.01		0.01		4		3.3	15.77	31.5	3.4	9.48	22
<i>Ixora subsessilis</i>	0.04	0.001		0.3				2	16.15	30.3	2.6	13.5	24.4
<i>Jatropha curcas</i>	0.01	0.01			0.2			11	15.7	20.4	6.5	6.85	7.2
<i>khaya anthotheca</i>	0.03	0.03					0.03	10.3	11.7	12.8	3.8	7.73	10.4
<i>Kleinhovia hospita</i>	0.01	0.01					0.01	22	22	22	8.1	8.1	8.1
<i>Knema bengalensis</i>	0.1	0.01		1				2.8	28.88	65.5	3.2	15.78	32.8
<i>Lagerstroemia indica</i>	0.05	0.01		0.4				2.4	20.33	34.5	3.1	14.03	23.3

Lagerstroemia macrocarpa	0.1	0.02		0.5				2.3	29.82	55.6	3.7	13.47	23.2
Lagerstroemia parviflora	0.02	0.02		0.2				10.6	23.94	38.2	9.1	12.21	18
Lagerstroemia speciosa	0.3	0.1		0.5			0.3	3.3	20.25	48.3	2.1	8.71	22.2
Lagerstroemia thorelii	1	0.1		1	0.2		0.4	2.7	30.09	63.8	2.6	13.86	26.4
Lagerstroemia tomentosa	0.01	0.01		0.1				19.1	23.53	32.3	2.6	9.57	15.4
Lannea coromandelica	3	1	1	1	1		3	2.3	16.04	53.3	2	7.23	23
Lawsonia inermis	0.2		1				0.2	4.3	5.67	8.1	2.2	3.8	4.9
Lepisanthes rubiginosa	0.005	0.005			0.1		0.002	19.7	25.05	30.4	14.35	14.83	15.3
Lepisanthes senegalensis	0.02	0.02		0.1	0.01			13.3	19.82	33.1	9.2	11.14	16.1
Lepisanthes tetraphylla	0.2	0.001		1				2	8.96	32.4	1.7	4.24	13.1
Leucaena leucocephala	0.3	0.2	1	0.03			0.3	3.8	17.77	44.8	3.1	10.63	19.4
Licuala peltata	0.04	0.004		0.3				3.2	10.5	17.8	2.8	2.98	3.15
Limonia acidissima	0.1	0.03					0.1	2	12.8	18.6	1.8	7.53	11
Litchi chinensis	1	1		0.5	1		2	2	19.33	57	1.5	7.39	15
Lithocarpus acuminatus	0.01	0.01		0.1				12.6	18.3	25.1	8.9	11.63	15.7
Lithocarpus elegans	0.01	0.01		0.04				27.9	33.93	37.4	17.6	18.87	19.8
Lithocarpus polystachyus	0.004	0.004		0.04				19.3	29.35	39.4	10.8	18.45	26.1
Lithocarpus sp.	0.001	0.001		0.01				49.4	49.4	49.4	18.12	18.12	18.12
Litsea glutinosa	0.1	0.02		0.3			0.02	3.1	14.28	21	4.2	6.78	10.8

Litsea monopetala	1	0.1	0.1	4			0.1	2.1	20.93	58.8	1.9	10.2	21.7
Litsea panamanja	0.004	0.004		0.03				18.4	18.4	18.4	9.1	9.1	9.1
Litsea semecarpifolia	0.1	0.01		1				8.21	9.71	10.51	5.71	6.91	8.1
Macaranga denticulata	6	1		48	1			2	11.28	75.4	1.6	8.12	22.6
Macropanax oreophilus	0.04			0.3				4.1	4.1	4.1	4.2	4.2	4.2
Madhuca longifolia	0.002	0.002					0.002	34.6	34.6	34.6	14.6	14.6	14.6
Maesa indica	0.03	0.03					0.04	10.1	20.63	34	6.2	11.78	18.9
Mallotus philippensis	0.1	0.1	1				0.1	10.4	16.76	33.8	3.5	7.11	12.4
Mallotus roxburghianus	0.1	0.01		1			0.01	6	17.88	32.4	3.7	8.98	14.6
Mangifera indica	15	8	18	5	11		18	2	27.81	125.7	1.5	10.01	36.5
Mangifera longipes	0.2	0.04	0.1	1			0.04	2.8	23.9	80.6	2.2	10.85	24.3
Mangifera sylvatica	0.03	0.03					0.03	13.5	15.8	19.8	4.4	6.67	9.7
Manilkara zapota	0.03	0.03					0.04	10.4	19.48	34.8	5.2	8.58	14.3
Melia azedarach	0.2	0.1	0.3	0.4			0.2	3.1	18.36	33.2	2.7	11.09	18
Meliosma pinnata	0.4	0.1		3				2	17.67	73.9	2.2	11.74	25.5
Meliosma simplicifolia	1	0.1		7				2	12.48	70.1	2.1	6.52	18.6
Memecylon edule	1		35					2	3.47	7.8	2.1	3.67	7.21
Mesua ferrea	0.2	0.1		2			0.01	2.3	32.24	68.4	1.9	17.47	27.32
Meyna spinosa	0.004	0.004		0.03				10.2	10.2	10.2	7.3	7.3	7.3
Michelia champaca	0.04	0.04		0.2			0.01	10	15.81	48.6	8.7	14.82	32.5

Micromelum minutum	0.1	0.01		1			0.01	3.5	57.59	97.8	2.16	14.74	22.3
Miliusa longiflora	0.004	0.004		0.03				11.01	11.01	11.01	7.3	7.3	7.3
Miliusa velutina	0.02	0.02		0.1	0.2		0.01	11.6	15.36	22.5	5.8	9	14.2
Millingtonia hortensis	0.2	0.1			0.1		0.3	3.5	15.27	31.6	3.84	10.11	20.7
Mimusops elengi	0.01	0.01					0.01	13.9	13.9	13.9	10.4	10.4	10.4
Mischocarpus pentapetalus	0.004	0.004		0.03				11.1	11.1	11.1	18.2	18.2	18.2
Mitragyna parvifolia	0.01	0.01		0.03			0.01	11.5	15.05	18.6	6.5	8.75	11
Mitragyna rotundifolia	0.2	0.01		2			0.002	2.2	14.68	38.7	2.2	9.09	18.3
Morinda angustifolia	0.1	0.01		1				3.3	8.1	12.7	2.2	6.47	12.8
Morinda citrifolia	0.03	0.03					0.04	13	21.58	34	6.2	12.78	18.4
Moringa concanensis	1	0.3	0.1	0.1	0.1		1	3.5	16.8	51	2	7.3	18.4
Moringa oleifera	1	0.4		0.1	0.1		1	4.5	21.51	41.7	3.1	8.39	19.2
Morus alba	0.02	0.02					0.02	10.8	11.15	11.5	6.6	7.3	8
Murraya koenigii	0.1	0.1		0.03			0.1	12.3	18.9	32	4.8	12.64	15
Murraya paniculata	0.1						0.1	5.7	5.7	5.7	5.8	5.8	5.8
Neolamarckia cadamba	1	1	1	2	1		1	2.4	26.45	119.6	1.58	13.41	28
Neonauclea sessilifolia	1	0.1		8				2.2	18.87	89.3	2	8.62	22.5
Nyssa javanica	0.04	0.04		0.3				10.2	15.48	19.2	6.9	8.66	11.4
Ochna squarrosa	0.004	0.004		0.03				15.4	15.4	15.4	16.4	16.4	16.4
Ochna wallichii	0.2	0.04		1				2.5	18.09	45.2	2.3	8.11	18.17
Olea dioica	1	0.02		5				2.1	10.01	50.5	2.4	6.77	17.3
Olea sp.	0.03	0.03					0.04	15.6	17	18.1	8	10.75	13

<i>Oroxylum indicum</i>	0.2	0.03		1			0.01	2.5	11.74	23.1	2.1	7.85	14.7
Other unknowntree	2	0.3	3	4	2	9	1	2.2	20	103.2	1.4	10.36	39
<i>Pajanelia longifolia</i>	0.1	0.03		1				5.6	16.9	40	3.5	7.57	14.2
<i>Palaquium polyanthum</i>	0.004	0.004		0.03				17	17	17	11.4	11.4	11.4
<i>Pavetta indica</i>	0.04			0.3				2.5	2.5	2.5	2	2	2
<i>Persea bombycina</i>	0.04			0.3				2.8	2.8	2.8	3.9	3.9	3.9
<i>Phoebe pallida</i>	0.2	0.04		2			0.01	2.1	13.53	38.7	2.3	8.83	19.8
<i>Phoenix sp.</i>	1					25		2	3.07	4.8	2	2.6	4.37
<i>Phoenix sylvestris</i>	2	1	1	0.2	2		2	5.4	29.64	45.8	1.6	7.86	22.3
<i>Phyllanthus acidus</i>	0.02	0.02		0.03	0.2		0.01	12.8	30.62	51.3	5.31	11.85	17.3
<i>Phyllanthus emblica</i>	0.2	0.1		1	0.2		0.1	2.3	18.21	36.5	3.8	7.97	14.9
<i>Picrasma javanica</i>	0.1	0.01		1				2.3	9.26	28.4	2.8	5.3	9.4
<i>Pinus kesiya</i>	0.04	0.04			0.01		0.04	11.1	16.8	35	2.5	7.8	11.3
<i>Pithecellobium dulce</i>	0.004	0.004	0.1					22.8	26.5	30.2	7.2	8.05	8.9
<i>Plumeria alba</i>	0.1	0.1		1				10	19.32	55.5	9.2	16.64	28.3
<i>Plumeria obtusa</i>	0.004	0.004		0.03				12.4	12.4	12.4	12.9	12.9	12.9
<i>Podocarpus neriifolius</i>	0.02	0.02		0.01			0.02	13.8	27.6	53	5.1	14.63	33.5
<i>Polyalthia longifolia</i>	1	0.1	1		0.1		1	2.1	16.67	43.5	1.9	10.77	20.2
<i>Polyalthia obliqua</i>	0.002	0.002					0.002	38.4	38.4	38.4	18.2	18.2	18.2
<i>Pongamia pinnata</i>	0.3	0.2	0.2			0.1	0.3	8	21.85	39.9	3.4	8.16	15.5
<i>Premna bengalensis</i>	0.1			1				4.1	6.4	9.2	3.5	4.03	5.1

<i>Protium serratum</i>	0.3	0.2		3	1			4.4	20.79	63.4	4.3	11.55	28.6
<i>Prunus ceylanica</i>	0.1	0.01	0.2	1				3.4	9.48	18.5	3.1	6.5	11.1
<i>Psidium guajava</i>	2	0.3	3	1	4		2	2.2	9.82	21.1	2.1	5.63	11.2
<i>Pterocarpus indicus</i>	0.1						0.1	2	2	2	2.87	2.87	2.87
<i>Pterospermum acerifolium</i>	0.01	0.01					0.01	18.2	18.2	18.2	13.6	13.6	13.6
<i>Pterospermum semisagittatum</i>	0.05	0.01		0.3			0.01	2.4	6.7	11	2.9	4.55	6.2
<i>Pterygota alata</i>	0.2	0.1	2	0.4			0.1	7.5	22.88	46.2	5	13.87	27.6
<i>Punica granatum</i>	0.1						0.1	2.1	2.1	2.1	2.2	2.2	2.2
<i>Putranjiva roxburghii</i>	1	0.1					1	2.3	8.6	20	2.2	7.01	17.2
<i>Quercus gomeziana</i>	0.001	0.001		0.01				32.4	32.4	32.4	11.2	11.2	11.2
<i>Quercus oxyodon</i>	1	0.2		6				2.1	26.52	93.3	1.8	14.22	26.6
<i>Rhizophora apiculata</i>	0.01	0.01		0.03		0.2		20.1	48.19	73.2	10	20.82	34
<i>Rhizophora mucronata</i>	0.04	0.001		0.3				3.6	61.7	119.8	3.7	16.85	30
<i>Samanea saman</i>	5	3	24	0.05	2		5	2	35.74	110.8	1.7	14.85	37.5
<i>Sambucus javanica</i>	0.2	0.02		1				2.4	11.11	20.9	2.1	7.13	9.7
<i>Sapium indicum</i>	0.03	0.03	0.3	0.04			0.01	14.3	23.66	49.3	9.1	11.53	14.9
<i>Sapium insigne</i>	0.01	0.01		0.1				10.4	12.38	14.5	5.6	7.05	9.2
<i>Sapium sebiferum</i>	0.004	0.004		0.03				19.9	19.9	19.9	14.3	14.3	14.3
<i>Saraca asoca</i>	0.002	0.002					0.002	32.9	32.9	32.9	14.2	14.2	14.2
<i>Saraca indica</i>	0.01	0.01					0.01	17.5	17.5	17.5	11.5	11.5	11.5
<i>Scaphium scaphigerum</i>	0.01	0.01		0.1				10.5	13.4	16.3	10.1	11.7	13.3
<i>Schima wallichii</i>	1	0.4		6				2.1	27.6	88.4	1.7	12.46	28.35

Schleichera oleosa	0.1	0.03		1	0.3		0.01	2.1	23.19	45.8	2.75	11.1	19.4
Schleichera sp.	0.01	0.01		0.1				10.6	17.43	24.1	3.2	6.5	10.6
Semecarpus subpanduriformis	0.01	0.01		0.01			0.01	10.9	22.05	33.2	6.5	7.3	8.1
Senna siamea	1	0.2		4			0.03	2.1	18.45	51.4	1.8	11.23	26.4
Shorea robusta	4	2		3	76		0.4	2	19.07	64.5	1.8	11.69	26
Sonneratia alba	0.004	0.004	0.1					12.8	12.8	12.8	11.7	11.7	11.7
Sonneratia apetala	4	3	104			1	0.002	2	28.63	96.2	1.8	16.88	48
Sonneratia caseolaris	0.4	0.3	10			1		5	18.61	39.3	3.4	12.15	19.3
Sonneratia griffithii	0.004	0.004	0.1					15.7	15.7	15.7	12.9	12.9	12.9
Spondias pinnata	1	0.4	1	0.5	0.03		1	4.5	24.92	53.7	3.3	11.18	28.2
Spondias purpurea	0.02	0.02					0.02	19.9	30.87	44.8	10.4	15.57	22.1
Sterculia foetida	0.4	0.1		3			0.02	2.4	19.32	58.8	2.5	9.49	17.3
Sterculia parviflora	0.1	0.03		1				3.6	23.15	64	3.1	12.16	25
Sterculia villosa	0.4	0.1		3				2.3	22.81	63.8	2.4	12.83	27.8
Stereospermum tetragonum	1	0.2		9				2.1	25.47	109	2.4	11.88	27.2
Streblus asper	1	0.2	2	0.1	1		1	2.5	18	36.5	2.3	8.09	23.4
Swietenia macrophylla	2	1					2	2.2	23.2	53.4	1.5	13.22	22.4
Swietenia mahagoni	26	11	15	1	16		31	2	18.96	86.1	1.4	11.38	27.3
Swietenia sp.	0.4	0.1	7				0.2	2.1	13.75	31.7	2.5	8.25	19.7
Swintonia floribunda	0.2	0.01		1				2.2	73.61	150.2	3.1	24.97	45.3
Symplocos racemosa	0.004	0.004		0.04				24.2	27.6	31	10.7	13.9	17.1

Syzygium aqueum	0.1	0.04					0.2	3.1	19.39	38.9	1.9	9.19	17.4
Syzygium claviflorum	0.02	0.02		0.1			0.01	13.5	25.6	54.6	8.1	11.61	15.8
Syzygium cumini	1	1	0.2	2	2		1	2.7	27.11	141.7	2.3	11.11	27.2
Syzygium cymosum	0.004	0.004		0.03				13.1	13.1	13.1	8.2	8.2	8.2
Syzygium firmum	1	0.04		10				2	14.33	59	1.35	7.19	18.9
Syzygium formosum	0.02	0.02					0.02	11.9	12.4	12.9	7.2	7.65	8.1
Syzygium malaccense	0.1	0.05	0.3				0.2	6.1	17.36	29.4	3.4	7.98	12.5
Syzygium megacarpum	0.01	0.01		0.1				26.4	27	27.6	7.9	8	8.1
Syzygium oblatum	0.003	0.003			0.1			22	22	22	10.2	10.2	10.2
Syzygium praecox	0.5	0.2	0.1	3			0.1	2.8	27.13	78.3	2.8	15.89	33.4
Syzygium ramosissimum	0.001	0.001		0.01				39.5	39.5	39.5	18.8	18.8	18.8
Syzygium sp.	0.001	0.001		0.01				35.2	35.2	35.2	14.9	14.9	14.9
Syzygium tetragonum	0.01	0.01					0.01	23.1	23.1	23.1	9.7	9.7	9.7
Tamarindus indica	0.3	0.2	2	0.01	0.2		0.2	2.5	29.83	80	2.5	11.82	19.2
Tamarix indica	1		19					2.2	4.26	7.6	2.1	3.82	6.1
Tarenna campaniflora	0.004	0.004		0.03				12.2	12.2	12.2	7.2	7.2	7.2
Tectona grandis	15	5	0.02	117	5		1	1.8	15.14	48	1.4	10.1	29.6
Tectona sp.	0.1						0.1	4.5	4.5	4.5	6.2	6.2	6.2
Terminalia alata	0.01	0.01					0.01	28.3	28.3	28.3	13.2	13.2	13.2
Terminalia arjuna	0.1	0.05		0.1	0.1		0.2	10.4	27.96	47.5	7.2	12.65	21.1
Terminalia bellirica	0.4	0.1		3			0.02	2.7	27.79	102	2.5	10.51	28.6

Terminalia catappa	0.01	0.01		0.03			0.002	15	24.35	33.7	9	12.5	16
Terminalia chebula	0.04	0.002		0.3				3.1	32.63	51.4	4	19.05	35.2
Terminalia citrina	0.1	0.1		1	0.1		0.1	2.1	20.96	52.1	2.7	8.05	16.8
Tetrameles nudiflora	0.2	0.03		2				5.9	43.07	134.6	5.2	16.05	31
Thespesia populnea	0.1	0.02	2					6	13.77	28.6	4.2	6.55	9.8
Thyrsostachys oliveri	0.001	0.001			0.01			30.9	30.9	30.9	11.4	11.4	11.4
Toona ciliata	0.04	0.04		0.1			0.04	10.3	21.16	32.3	5.7	11.24	16.3
Trema orientalis	2	0.3		8	0.2		1	2	13.69	64.1	1.4	7.98	23
Trema tomentosa	0.001	0.001			0.01			33.6	33.6	33.6	17.9	17.9	17.9
Trevesia palmata	0.01	0.01		0.1				17.1	18	18.9	7.3	8.95	10.6
Trewia nudiflora	1	1	0.1	1	3		2	2.5	25.78	59.5	2	11.62	30.8
Turpinia pomifera	0.01	0.01		0.1				13	25.87	51.1	5.7	8.23	12.9
Vatica lanceifolia	0.1						0.1	6.5	6.5	6.5	7.3	7.3	7.3
Vatica sp.	0.001	0.001		0.01				54.1	54.1	54.1	22.8	22.8	22.8
Vitex glabrata	1	0.2		5			0.01	2.4	19.4	56.8	1.9	9.63	20.2
Vitex negundo	0.004	0.004		0.03				17.3	17.3	17.3	11.2	11.2	11.2
Vitex peduncularis	0.1	0.1		0.4			0.01	11.8	27.77	64.2	5.7	13.44	20.2
Vitex pinnata	0.03	0.03		0.3				11.1	40.34	96.5	4.1	12.53	19.5
Vitex quinata	0.05	0.05		0.1			0.04	10.8	17.5	35.4	6.1	9.6	20.9
Walsura robusta	0.01	0.01		0.04				14.1	38.5	51.4	12.3	15.67	17.5
Xylocarpus granatum	0.3	0.1				11		3.6	30.54	64.5	4.3	10.59	23
Xylocarpus mekongensis	1	0.3				22		2	29.71	84.1	2.9	10.47	19.5
Ziziphus jujuba	0.1	0.1	0.02	0.1	1		0.1	10.4	21.69	34.1	4.5	7.21	12.4

Appendix 4.1.2 (c): Tree density by DBH classes and Zones

DBH class (cm)	Density (stem/ha)	Total no. of stems (Million)	Distribution of density into Zones				
			CZ	HZ	SZ	SuZ	VZ
2-<10	344	4621	740	485	99	6200	86
10-<20	92	1244	146	102.35	108	574	69
20-<30	26	353	59	30	47	78	21
30-<40	7	90	19	7	9	7	6
40-<50	2	27	4	3	3	2	2
50-<60	0.6	9	1	1	0.94	0.6	0.5
60-<70	0.2	3	0.3	0.6	0.2	0.4	0.2
70-<80	0.1	2	0.1	0.4	0.04	0.2	0.1
80-<90	0.06	0.8	0.04	0.3		0.1	0.03
90-<100	0.03	0.4	0.02	0.06		0.1	0.02
≥100	0.04	0.6		0.2		0.2	0.02

Appendix 4.1.2 (d): Tree density by Height classes and Zones

Height class (m)	Density (stem/ha)	Total no. of stems (Million)	Distribution of density into Zones				
			CZ	HZ	SZ	SuZ	VZ
<5	249	3353	528	364	84	4751	50
5-<10	142	1913	261	179	85	1722	72
10-<15	61	815	121	63	66	338	46
15-<20	17	231	44	19	29	46	14
20-<25	2	31	14	3	4	2	2
25-<30	0.3	4	0.02	0.1	0.3		0.2
30-<35	0.1	1	0.1	0.5	0.03		0.03

35-<40	0.02	0.2		0.1			0.004
40-<45	0.02	0.3	0.1	0.09	0.08		
≥ 45	0.003	0.1		0.01		0.02	0.002

Appendix 4.2.1 (a): Seedling species composition and density per family and Zones

Family	Number of seedling species	Seedling density (seedling/ha)	Total No. of seedling (million)	Distribution of seedling density into Zones (seedling/ha)				
				CZ	HZ	SZ	SuZ	VZ
Anacardiaceae	7	23.26	312.87	28.58	37.61	31.36		21.20
Annonaceae	4	11.49	154.59	4.08	1.54	0.83		14.44
Apocynaceae	4	4.50	60.50	0.00	35.76	0.00	0.00	0.11
Aquifoliaceae	1	0.38	5.11		3.08			
Araliaceae	3	0.64	8.65		0.92			0.69
Arecaceae	8	72.98	981.56	105.12	79.22	6.60	524.48	56.15
Bignoniaceae	4	1.19	16.01		8.94	0.00		0.11
Bixaceae	1	0.08	1.02		0.62	0.00		0.00
Bombacaceae	2	0.66	8.84	0.00	2.47	0.00		0.46
Boraginaceae	2	0.42	5.62		3.39			0.00
Burseraceae	2	1.56	20.96	0.00	12.64	0.00		0.00
Caesalpiniaceae	8	10.29	138.39	2.04	6.78	0.83	264.42	1.83
Capparaceae	1	0.97	13.05		0.00			1.26
Celastraceae	1	0.49	6.65		4.01			
Clusiaceae	6	5.39	72.43	7.14	33.60			1.26
Combretaceae	4	4.62	62.17	2.04	29.90	10.73		0.57
Dichapetalaceae	1	0.04	0.51		0.31			

Dilleniaceae	2	0.65	8.68	0.00	0.62	3.30		0.57
Dipterocarpaceae	6	168.27	2263.20		62.57	4065.17		3.55
Ebenaceae	5	28.01	376.74	74.50	2.47	0.00		32.32
Elaeocarpaceae	2	0.11	1.53		0.92	0.00		0.00
Euphorbiaceae	24	107.68	1448.31	1008.31	181.86	47.86	1366.92	5.39
Fabaceae	5	3.47	46.67	3.06	2.16	0.00	0.00	4.01
Fagaceae	7	9.77	131.39		65.66	0.00	55.73	0.00
Flacourtiaceae	2	1.56	21.03		1.23	0.00		1.83
Juglandaceae	1	0.19	2.58	2.04	0.92			0.00
Lamiaceae	1	0.53	7.12					0.69
Lauraceae	13	11.58	155.78	0.00	42.54	4.13		8.02
Lecythidaceae	1	4.23	56.90	9.18	0.00	0.00		5.04
Lythraceae	6	1.78	23.94	14.29	4.32	0.00		0.92
Malvaceae	3	1.27	17.12	13.27	0.92		21.85	0.00
Melastomataceae	1	11.15	149.94	293.92				
Meliaceae	15	57.33	771.10	50.01	22.19	46.21	876.32	31.97
Mimosaceae	12	57.35	771.42	24.49	76.14	686.61		26.47
Moraceae	12	111.95	1505.80	85.73	304.54	18.98		91.45
Moringaceae	2	0.72	9.68	0.00	1.54	0.00		0.69
Myrsinaceae	2	1.66	22.35		0.00		52.45	0.11
Myrtaceae	15	54.46	732.55	46.95	120.83	70.97		45.49
Nyssaceae	1	0.30	4.09		2.47			
Ochnaceae	1	3.62	48.65		0.00			4.70
Oleaceae	1	1.44	19.43		11.71			0.00
Other	NA	2.33	31.33	0.00	4.01	22.28	0.00	1.26
Oxalidaceae	2	0.12	1.62	0.00	0.00	0.83		0.11
Poaceae	3	2.19	29.47	0.00	16.34	0.00	0.00	0.23
Proteaceae	1	3.18	42.72					4.13
Punicaceae	1	0.18	2.37					0.23
Rhamnaceae	1	0.30	4.07	0.00	0.31	0.00		0.34

Rhizophoraceae	5	224.91	3025.00	93.89	2.77	0.00	7364.55	0.11
Rosaceae	1	0.04	0.51	0.00	0.31			
Rubiaceae	10	6.94	93.36	3.06	47.47	0.00		1.26
Rutaceae	9	21.48	288.95	15.31	8.01	19.81		24.87
Sabiaceae	2	1.79	24.03		14.49	0.00		
Sapindaceae	5	2.10	28.28		0.92	5.78		2.29
Simaroubaceae	1	0.72	9.72		5.86			
Sonneratiaceae	3	6.19	83.31	140.84	0.00	0.00	28.41	0.00
Sterculiaceae	10	307.01	4129.32	9.18	22.81	0.00	10094.03	1.38
Symplocaceae	1	0.04	0.51		0.31			
Tamaricaceae	1	3.48	46.81	59.19				1.60
Theaceae	3	2.50	33.62		18.19	6.60		
Thymelaeaceae	1	0.33	4.44		2.16	1.65		0.00
Tiliaceae	6	22.07	296.78	2.04	71.82	23.93	65.56	13.29
Ulmaceae	1	0.99	13.29		8.01	0.00		0.00
Urticaceae	1	0.19	2.56		1.54			
Verbenaceae	11	31.38	422.06	1.02	192.34	11.55	227.27	0.46

Appendix 4.2.1 (b): Seedling density by species and Zones

Species ¹	Seedling density (seedling/ha)	Total No. of seedling (million)	Seedling density by Zones (seedling/ha)				
			CZ	HZ	SZ	SuZ	VZ
Averrhoa bilimbi	0.03	0.43			0.83		0.00
Cananga sp.	0.03	0.43			0.83		
Ficus altissima	0.03	0.43	0.00	0.00	0.83		0.00
Excoecaria indica	0.03	0.44				1.09	0.00

¹ Unidentified seedlings were presented as Other Unknown seedlings

Aidia sp.	0.04	0.51		0.31			
Alstonia scholaris	0.04	0.51		0.31			0.00
Casearia vareca	0.04	0.51		0.31			
Cassia bakeriana	0.04	0.51		0.31			0.00
Chaetocarpus castanocarpus	0.04	0.51		0.31			
Cinnamomum iners	0.04	0.51		0.31			
Citrus reticulata	0.04	0.51		0.31			
Dehaasia kurzii	0.04	0.51		0.31			
Dichapetalum gelonioides	0.04	0.51		0.31			
Elaeocarpus tectorius	0.04	0.51		0.31	0.00		0.00
Lagerstroemia speciosa	0.04	0.51		0.31			0.00
Lepisanthes tetraphylla	0.04	0.51		0.31			
Limonia acidissima	0.04	0.51		0.31			0.00
Lithocarpus sp.	0.04	0.51		0.31			
Macropanax oreophilus	0.04	0.51		0.31			
Mischocarpus pentapetalus	0.04	0.51		0.31			
Mitragyna parvifolia	0.04	0.51		0.31			0.00
Murraya koenigii	0.04	0.51		0.31			0.00
Oroxylum indicum	0.04	0.51		0.31			0.00
Prunus ceylanica	0.04	0.51	0.00	0.31			
Sapium insigne	0.04	0.51		0.31			
Symplocos racemosa	0.04	0.51		0.31			
Walsura robusta	0.04	0.51		0.31			
Avicennia alba	0.04	0.52	1.02			0.00	0.00
Syzygium cymosum	0.04	0.52	1.02	0.00			
Bauhinia purpurea	0.07	0.94		0.31	0.83		
Actinodaphne angustifolia	0.08	1.02		0.62			

Adansonia digitata	0.08	1.02		0.62			
Bixa orellana	0.08	1.02		0.62	0.00		0.00
Butea monosperma	0.08	1.02		0.62	0.00		0.00
Clerodendrum inerme	0.08	1.02		0.62			
Dysoxylum binectariferum	0.08	1.02		0.62			
Ehretia serrata	0.08	1.02		0.62			0.00
Elaeocarpus floribundus	0.08	1.02		0.62	0.00		0.00
Glochidion multiloculare	0.08	1.02	0.00	0.62			
Hopea odorata	0.08	1.02		0.62			0.00
Lagerstroemia tomentosa	0.08	1.02		0.62			
Licuala peltata	0.08	1.02		0.62			
Litsea semecarpifolia	0.08	1.02		0.62			
Pajanelia longifolia	0.08	1.02		0.62			
Syzygium sp.	0.08	1.02		0.62			
Trevesia palmata	0.08	1.02		0.62			
Wendlandia tinctoria	0.08	1.02		0.62			
Abroma augusta	0.09	1.19		0.00			0.11
Ardisia sp.	0.09	1.19		0.00			0.11
Averrhoa carambola	0.09	1.19	0.00	0.00	0.00		0.11
Cinnamomum verum	0.09	1.19					0.11
Dillenia indica	0.09	1.19	0.00	0.00			0.11
Ficus benghalensis	0.09	1.19		0.00	0.00		0.11
Lepisanthes rubiginosa	0.09	1.19		0.00	0.00		0.11
Millingtonia hortensis	0.09	1.19			0.00		0.11
Syzygium malaccense	0.09	1.19	0.00				0.11
Albizia julibrissin	0.10	1.29			2.48		
Xylocarpus granatum	0.10	1.32				3.28	
Brownlowia elata	0.11	1.53		0.92			

Camellia sp.	0.11	1.53		0.92			
Cedrela cumingianus	0.11	1.53		0.92	0.00		0.00
Dipterocarpus costatus	0.11	1.53		0.92			
Garcinia morella	0.11	1.53		0.92			
Hibiscus macrophyllus	0.11	1.53		0.92			
Lagerstroemia macrocarpa	0.11	1.53		0.92			
Litsea panamanja	0.11	1.53		0.92			
Melaleuca leucadendron	0.11	1.53		0.92			
Pterospermum acerifolium	0.11	1.53		0.92			0.00
Scaphium scaphigerum	0.11	1.53		0.92			
Sterculia parviflora	0.11	1.53		0.92			
Syzygium aqueum	0.11	1.53		0.92			0.00
Toona ciliata	0.11	1.53		0.92			0.00
Vitex quinata	0.11	1.53		0.92			0.00
Meyna spinosa	0.12	1.56	3.06	0.00			
Haematoxylon campechianum	0.13	1.70	0.00	0.31	0.00		0.11
Cinnamomum tamala	0.15	2.05		1.23			0.00
Glochidion arborescens	0.15	2.05		1.23			
Mitragyna rotundifolia	0.15	2.05		1.23			0.00
Calophyllum polyanthum	0.15	2.08	4.08	0.00			
Beilschmiedia assamica	0.16	2.15			4.13		
Vitex pinnata	0.16	2.21		0.62			0.11
Acacia suma	0.18	2.37					0.23
Bambusa vulgaris	0.18	2.37	0.00	0.00	0.00	0.00	0.23
Calophyllum inophyllum	0.18	2.37					0.23
Punica granatum	0.18	2.37					0.23
Alphonsea ventricosa	0.19	2.56		1.54			0.00
Boehmeria glomerulifera	0.19	2.56		1.54			

<i>Cryptocarya amygdalina</i>	0.19	2.56		1.54			
<i>Derris robusta</i>	0.19	2.56		1.54	0.00		0.00
<i>Gardenia coronaria</i>	0.19	2.56	0.00	1.54	0.00		0.00
<i>Garuga pinnata</i>	0.19	2.56	0.00	1.54			0.00
<i>Knema bengalensis</i>	0.19	2.56		1.54			
<i>Lithocarpus acuminatus</i>	0.19	2.56		1.54			
<i>Rhizophora apiculata</i>	0.19	2.56		1.54	0.00	0.00	
<i>Engelhardtia spicata</i>	0.19	2.58	2.04	0.92			0.00
<i>Albizia lebbeck</i>	0.20	2.75	0.00	0.62	3.30		0.00
<i>Citrus limon</i>	0.20	2.75	3.06				0.11
<i>Albizia odoratissima</i>	0.23	3.07	0.00	1.85	0.00		0.00
<i>Castanopsis tribuloides</i>	0.23	3.07		1.85			
<i>Mangifera longipes</i>	0.23	3.10	3.06	0.92			0.00
<i>Carallia brachiata</i>	0.24	3.23		1.23			0.11
<i>Spondias pinnata</i>	0.24	3.23	0.00	1.23	0.00		0.11
<i>Aleurites moluccana</i>	0.26	3.56					0.34
<i>Erythrina stricta</i>	0.26	3.56	0.00	0.00	0.00		0.34
<i>Phyllanthus reticulatus</i>	0.26	3.56					0.34
<i>Haldina cordifolia</i>	0.27	3.58		2.16	0.00		0.00
<i>Lagerstroemia parviflora</i>	0.27	3.58		2.16			
<i>Syzygium fruticosum</i>	0.27	3.58		2.16			
<i>Eurya acuminata</i>	0.29	3.96		0.31	6.60		
<i>Diospyros ramiflora</i>	0.30	4.07		0.31			0.34
<i>Ziziphus jujuba</i>	0.30	4.07	0.00	0.31	0.00		0.34
<i>Dipterocarpus gracilis</i>	0.30	4.09		2.47	0.00		0.00
<i>Eucalyptus alba</i>	0.30	4.09	0.00	2.47	0.00		0.00
<i>Eucalyptus citriodora</i>	0.30	4.09	0.00	2.47			0.00
<i>Nyssa javanica</i>	0.30	4.09		2.47			
<i>Vitex peduncularis</i>	0.30	4.09		2.47			0.00
<i>Croton joufra</i>	0.31	4.16	8.16	0.00			0.00

Melia azedarach	0.32	4.28	3.06	0.92			0.11
Antidesma sp.	0.32	4.31			8.25		
Aquilaria agallocha	0.33	4.44		2.16	1.65		0.00
Tamarindus indica	0.34	4.60	2.04	0.00	0.00		0.34
Baccaurea ramiflora	0.34	4.60		2.77	0.00		0.00
Chukrasia tabularis	0.34	4.60		2.77	0.00		0.00
Cordia grandis	0.34	4.60		2.77			0.00
Diospyros nigricans	0.35	4.77		2.16			0.11
Pterygota alata	0.36	4.79	3.06	1.23			0.11
Alseodaphne petiolaris	0.38	5.11		3.08			
Castanopsis armata	0.38	5.11		3.08			
Grewia serrulata	0.38	5.11		3.08			
Ilex umbellulata	0.38	5.11		3.08			
Terminalia arjuna	0.38	5.17		0.00	9.90		0.00
Bridelia tomentosa	0.42	5.62		3.39			0.00
Senna sp.	0.44	5.93					0.57
Citrus medica	0.47	6.34	4.08	1.85	0.00		0.11
Clausena excavata	0.49	6.65		4.01			
Euonymus pendulus	0.49	6.65		4.01			
Thespesia populnea	0.50	6.77	13.27				
Alstonia neriifolia	0.51	6.81		3.39			0.11
Sonneratia caseolaris	0.52	7.05	11.23			3.28	
Aralia sp.	0.53	7.12					0.69
Grewia sp.	0.53	7.12					0.69
Lawsonia inermis	0.53	7.12	0.00				0.69
Moringa concanensis	0.53	7.12	0.00	0.00	0.00		0.69
Ocimum tenuiflorum	0.53	7.12					0.69
Holigarna caustica	0.53	7.16		4.32			
Morinda angustifolia	0.53	7.16		4.32			
Terminalia citrina	0.55	7.34	2.04	3.08	0.00		0.11

Dillenia pentagyna	0.56	7.49		0.62	3.30		0.46
Carallia sp.	0.56	7.49		0.00		18.58	
Bombax ceiba	0.58	7.81	0.00	1.85	0.00		0.46
Albizia chinensis	0.58	7.83	0.00	4.01	0.00		0.11
Annona reticulata	0.60	8.02	4.08	0.00	0.00		0.57
Garcinia xanthochymus	0.61	8.18		4.93			
Mallotus roxburghianus	0.61	8.18		4.93			0.00
Phyllanthus emblica	0.61	8.18		4.93	0.00		0.00
Cassia fistula	0.62	8.31	0.00	0.00	0.00		0.80
Bambusa sp.	0.65	8.69		5.24	0.00		0.00
Pterospermum semisagittatum	0.65	8.69		5.24			0.00
Senna siamea	0.65	8.69		5.24			0.00
Hibiscus tiliaceus	0.66	8.82	0.00			21.85	0.00
Meliosma pinnata	0.68	9.20		5.55	0.00		
Eucalyptus camaldulensis	0.69	9.29	0.00	2.16	4.13		0.34
Picrasma javanica	0.72	9.72		5.86			
Lagerstroemia thorelii	0.76	10.17	14.29	0.31	0.00		0.23
Premna bengalensis	0.76	10.23		6.16			
Aglaia odoratissima	0.79	10.68		0.00			1.03
Albizia lucidior	0.79	10.68	0.00	0.00	0.00		1.03
Sterculia foetida	0.80	10.74		6.47			0.00
Diospyros montana	0.81	10.93	21.43				0.00
Swintonia floribunda	0.84	11.25		6.78			
Terminalia bellirica	0.87	11.68		6.78	0.83		0.00
Sterculia villosa	0.87	11.76		7.09			
Allophylus cobbe	0.88	11.87		0.00			1.15
Putranjiva roxburghii	0.88	11.87					1.15
Ficus racemosa	0.91	12.25		5.24	0.00		0.34

Antidesma khasianum	0.93	12.52	9.18	2.77	1.65		0.23
Crateva magna	0.97	13.05		0.00			1.26
Stereospermum tetragonum	0.99	13.29		8.01			
Trema orientalis	0.99	13.29		8.01	0.00		0.00
Aporosa aurea	1.03	13.81	0.00	8.32			0.00
Litchi chinensis	1.06	14.21		0.31	5.78		1.03
Meliosma simplicifolia	1.10	14.83		8.94			
Helicteres papilio	1.11	14.99	6.12	0.00	0.00		1.15
Gluta elegans	1.14	15.34		9.25			
Lannea coromandelica	1.15	15.43	0.00	0.00	0.00		1.49
Sonneratia alba	1.20	16.14	31.64				
Antidesma acidum	1.22	16.36		9.86	0.00		
Aporosa wallichii	1.33	17.90		10.79			
Cocos nucifera	1.36	18.32	1.02	0.00	0.00		1.72
Melocanna baccifera	1.37	18.41		11.10	0.00		0.00
Protium serratum	1.37	18.41		11.10	0.00		
Gmelina arborea	1.39	18.74	0.00	9.86	0.00		0.23
Dipterocarpus turbinatus	1.41	18.92		11.40			0.00
Pongamia pinnata	1.44	19.36	3.06			0.00	1.72
Olea dioica	1.44	19.43		11.71			
Dalbergia sissoo	1.50	20.17					1.95
Flacourtia jangomas	1.53	20.52		0.92	0.00		1.83
Vitex glabrata	1.56	20.96		12.64			0.00
Artocarpus lacucha	1.57	21.07	0.00	5.55	0.00		1.15
Aegiceras corniculatum	1.57	21.16				52.45	
Holarrhena pubescens	1.63	21.99		13.25			0.00
Syzygium oblatum	1.65	22.22		1.23	0.00		1.95
Castanopsis lanceifolia	1.67	22.48		0.00		55.73	
Callicarpa arborea	1.67	22.50		13.56			0.00

Neolamarckia cadamba	1.69	22.77	0.00	5.86	0.00		1.26
Mesua ferrea	1.71	23.01		13.87			0.00
Hevea brasiliensis	1.72	23.20		12.95	3.30		
Xylocarpus mekongensis	1.74	23.36				57.91	
Ficus hirta	1.76	23.73		0.00			2.29
Grewia asiatica	1.93	25.90		0.92	23.93		1.15
Brownlowia tersa	1.97	26.45				65.56	
Trewia nudiflora	2.03	27.24	0.00	5.24	8.25		1.38
Phoebe pallida	2.08	27.94		15.41			0.23
Schima wallichii	2.09	28.12		16.95			
Cerbera odollam	2.32	31.19		18.80		0.00	
Other unknowntree	2.33	31.33	0.00	4.01	22.28	0.00	1.26
Aegle marmelos	2.58	34.72	0.00	0.00	16.50		2.52
Garcinia cowa	2.62	35.25	3.06	13.87			1.03
Aglaiia spectabilis	2.67	35.86	1.02	5.24	3.30		2.41
Ficus lamponga	2.72	36.64	1.02	20.34			0.23
Samanea saman	2.80	37.62	13.27	0.00	0.00		2.98
Anogeissus acuminata	2.82	37.98		20.04	0.00		0.46
Syzygium praecox	2.86	38.52	7.14	13.87			1.15
Albizia procera	2.88	38.79	2.04	8.32	4.95		2.06
Psidium guajava	2.91	39.17	2.04	1.85	5.78		3.09
Azadirachta indica	3.01	40.42	0.00	0.31	8.25		3.44
Artocarpus heterophyllus	3.13	42.09	6.12	6.78	9.90		2.18
Helicia excelsa	3.18	42.72					4.13
Castanopsis indica	3.19	42.95		25.89	0.00		0.00
Borassus flabellifer	3.31	44.54	22.45	0.31	3.30		2.98
Drypetes eglanulosa	3.40	45.72		7.09	26.41		1.95
Tamarix indica	3.48	46.81	59.19				1.60
Ochna wallichii	3.62	48.65		0.00			4.70

Litsea glutinosa	3.67	49.37		4.01			4.13
Neonauclea sessilifolia	3.84	51.64		31.13			
Aphanamixis polystachya	3.95	53.17	19.39	2.16	3.30		3.67
Aglaia chittagonga	4.05	54.49	14.29	5.24	3.30		3.55
Quercus oxyodon	4.07	54.71		32.98			
Artocarpus chama	4.09	55.04	0.00	31.75	0.00		0.23
Barringtonia acutangula	4.23	56.90	9.18		0.00		5.04
Areca catechu	4.25	57.11	32.66	1.23	0.83		3.67
Sonneratia apetala	4.47	60.12	97.97			25.13	0.00
Litsea monopetala	4.52	60.82	0.00	14.49			3.55
Syzygium firmum	4.65	62.51		32.67			0.80
Dipterocarpus alatus	4.90	65.96		39.76			
Ficus elastica	5.47	73.63		44.39			0.00
Cleistocalyx nervosum	5.89	79.27	7.14	21.27			3.90
Diospyros malabarica	5.97	80.34	13.27		0.00		7.10
Leucaena leucocephala	5.98	80.39	3.06	0.00	48.69		5.16
Glochidion lanceolarium	6.59	88.57	0.00	19.11		140.95	
Citrus maxima	6.77	91.00	8.16	1.23	3.30		8.02
Avicennia officinalis	6.82	91.70	0.00			227.27	
Albizia richardiana	7.59	102.14	5.10	2.77	0.00		9.17
Cynometra ramiflora	8.01	107.71		0.62		264.42	
Corypha taliera	9.43	126.81		76.44			
Polyalthia longifolia	10.68	143.59	0.00		0.00		13.87
Macaranga denticulata	10.76	144.70		87.23	0.00		
Glycosmis pentaphylla	10.85	145.96		0.00	0.00		14.10
Memecylon edule	11.15	149.94	293.92				
Phoenix sylvestris	11.92	160.38	48.99	0.00	2.48		12.95
Bruguiera sexangula	12.68	170.61				422.86	
Ficus hispida	13.00	174.88	61.23	44.39			6.76
Swietenia mahagoni	14.42	194.01	12.25	2.77	28.06		16.27

Acacia mangium	14.61	196.54	0.00	6.78	354.86		0.00
Phoenix sp.	15.73	211.61				524.48	
Grewia nervosa	17.15	230.67	2.04	66.89	0.00		11.46
Tectona grandis	18.48	248.56	0.00	145.49	11.55		0.11
Mangifera indica	19.13	257.37	25.51	15.10	31.36		19.60
Diospyros blancoi	20.57	276.63	39.80				24.75
Acacia auriculiformis	21.41	287.95	1.02	51.78	272.33		5.73
Streblus asper	23.34	313.99	14.29	0.00	3.30		29.45
Aglaia cucullata	25.60	344.30				815.13	1.49
Caryota mitis	26.90	361.77		0.62			34.84
Syzygium cumini	34.50	464.02	29.60	38.22	61.07		34.15
Ficus carica	55.82	750.85	3.06	146.11	4.95		48.70
Excoecaria agallocha	74.33	999.70	990.96			1224.88	0.00
Shorea robusta	161.46	2171.68		7.40	4065.17		3.55
Cerriops decandra	211.23	2841.11	93.89			6923.12	
Heritiera fomes	302.79	4072.55		0.00		10094.03	

Appendix 4.2.3 (a): Seedling to tree recruitment percentage by species and Zones

Scientific name ²	Seedling to tree recruitment (%)	Recruitment percentage by Zones (%)				
		CZ	HZ	SZ	SuZ	VZ
Abroma augusta	5.70					
Acacia auriculiformis	22.82	11.50	13.05	15.65		54.26
Acacia mangium	5.50		49.93	0.45		

² Unidentified seedling species were provided as Other Unknown

Actinodaphne angustifolia	2.60		2.60			
Aegle marmelos	7.70			5.72		7.94
Aglaia chittagonga	9.10		3.48	24.41		11.51
Aglaia cucullata	0.32				0.33	0.13
Aglaia odoratissima	3.72					3.26
Aglaia spectabilis	14.51		6.46	9.77		17.95
Aidia sp.	154.03		154.03			
Albizia chinensis	53.54		25.72			184.22
Albizia lebbeck	406.90		187.24	3.31		
Albizia lucidior	30.97					26.00
Albizia odoratissima	56.17		47.35			
Albizia procera	31.60	30.47	31.33	6.61		34.85
Albizia richardiana	23.95	17.13	19.67			24.33
Aleurites moluccana	3.26					3.26
Allophylus cobbe	0.84					
Alphonsea ventricosa	6.49		1.95			
Alseodaphne petiolaris	0.98		0.98			
Alstonia neriifolia	8.75		0.16			49.45
Alstonia scholaris	43.93		21.26			
Annona reticulata	45.11	4.88				57.68
Anogeissus acuminata	8.52		7.90			11.06
Antidesma acidum	0.51					
Antidesma khasianum	4.68		3.64	3.46		16.38
Aphanamixis polystachya	7.25	3.60	25.06	7.32		6.52
Aporosa aurea	0.84					
Aquilaria agallocha	36.10		28.40	0.87		
Ardisia sp.	0.75					
Areca catechu	480.29	182.10	190.43	97.66		631.07
Artocarpus chama	7.96		5.73			48.27
Artocarpus heterophyllus	138.02	53.34	56.69	159.04		185.52

Artocarpus lacucha	11.44		3.83			14.99
Averrhoa bilimbi	53.79					
Averrhoa carambola	160.03					146.48
Avicennia alba	62.79	39.06				
Avicennia officinalis	3.90				2.95	
Azadirachta indica	39.02		171.21	17.58		39.43
Baccaurea ramiflora	10.71		4.53			
Bambusa vulgaris	45.07					39.06
Barringtonia acutangula	5.11					5.09
Bixa orellana	24.44		4.88			
Bombax ceiba	75.58		14.12			110.43
Borassus flabellifer	29.78	4.19	8.66	94.01		36.05
Bridelia tomentosa	3.03		2.66			
Brownlowia elata	25.88		25.88			
Bruguiera sexangula	2.40				2.40	
Butea monosperma	25.40					
Callicarpa arborea	20.68		20.59			
Calophyllum inophyllum	4.88					4.88
Calophyllum polyanthum	2.13					
Carallia brachiata	5.13		2.44			9.77
Carallia sp.	6.23					
Caryota mitis	0.39		9.77			0.36
Cassia bakeriana	45.33					
Cassia fistula	12.01					6.32
Castanopsis armata	5.23		5.23			
Castanopsis indica	5.27		4.90			
Castanopsis lanceifolia	0.38					
Castanopsis tribuloides	6.90		6.90			
Cedrela cumingianus	11.66		7.09			
Cerbera odollam	1.56		1.42			

Chaetocarpus castanocarpus	39.06		39.06			
Chukrasia tabularis	70.10		36.78			
Cinnamomum tamala	5.67					
Citrus maxima	5.64	2.44	59.89	12.21		4.32
Citrus medica	1.58		3.26			
Citrus reticulata	29.30		29.30			
Clausena excavata	0.75		0.75			
Cleistocalyx nervosum	2.97		1.33			4.66
Cocos nucifera	290.29	752.63				272.40
Cordia grandis	12.54		8.68			
Corypha taliera	1.51		1.51			
Crateva magna	2.86					2.09
Croton joufra	23.82	2.44				
Cynometra ramiflora	0.37				0.37	
Dalbergia sissoo	18.33					18.33
Derris robusta	20.16		10.80			
Dillenia indica	122.22					96.55
Dillenia pentagyna	6.06		20.71	7.32		2.44
Diospyros blancoi	1.64	4.51				1.41
Diospyros malabarica	6.61	0.75				7.13
Diospyros montana	1.99	0.93				
Diospyros nigricans	3.14		4.19			
Diospyros ramiflora	8.54					9.77
Dipterocarpus alatus	1.70		1.70			
Dipterocarpus costatus	1.15		1.15			
Dipterocarpus gracilis	7.66		3.96			
Dipterocarpus turbinatus	6.70		6.59			
Drypetes glandulosa	0.90		3.50			
Dysoxylum binectariferum	2.60		2.60			
Ehretia serrata	11.33					

Elaeocarpus floribundus	267.98		61.81			
Elaeocarpus tectorius	136.47		42.53			
Engelhardtia spicata	35.32	4.88	54.64			
Erythrina stricta	23.54					16.85
Eucalyptus alba	476.12		6.10			
Eucalyptus camaldulensis	594.79			27.47		1533.27
Eucalyptus citriodora	40.08					
Euonymus pendulus	8.84		8.84			
Eurya acuminata	7.79		60.33			
Excoecaria agallocha	12.14	1.00			23.55	
Excoecaria indica	101.40				48.83	
Ficus altissima	68.22			27.08		
Ficus benghalensis	35.49					25.35
Ficus carica	1.16	3.26	2.47			0.53
Ficus elastica	3.68		3.53			
Ficus hirta	0.38					0.17
Ficus hispida	2.43	0.33	4.03			1.68
Ficus lamponga	9.46		10.15			1.73
Ficus racemosa	7.83		10.31			0.58
Flacourtia jangomas	1.38		13.02			
Garcinia cowa	1.47		1.75			1.09
Garcinia morella	3.26		3.26			
Garcinia xanthochymus	17.38		17.38			
Gardenia coronaria	32.95		26.43			
Garuga pinnata	121.12		85.55			
Glochidion lanceolarium	0.70		1.48			
Glochidion multiloculare	4.88		4.88			
Glycosmis pentaphylla	1.73					1.60
Gmelina arborea	88.42		73.89			140.49
Grewia asiatica	3.04			0.73		5.86

Grewia nervosa	0.93		1.64			0.10
Grewia serrulata	3.28		3.28			
Haematoxylon campechianum	86.48		1.73			110.88
Haldina cordifolia	28.69		16.99			
Helicteres papilio	46.52	5.17				51.82
Heritiera fomes	3.28				3.28	
Hevea brasiliensis	40.17		22.17	264.40		
Hibiscus macrophyllus	91.93		91.93			
Hibiscus tiliaceus	5.10					
Holarrhena pubescens	6.11		1.36			
Holigarna caustica	14.25		14.25			
Hopea odorata	57.01		45.68			
Ilex umbellulata	2.13		2.13			
Knema bengalensis	7.59		7.59			
Lagerstroemia macrocarpa	16.48		16.48			
Lagerstroemia parviflora	7.47		7.47			
Lagerstroemia speciosa	169.07		55.75			
Lagerstroemia thorelii	16.22		138.10			35.91
Lagerstroemia tomentosa	10.63		10.63			
Lannea coromandelica	95.78					85.20
Lepisanthes rubiginosa	5.28					1.73
Lepisanthes tetraphylla	1.73		1.73			
Leucaena leucocephala	3.10	32.55				3.63
Licuala peltata	4.88		4.88			
Limonia acidissima	67.99					
Litchi chinensis	59.95		50.56	9.36		74.69
Lithocarpus acuminatus	5.86		5.86			
Lithocarpus sp.	1.73		1.73			
Litsea glutinosa	0.57		0.75			0.54
Litsea monopetala	2.70		3.56			2.00

Litsea panamanja	3.26		3.26			
Litsea semecarpifolia	9.77		9.77			
Macaranga denticulata	6.95		6.69			
Mallotus roxburghianus	1.52		0.11			
Mangifera indica	43.97	24.73	20.54	26.07		49.54
Mangifera longipes	16.01	3.26	4.99			
Melia azedarach	35.29	9.77	10.34			101.12
Meliosma pinnata	15.67		15.67			
Meliosma simplicifolia	5.23		5.23			
Mesua ferrea	3.75		3.25			
Meyna spinosa	3.20					
Millingtonia hortensis	65.60					62.06
Mischocarpus pentapetalus	9.77		9.77			
Mitragyna parvifolia	32.43		9.77			
Mitragyna rotundifolia	3.88		2.87			
Morinda angustifolia	2.09		2.09			
Moringa concanensis	53.40					48.93
Murraya koenigii	149.77		9.77			
Neolamarckia cadamba	41.72		10.83			61.44
Neonauclea sessilifolia	1.94		1.94			
Nyssa javanica	12.21		12.21			
Ochna wallichii	1.08					
Olea dioica	1.63		1.63			
Oroxylum indicum	91.02		68.36			
Other unknowntree	14.37		15.17	1.15		14.52
Pajanelia longifolia	39.93		39.93			
Phoebe pallida	2.09		1.83			4.88
Phoenix sylvestris	9.65	2.85		72.24		10.07
Phyllanthus emblica	10.88		5.60			
Picrasma javanica	1.03		1.03			

<i>Polyalthia longifolia</i>	1.29					1.23
<i>Pongamia pinnata</i>	12.48	6.51				12.76
<i>Protium serratum</i>	13.81		11.94			
<i>Prunus ceylanica</i>	19.89					
<i>Psidium guajava</i>	8.83	9.77	8.14	6.98		9.04
<i>Pterospermum acerifolium</i>	7.55					
<i>Pterospermum semisagittatum</i>	1.33					
<i>Pterygota alata</i>	40.83	20.11	5.32			129.31
<i>Putranjiva roxburghii</i>	5.86					5.86
<i>Quercus oxyodon</i>	5.55		5.55			
<i>Rhizophora apiculata</i>	4.96		2.08			
<i>Samanea saman</i>	111.30	108.29				110.06
<i>Sapium insigne</i>	39.06		39.06			
<i>Scaphium scaphigerum</i>	6.51		6.51			
<i>Schima wallichii</i>	17.06		17.06			
<i>Senna siamea</i>	27.24		24.10			
<i>Shorea robusta</i>	1.16		2.18	1.07		6.04
<i>Sonneratia alba</i>	0.32	0.32				
<i>Sonneratia apetala</i>	74.24	88.19			5.28	
<i>Sonneratia caseolaris</i>	53.25	60.90			20.11	
<i>Spondias pinnata</i>	150.08		15.51			367.90
<i>Sterculia foetida</i>	13.43		11.27			
<i>Sterculia parviflora</i>	23.94		23.94			
<i>Sterculia villosa</i>	7.50		7.50			
<i>Stereospermum tetragonum</i>	20.72		20.72			
<i>Streblus asper</i>	0.93	3.49		5.32		0.81
<i>Swietenia mahagoni</i>	76.59	41.17	53.31	29.07		82.67
<i>Swintonia floribunda</i>	1.31		1.31			
<i>Symplocos racemosa</i>	11.50		11.50			
<i>Syzygium aqueum</i>	32.90					

Syzygium cumini	1.97	0.67	1.95	1.25		2.09
Syzygium cymosum	9.59					
Syzygium firmum	0.85		0.98			
Syzygium malaccense	51.92					39.06
Syzygium oblatum	0.19					
Syzygium praecox	5.96	1.40	5.63			7.99
Syzygium sp.	0.87		0.87			
Tamarindus indica	62.49	27.01				70.14
Tectona grandis	24.68		23.03	19.17		388.41
Terminalia arjuna	11.94			0.96		
Terminalia bellirica	13.51		11.78			
Terminalia citrina	12.95		5.23			54.02
Thespesia populnea	3.76	3.76				
Toona ciliata	37.88		7.66			
Trema orientalis	25.46		4.16			
Trevesia palmata	9.77		9.77			
Trewia nudiflora	34.31		4.47	20.40		56.38
Vitex glabrata	10.80		10.25			
Vitex peduncularis	18.42		15.59			
Vitex pinnata	20.23		43.70			
Vitex quinata	40.56		10.34			
Walsura robusta	13.23		13.23			
Xylocarpus granatum	87.03				87.03	
Xylocarpus mekongensis	17.72				17.72	
Ziziphus jujuba	49.33		29.30			43.47

Appendix 4.2.3 (b): Recruitment percentage by zones

Zone	Seedling to sapling recruitment (%)	Sapling to tree recruitment (%)	Seedling to tree recruitment percentage (%)
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Coastal	35.25	30.92	10.90
Hill	30.61	30.03	9.19
Sal	1.95	170.43	3.32
Sundarbans	29.60	10.67	3.16
Villages	20.73	114.65	23.77

Section 5: Growing stock and biomass appendices

Appendix 5.1.1 (a): Growing stock by families and Zones

Family	Growing stock (m3/ha)	Total growing stock (million m3)	Distribution of growing stock in Zones				
			CZ	HZ	SZ	SuZ	VZ
Anacardiaceae	2.27553	30.60616	1.30450	2.87129	2.02559		2.32919
Annonaceae	0.08261	1.11117	0.07428	0.01194	0.06048		0.09868
Apocynaceae	0.09407	1.26519	0.01225	0.33986	0.00660	0.01756	0.06611
Aquifoliaceae	0.00682	0.09179		0.05533			
Araliaceae	0.00115	0.01551		0.00935			0.00000
Arecaceae	5.02739	67.61889	9.27180	1.09898	4.19278	0.00000	5.68554
Asclepiadaceae	0.00706	0.09502		0.02642			0.00494
Bignoniaceae	0.11980	1.61134		0.87298	0.00478		0.01552
Bixaceae	0.00114	0.01540		0.00447	0.00921		0.00031
Bombacaceae	0.40835	5.49237	0.07268	0.96362	0.35100		0.35474
Boraginaceae	0.01427	0.19192		0.03715			0.01258
Burseraceae	0.12316	1.65648	0.04033	0.82837	0.13242		0.01860
Caesalpiniaceae	0.18361	2.46953	0.17327	0.28360	0.14199	0.12057	0.17265
Capparaceae	0.00529	0.07117		0.00440			0.00617
Caprifoliaceae	0.00285	0.03830		0.02309			
Casuarinaceae	0.00731	0.09837	0.15447			0.00313	0.00177

Celastraceae	0.01956	0.26305		0.15857			
Clusiaceae	0.14529	1.95413	0.00000	1.12489			0.00851
Combretaceae	0.20908	2.81218	0.00000	1.31569	0.08320		0.05661
Datisceae	0.07139	0.96020		0.57884			
Dilleniaceae	0.05767	0.77573	0.02667	0.26653	0.01870		0.02996
Dipterocarpaceae	0.81490	10.96048		3.74652	8.12765		0.04846
Ebenaceae	0.12041	1.61959	0.18192	0.02849	0.02764		0.14148
Elaeocarpaceae	0.10080	1.35574		0.37710	0.45161		0.04774
Euphorbiaceae	1.50700	20.26936	1.34311	2.06018	3.21520	26.46092	0.36811
Fabaceae	0.19223	2.58553	0.13156	0.11862	0.03293	0.00600	0.22230
Fagaceae	0.28083	3.77724		1.85881	0.00121	0.00000	0.06694
Flacourtiaceae	0.00560	0.07526		0.04241	0.00941		0.00000
Juglandaceae	0.05063	0.68099	0.00564	0.39862			0.00163
Lauraceae	0.05445	0.73231	0.00286	0.34341	0.00000		0.01557
Lecythidaceae	0.04076	0.54823	0.00000	0.00633	0.17301		0.04320
Lythraceae	0.09419	1.26688	0.00000	0.58875	0.05514		0.02525
Magnoliaceae	0.00655	0.08806		0.04978			0.00053
Malvaceae	0.04923	0.66220	0.09581	0.20839		0.00000	0.02584
Meliaceae	3.44573	46.34542	1.15993	1.73632	2.52534	5.59915	3.79467
Mimosaceae	3.87474	52.11562	6.83919	4.97317	6.54801		3.56892
Moraceae	1.64342	22.10424	0.70382	5.55430	3.10867		1.05339
Moringaceae	0.11955	1.60800	0.04087	0.12762	0.08741		0.12841
Myrsinaceae	0.00827	0.11122		0.01159		0.00000	0.00888
Myrtaceae	1.72241	23.16662	0.29752	1.21511	0.96014		1.97941
Nyssaceae	0.00452	0.06078		0.03664			
Ochnaceae	0.00718	0.09656		0.05821			0.00000
Oleaceae	0.01082	0.14549		0.03999			0.00764
Other	0.09616	1.29335	0.00000	0.47922	0.02769	0.58947	0.02377
Oxalidaceae	0.02279	0.30654	0.00868	0.00839	0.00955		0.02735
Pinaceae	0.00254	0.03417			0.01076		0.00276

Poaceae	0.01361	0.18309	0.03749	0.00000	0.04752	0.07363	0.01057
Podocarpaceae	0.00446	0.06002		0.02733			0.00142
Rhamnaceae	0.02467	0.33181	0.00507	0.02306	0.14432		0.02082
Rhizophoraceae	0.09698	1.30437	0.00000	0.37076	0.00735	1.67654	0.00088
Rosaceae	0.00099	0.01338	0.02623	0.00000			
Rubiaceae	0.40232	5.41123	0.07948	1.75713	0.16503		0.22884
Rutaceae	0.19478	2.61977	0.02588	0.14959	0.25571		0.21485
Sabiaceae	0.03893	0.52360		0.31564	0.00000		
Sapindaceae	0.13504	1.81624		0.13981	0.19601		0.14311
Sapotaceae	0.00663	0.08915		0.00540			0.00774
Simaroubaceae	0.00169	0.02267		0.01367			
Sonneratiaceae	1.18854	15.98606	27.23350	1.00612	0.01359	0.89569	0.00541
Staphyleaceae	0.00162	0.02186		0.01318			
Sterculiaceae	1.95488	26.29336	0.25342	0.65458	0.10673	58.41615	0.14039
Symplocaceae	0.00185	0.02495		0.01504			
Theaceae	0.16586	2.23080		1.34480	0.00000		
Thymelaeaceae	0.01308	0.17597		0.08135	0.01053		0.00343
Tiliaceae	0.07012	0.94307	0.00000	0.51201	0.04854	0.00000	0.00660
Ulmaceae	0.04756	0.63968		0.12198	0.02770		0.04083
Urticaceae	0.00265	0.03571		0.02153			
Verbenaceae	1.02304	13.75995	0.47756	6.17697	0.75075	3.89561	0.12612

Appendix 5.1.1 (b): Growing stock of the trees of Bangladesh by species and Zone

Species	Growing stock (m3/ha)	Total growing stock (million m3)	Distribution of growing stock by species					Origin
			CZ	HZ	SZ	SuZ	VZ	

Abroma augusta	0.0016	0.0216		0.0130			0.0000	Native
Acacia auriculiformis	0.5831	7.8430	0.0198	0.8283	5.1894		0.3621	Introduced
Acacia catechu	0.0056	0.0747		0.0039	0.0025		0.0065	Introduced
Acacia farnesiana	0.0044	0.0587	0.0187		0.0032		0.0046	Native
Acacia longifolia	0.0010	0.0137			0.0263			Native
Acacia mangium	0.1212	1.6305	0.0099	0.5408	0.1813		0.0612	Introduced
Acacia nilotica	0.0157	0.2117	0.0771				0.0167	Introduced
Actinodaphne angustifolia	0.0090	0.1216		0.0733				Native
Adenanthera pavonina	0.0005	0.0074			0.0141			Introduced
Aegle marmelos	0.0471	0.6339	0.0043	0.0094	0.1758		0.0506	Native
Aglaiia chittagonga	0.0594	0.7995	0.0000	0.0489	0.0850		0.0651	Native
Aglaiia cucullata	0.0131	0.1768				0.2298	0.0081	Native
Aglaiia odoratissima	0.0026	0.0346		0.0023			0.0030	Native
Aglaiia spectabilis	0.0915	1.2301	0.0000	0.1149	0.0649		0.0971	Native
Aidia sp.	0.0373	0.5017		0.3025				Native
Albizia chinensis	0.3665	4.9289	0.0588	1.0256	0.2547		0.2959	Native
Albizia lebbeck	0.5116	6.8815	1.0414	0.7496	0.0598		0.4901	Native
Albizia lucidior	0.1222	1.6437	0.1067	0.0506	0.0913		0.1408	Native
Albizia odoratissima	0.0742	0.9982	0.0645	0.5037	0.0375		0.0106	Native
Albizia procera	0.3265	4.3912	0.2072	1.0807	0.0712		0.2371	Native
Albizia richardiana	0.5070	6.8194	0.2238	0.1594	0.0324		0.6203	Introduced
Albizia sp.	0.0022	0.0301					0.0029	Native
Aleurites moluccana	0.0010	0.0139					0.0013	Native
Allophylus cobbe	0.0006	0.0085		0.0051			0.0000	Native

Alphonsea ventricosa	0.0007	0.0094		0.0020			0.0006	Native
Alseodaphne petiolaris	0.0004	0.0053		0.0032				Native
Alstonia macrophylla	0.0042	0.0561	0.0123	0.0099			0.0032	Introduced
Alstonia neriifolia	0.0235	0.3167		0.0045			0.0299	Native
Alstonia scholaris	0.0040	0.0542		0.0193			0.0021	Native
Anacardium occidentale	0.0213	0.2867	0.2634	0.0278			0.0103	Introduced
Anisoptera scaphula	0.0013	0.0170		0.0102				Native
Annona reticulata	0.0260	0.3496	0.0207	0.0032	0.0038		0.0320	Native
Annona squamosa	0.0047	0.0625	0.0451				0.0038	Native
Anogeissus acuminata	0.1216	1.6357		0.8890	0.0385		0.0136	Native
Antidesma acidum	0.0006	0.0082		0.0000	0.0156			Native
Antidesma khasianum	0.0145	0.1949	0.0000	0.0253	0.0703		0.0112	Native
Aphanamixis polystachya	0.0443	0.5952	0.0650	0.1711	0.0362		0.0250	Native
Aporosa aurea	0.0004	0.0049	0.0000	0.0000			0.0005	Native
Aquilaria agallocha	0.0131	0.1760		0.0814	0.0105		0.0034	Native
Ardisia sp.	0.0014	0.0192		0.0116			0.0000	Native
Areca catechu	1.8512	24.8992	5.1438	0.2180	0.0715		2.1125	Introduced
Artocarpus chama	0.1212	1.6300	0.0103	0.8409	0.0746		0.0184	Native
Artocarpus heterophyllus	0.7633	10.2667	0.4234	0.9235	2.7174		0.6856	Introduced
Artocarpus lacucha	0.0329	0.4426	0.0579	0.0983	0.0345		0.0224	Native

Artocarpus sp.	0.0018	0.0244					0.0024	Native
Averrhoa bilimbi	0.0016	0.0210			0.0000		0.0020	Native
Averrhoa carambola	0.0212	0.2855	0.0087	0.0084	0.0095		0.0253	Native
Avicennia alba	0.0135	0.1817	0.2008			0.0658	0.0051	Native
Avicennia officinalis	0.1233	1.6585	0.2222			3.8298		Native
Azadirachta indica	0.1126	1.5151	0.0224	0.0479	0.0814		0.1334	Native
Azadirachta sp.	0.0081	0.1088					0.0105	Native
Baccaurea ramiflora	0.0037	0.0503		0.0179	0.0285		0.0006	Native
Balanostreblus ilicifolius	0.0011	0.0147		0.0008	0.0257			Native
Bambusa jaintiana	0.0029	0.0392		0.0000	0.0000		0.0038	Native
Bambusa vulgaris	0.0104	0.1395	0.0375	0.0000	0.0391	0.0736	0.0068	Native
Barringtonia acutangula	0.0400	0.5377	0.0000		0.1730		0.0432	Native
Bhesa robusta	0.0005	0.0061		0.0037				Native
Bixa orellana	0.0011	0.0154		0.0045	0.0092		0.0003	Native
Bombax ceiba	0.3835	5.1585	0.0727	0.9024	0.3062		0.3346	Native
Bombax insigne	0.0248	0.3338		0.0612	0.0448		0.0202	Native
Borassus flabellifer	0.8743	11.7588	0.4418	0.0324	3.1547		0.9495	Introduced
Bouea oppositifolia	0.0017	0.0234		0.0000			0.0023	Native
Bridelia squamosa	0.0003	0.0037			0.0071			Native
Bridelia tomentosa	0.0066	0.0888		0.0396			0.0022	Native
Brownlowia elata	0.0236	0.3180		0.1917				Native
Bruguiera gymnorrhiza	0.0071	0.0956			0.0073	0.2276		Native

Bruguiera sexangula	0.0406	0.5462				1.3538		Native
Butea monosperma	0.0038	0.0517		0.0000	0.0090		0.0045	Native
Calliandra umbrosa	0.0014	0.0190		0.0115				Native
Callicarpa arborea	0.0603	0.8112		0.4683			0.0033	Native
Calophyllum inophyllum	0.0020	0.0264					0.0026	Native
Calophyllum polyanthum	0.0101	0.1362	0.0000	0.0821				Native
Calotropis gigantea	0.0071	0.0950		0.0264			0.0049	Native
Canarium resiniferum	0.0005	0.0068			0.0130			Native
Carallia brachiata	0.0012	0.0156		0.0039			0.0009	Native
Carallia sp.	0.0063	0.0851		0.0513		0.0000		Native
Careya arborea	0.0008	0.0105		0.0063				Native
Caryota mitis	0.0302	0.4063		0.0123			0.0373	Native
Caryota urens	0.0003	0.0046					0.0004	Native
Cassia bakeriana	0.0019	0.0249		0.0000			0.0024	Native
Cassia fistula	0.0139	0.1866	0.0344	0.0079	0.0452		0.0128	Native
Cassia javanica	0.0014	0.0190		0.0114				Native
Cassia roxburghii	0.0043	0.0577					0.0056	Native
Castanopsis armata	0.0061	0.0816		0.0492				Native
Castanopsis castanicaarpa	0.0494	0.6648		0.0449			0.0570	Native
Castanopsis indica	0.0788	1.0593		0.5762	0.0012		0.0099	Native
Castanopsis lanceifolia	0.0041	0.0555		0.0334		0.0000		Native

Castanopsis tribuloides	0.0123	0.1649		0.0994				Native
Casuarina equisetifolia	0.0073	0.0984	0.1545			0.0031	0.0018	Native
Cedrela cumingianus	0.0037	0.0492		0.0105	0.0364		0.0012	Native
Celastrus paniculatus	0.0002	0.0026		0.0015				Native
Celastrus stylosus	0.0007	0.0094		0.0057				Native
Cerbera manghas	0.0006	0.0084		0.0000	0.0066	0.0123		Native
Cerbera odollam	0.0145	0.1955		0.1166		0.0053		Native
Chaetocarpus castanocarpus	0.0016	0.0214		0.0129				Native
Chukrasia tabularis	0.1017	1.3682		0.7023	0.1972		0.0097	Native
Cinnamomum tamala	0.0015	0.0196		0.0000			0.0019	Native
Citrus aurantium	0.0040	0.0544		0.0234			0.0015	Native
Citrus maxima	0.0421	0.5659	0.0215	0.0993	0.0379		0.0358	Native
Citrus medica	0.0003	0.0043	0.0000	0.0026	0.0000		0.0000	Native
Citrus reticulata	0.0006	0.0081		0.0049				Native
Clausena excavata	0.0002	0.0023		0.0014				Native
Clausena heptaphylla	0.0006	0.0078					0.0008	Native
Cleistocalyx nervosum	0.0616	0.8286	0.0000	0.1689			0.0530	Native
Cocos nucifera	1.8413	24.7661	3.3348	0.0970	0.4267		2.1903	Introduced
Cordia dichotoma	0.0012	0.0162					0.0016	Native
Cordia grandis	0.0108	0.1451		0.0372			0.0081	Native
Corypha taliera	0.0811	1.0913		0.6579				Native
Crateva magna	0.0053	0.0712		0.0044			0.0062	Native

Croton joufra	0.0140	0.1879	0.0352	0.0072			0.0153	Native
Croton tiglium	0.0003	0.0040					0.0004	Native
Cynometra ramiflora	0.0024	0.0319		0.0000		0.0791		Native
Dalbergia ovata	0.0109	0.1466	0.0098				0.0137	Native
Dalbergia reniformis	0.0002	0.0030			0.0057			Native
Dalbergia sissoo	0.1050	1.4129					0.1364	Introduced
Delonix regia	0.0106	0.1423	0.0066	0.0097			0.0119	Introduced
Dendrocnide sinuata	0.0027	0.0357		0.0215				Native
Derris robusta	0.0074	0.0997		0.0479	0.0114		0.0014	Native
Dillenia indica	0.0357	0.4801	0.0267	0.0960			0.0297	Native
Dillenia pentagyna	0.0174	0.2339		0.1333	0.0187		0.0003	Native
Dillenia scabrella	0.0046	0.0617		0.0372				Native
Dimocarpus longan	0.0158	0.2128					0.0205	Native
Diospyros blancoi	0.0336	0.4523	0.1655				0.0355	Native
Diospyros malabarica	0.0706	0.9497	0.0032		0.0276		0.0902	Native
Diospyros montana	0.0033	0.0444	0.0132				0.0036	Native
Diospyros nigricans	0.0035	0.0473		0.0285			0.0000	Native
Diospyros ramiflora	0.0068	0.0918		0.0000			0.0089	Native
Diospyros toposia	0.0025	0.0342					0.0033	Native
Dipterocarpus alatus	0.3267	4.3945		2.6491				Native
Dipterocarpus costatus	0.0097	0.1304		0.0786				Native

Dipterocarpus gracilis	0.0314	0.4223		0.2236	0.0200		0.0040	Native
Dipterocarpus tuberculatus	0.0098	0.1318		0.0795				Native
Dipterocarpus turbinatus	0.0731	0.9834		0.5824			0.0017	Native
Dodonaea viscosa	0.0021	0.0279		0.0168				Native
Drypetes assamica	0.0014	0.0190		0.0114				Native
Drypetes eglandulosa	0.0116	0.1565		0.0944	0.0000		0.0000	Native
Duabanga grandiflora	0.1278	1.7188		1.0061	0.0136		0.0041	Native
Dysoxylum binectariferum	0.0024	0.0327		0.0197				Native
Ehretia serrata	0.0023	0.0307		0.0000			0.0030	Native
Elaeocarpus floribundus	0.0843	1.1343		0.3365	0.4263		0.0341	Native
Elaeocarpus rugosus	0.0003	0.0045		0.0027				Native
Elaeocarpus tectorius	0.0156	0.2097		0.0336	0.0253		0.0136	Native
Elaeocarpus varunua	0.0005	0.0072		0.0043				Native
Engelhardtia spicata	0.0506	0.6810	0.0056	0.3986			0.0016	Native
Epiprinus sp.	0.0008	0.0102					0.0010	Native
Erythrina fusca	0.0111	0.1495	0.0492	0.0000	0.0069		0.0117	Native
Erythrina sp.	0.0009	0.0124					0.0012	Native
Erythrina stricta	0.0145	0.1948	0.0450	0.0385	0.0000		0.0104	Native
Erythrina suberosa	0.0029	0.0387		0.0233				Native
Erythrina variegata	0.0016	0.0221	0.0144	0.0089				Native

<i>Eucalyptus alba</i>	0.4359	5.8632	0.0714	0.0360	0.2817		0.5427	Introduced
<i>Eucalyptus camaldulensis</i>	0.8695	11.6946	0.0462	0.0000	0.4281		1.1054	Introduced
<i>Eucalyptus citriodora</i>	0.0607	0.8160	0.0625	0.0000			0.0757	Introduced
<i>Euonymus pendulus</i>	0.0182	0.2450		0.1477				Native
<i>Euphorbia antiquorum</i>	0.0002	0.0031			0.0059			Native
<i>Eurya acuminata</i>	0.0039	0.0527		0.0318	0.0000			Native
<i>Excoecaria agallocha</i>	0.8371	11.2593	1.1582			26.4423	0.0000	Native
<i>Excoecaria indica</i>	0.0038	0.0505				0.0186	0.0042	Native
<i>Ficus altissima</i>	0.1563	2.1022	0.0382	1.1101	0.1360		0.0164	Native
<i>Ficus auriculata</i>	0.0002	0.0034		0.0020				Native
<i>Ficus benghalensis</i>	0.1880	2.5291		0.9018	0.0373		0.0979	Native
<i>Ficus benjamina</i>	0.0120	0.1611					0.0156	Native
<i>Ficus carica</i>	0.0903	1.2148	0.0211	0.4923	0.0000		0.0374	Native
<i>Ficus elastica</i>	0.0224	0.3018		0.1763			0.0009	Native
<i>Ficus hirta</i>	0.0051	0.0692		0.0154			0.0042	Native
<i>Ficus hispida</i>	0.0469	0.6313	0.0086	0.3292			0.0078	Native
<i>Ficus lamponga</i>	0.0466	0.6274	0.0000	0.3728			0.0009	Native
<i>Ficus racemosa</i>	0.0297	0.4001		0.2296	0.0035		0.0017	Native
<i>Ficus religiosa</i>	0.0633	0.8515	0.0502				0.0798	Native
<i>Ficus semicordata</i>	0.0028	0.0372		0.0121			0.0017	Native
<i>Ficus subincisa</i>	0.0009	0.0119					0.0012	Native
<i>Ficus virens</i>	0.0199	0.2671		0.0350	0.0413		0.0181	Native
<i>Firmiana colorata</i>	0.0052	0.0705		0.0228	0.0346		0.0014	Native
<i>Flacourtia indica</i>	0.0002	0.0024		0.0015				Native

Flacourtia jangomas	0.0054	0.0728		0.0409	0.0094		0.0000	Native
Garcinia cowa	0.0183	0.2467	0.0000	0.1365			0.0020	Native
Garcinia morella	0.0002	0.0027		0.0016				Native
Garcinia xanthochymus	0.0614	0.8254		0.4976				Native
Gardenia coronaria	0.0142	0.1914	0.0168	0.1052	0.0000		0.0008	Native
Garuga floribunda	0.0004	0.0058		0.0000			0.0006	Native
Garuga pinnata	0.0782	1.0515	0.0403	0.5088			0.0180	Native
Glochidion lanceolarium	0.0109	0.1470	0.0211	0.0821		0.0000		Native
Glochidion multiloculare	0.0008	0.0105	0.0000	0.0064				Native
Glochidion sphaerogynum	0.0011	0.0152		0.0092				Native
Glycosmis pentaphylla	0.0298	0.4005		0.0059	0.0420		0.0356	Native
Gmelina arborea	0.2999	4.0331	0.0479	2.0103	0.3489		0.0475	Native
Gossypium arboreum	0.0208	0.2800	0.0150	0.0126			0.0243	Native
Grewia asiatica	0.0052	0.0699		0.0000	0.0225		0.0056	Native
Grewia nervosa	0.0352	0.4729	0.0000	0.2743	0.0260		0.0004	Native
Grewia serrulata	0.0057	0.0763		0.0460				Native
Grewia tiliifolia	0.0004	0.0060					0.0006	Native
Haematoxylon campechianum	0.0187	0.2508	0.0464	0.0037	0.0092		0.0209	Native
Haldina cordifolia	0.0233	0.3135		0.0613	0.0358		0.0187	Native
Harpullia cupanioides	0.0069	0.0924					0.0089	Native
Helicteres papilio	0.0634	0.8529	0.0531	0.0441	0.0721		0.0690	Native
Heritiera fomes	1.7523	23.5687		0.0000		58.4162		Native

Hevea brasiliensis	0.1707	2.2960		0.5578	2.6252			Introduced
Hibiscus macrophyllus	0.0242	0.3248		0.1958				Native
Hibiscus tiliaceus	0.0019	0.0259	0.0191			0.0000	0.0016	Native
Holarrhena pubescens	0.0252	0.3392		0.0116			0.0309	Native
Holigarna caustica	0.0482	0.6482		0.3907				Native
Hopea odorata	0.0152	0.2049		0.0818			0.0067	Native
Hymenodictyon orixense	0.0646	0.8684	0.0266	0.5050			0.0017	Native
Ilex godajam	0.0027	0.0363		0.0219				Native
Ilex umbellulata	0.0041	0.0555		0.0335				Native
Intsia bijuga	0.0026	0.0348		0.0109		0.0414		Native
Ixora subsessilis	0.0008	0.0108		0.0065				Native
Jatropha curcas	0.0006	0.0087			0.0166			Native
khaya anthotheca	0.0015	0.0197					0.0019	Native
Kleinhovia hospita	0.0018	0.0247					0.0024	Native
Knema bengalensis	0.0131	0.1763		0.1063				Native
Lagerstroemia indica	0.0040	0.0533		0.0321				Native
Lagerstroemia macrocarpa	0.0102	0.1371		0.0826				Native
Lagerstroemia parviflora	0.0059	0.0788		0.0475				Native
Lagerstroemia speciosa	0.0092	0.1231		0.0434			0.0049	Introduced
Lagerstroemia thorelii	0.0635	0.8536	0.0000	0.3704	0.0551		0.0203	Native

Lagerstroemia tomentosa	0.0016	0.0210		0.0127				Native
Lannea coromandelica	0.1085	1.4596	0.0754	0.0669	0.0421		0.1244	Native
Lepisanthes rubiginosa	0.0021	0.0286		0.0000	0.0244		0.0015	Native
Lepisanthes senegalensis	0.0030	0.0406		0.0218	0.0084			Native
Lepisanthes tetraphylla	0.0005	0.0066		0.0040				Native
Leucaena leucocephala	0.0397	0.5346	0.0839	0.0028	0.0000		0.0470	Introduced
Licuala peltata	0.0002	0.0024		0.0015				Native
Limonia acidissima	0.0036	0.0488		0.0000			0.0047	Native
Litchi chinensis	0.0940	1.2645		0.0289	0.1407		0.1104	Introduced
Lithocarpus acuminatus	0.0029	0.0390		0.0235				Native
Lithocarpus elegans	0.0047	0.0629		0.0379				Native
Lithocarpus polystachyus	0.0023	0.0305		0.0184				Native
Lithocarpus sp.	0.0016	0.0213		0.0128				Native
Litsea glutinosa	0.0027	0.0361		0.0051			0.0027	Native
Litsea monopetala	0.0335	0.4500	0.0029	0.2047			0.0105	Native
Litsea panamanja	0.0006	0.0084		0.0050				Native
Litsea semecarpifolia	0.0003	0.0041		0.0025				Native
Macaranga denticulata	0.1185	1.5937		0.9158	0.1427			Native
Madhuca longifolia	0.0015	0.0195					0.0019	Native
Maesa indica	0.0068	0.0920					0.0089	Native

Mallotus philippensis	0.0165	0.2220	0.0723				0.0179	Native
Mallotus roxburghianus	0.0053	0.0718		0.0040			0.0063	Native
Mangifera indica	1.7655	23.7465	0.9342	0.6982	1.9607		2.0364	Native
Mangifera longipes	0.0150	0.2011	0.0076	0.0608			0.0093	Native
Mangifera sylvatica	0.0027	0.0363					0.0035	Native
Manilkara zapota	0.0036	0.0480					0.0046	Native
Melia azedarach	0.0231	0.3107	0.1000	0.0126			0.0231	Introduced
Meliosma pinnata	0.0291	0.3910		0.2357	0.0000			Native
Meliosma simplicifolia	0.0099	0.1326		0.0799				Native
Mesua ferrea	0.0533	0.7167		0.4071			0.0040	Native
Meyna spinosa	0.0002	0.0021	0.0000	0.0012				Native
Michelia champaca	0.0065	0.0881		0.0498			0.0005	Native
Micromelum minutum	0.0540	0.7259		0.0000			0.0701	Native
Miliusa longiflora	0.0002	0.0024		0.0014				Native
Miliusa velutina	0.0026	0.0350		0.0053	0.0380		0.0006	Native
Millingtonia hortensis	0.0108	0.1457			0.0048		0.0138	Native
Mimusops elengi	0.0009	0.0127					0.0012	Native
Mischocarpus pentapetalus	0.0005	0.0061		0.0037				Native
Mitragyna parvifolia	0.0020	0.0263		0.0014			0.0023	Native
Mitragyna rotundifolia	0.0052	0.0693		0.0233			0.0030	Native
Morinda angustifolia	0.0008	0.0107		0.0065				Native

Morinda citrifolia	0.0076	0.1027					0.0099	Native
Moringa concanensis	0.0353	0.4747	0.0409	0.0104	0.0200		0.0412	Native
Moringa oleifera	0.0712	0.9571		0.0110	0.0675		0.0873	Native
Morus alba	0.0008	0.0114					0.0011	Introduced
Murraya koenigii	0.0125	0.1678		0.0025			0.0158	Native
Neolamarckia cadamba	0.2161	2.9062	0.0362	0.4982	0.1293		0.1925	Native
Neonauclea sessilifolia	0.0301	0.4052		0.2442				Native
Nyssa javanica	0.0045	0.0608		0.0366				Native
Ochna squarrosa	0.0008	0.0106		0.0064				Native
Ochna wallichii	0.0064	0.0860		0.0518			0.0000	Native
Olea dioica	0.0049	0.0663		0.0400				Native
Olea sp.	0.0059	0.0792					0.0076	Native
Oroxylum indicum	0.0048	0.0644		0.0282			0.0017	Native
Other unknowntree	0.1120	1.5068	0.0000	0.4792	0.0277	0.5895	0.0444	Native
Pajanelia longifolia	0.0037	0.0503		0.0303				Native
Palaquium polyanthum	0.0007	0.0090		0.0054				Native
Phoebe pallida	0.0065	0.0872		0.0496			0.0005	Native
Phoenix sylvestris	0.3487	4.6901	0.3514	0.0800	0.5398		0.3956	Native
Phyllanthus acidus	0.0068	0.0915		0.0441	0.0231		0.0006	Introduced
Phyllanthus emblica	0.0117	0.1571		0.0539	0.0319		0.0049	Native
Picrasma javanica	0.0017	0.0227		0.0137				Native
Pinus kesiya	0.0025	0.0342			0.0108		0.0028	Introduced
Pithecellobium dulce	0.0011	0.0143	0.0281					Introduced

Plumeria alba	0.0215	0.2898		0.1747				Native
Plumeria obtusa	0.0004	0.0054		0.0032				Native
Podocarpus neriifolius	0.0045	0.0600		0.0273			0.0014	Native
Polyalthia longifolia	0.0463	0.6222	0.0085		0.0187		0.0587	Introduced
Polyalthia obliqua	0.0022	0.0300					0.0029	Native
Pongamia pinnata	0.0338	0.4541	0.0133			0.0060	0.0430	Native
Protium serratum	0.0440	0.5924		0.3196	0.1194			Native
Prunus ceylanica	0.0010	0.0134	0.0262	0.0000				Native
Psidium guajava	0.0176	0.2371	0.0196	0.0115	0.0166		0.0193	Introduced
Pterospermum acerifolium	0.0021	0.0284		0.0000			0.0027	Native
Pterospermum semisagittatum	0.0004	0.0047		0.0000			0.0005	Native
Pterygota alata	0.0553	0.7436	0.2003	0.0393			0.0556	Native
Putranjiva roxburghii	0.0103	0.1382					0.0134	Native
Quercus gomeziana	0.0004	0.0057		0.0034				Native
Quercus oxyodon	0.1184	1.5919		0.9596				Native
Rhizophora apiculata	0.0263	0.3543		0.1905	0.0000	0.0952		Native
Rhizophora mucronata	0.0154	0.2075		0.1251				Native
Samanea saman	1.1907	16.0150	4.8993	0.0163	0.5843		1.2731	Introduced
Sambucus javanica	0.0028	0.0383		0.0231				Native
Sapium indicum	0.0063	0.0843	0.0526	0.0144			0.0032	Native
Sapium insigne	0.0009	0.0119		0.0072				Native

Sapium sebiferum	0.0011	0.0154		0.0093				Native
Saraca asoca	0.0013	0.0172					0.0017	Native
Saraca indica	0.0017	0.0222					0.0021	Native
Scaphium scaphigerum	0.0009	0.0126		0.0076				Native
Schima wallichii	0.1619	2.1781		1.3130				Native
Schleichera oleosa	0.0081	0.1095		0.0481	0.0225		0.0017	Native
Schleichera sp.	0.0014	0.0189		0.0114				Native
Semecarpus subpanduriformis	0.0007	0.0092		0.0026			0.0005	Native
Senna siamea	0.0312	0.4193		0.2259			0.0043	Introduced
Shorea robusta	0.3453	4.6441		0.0219	8.1076		0.0361	Native
Sonneratia alba	0.0004	0.0053	0.0104					Native
Sonneratia apetala	0.9954	13.3878	25.6003			0.7809	0.0013	Native
Sonneratia caseolaris	0.0643	0.8654	1.6056			0.1148		Native
Sonneratia griffithii	0.0007	0.0088	0.0172					Native
Spondias pinnata	0.1118	1.5036	0.0239	0.0892	0.0228		0.1286	Native
Spondias purpurea	0.0108	0.1453					0.0140	Native
Sterculia foetida	0.0287	0.3856		0.1780			0.0087	Native
Sterculia parviflora	0.0126	0.1693		0.1021				Native
Sterculia villosa	0.0305	0.4106		0.2475				Native
Stereospermum tetragonum	0.1004	1.3510		0.8144				Native
Streblus asper	0.0377	0.5064	0.0942	0.0143	0.0383		0.0400	Native
Swietenia macrophylla	0.1944	2.6150					0.2525	Introduced

Swietenia mahagoni	2.5901	34.8372	0.9726	0.5525	2.0242		3.1256	Introduced
Swietenia sp.	0.0233	0.3137	0.0000				0.0303	Native
Swintonia floribunda	0.1893	2.5463		1.5350				Native
Symplocos racemosa	0.0019	0.0249		0.0150				Native
Syzygium aqueum	0.0074	0.1001		0.0000			0.0097	Native
Syzygium claviflorum	0.0049	0.0665		0.0307			0.0015	Native
Syzygium cumini	0.1433	1.9273	0.0214	0.1647	0.2120		0.1480	Native
Syzygium cymosum	0.0003	0.0038	0.0000	0.0023				Native
Syzygium firmum	0.0188	0.2528		0.1524			0.0000	Native
Syzygium formosum	0.0011	0.0149					0.0014	Native
Syzygium malaccense	0.0077	0.1030	0.0724				0.0064	Native
Syzygium megacarpum	0.0024	0.0317		0.0191				Native
Syzygium oblatum	0.0008	0.0113		0.0000	0.0217		0.0000	Native
Syzygium praecox	0.0862	1.1600	0.0039	0.6157			0.0132	Native
Syzygium ramosissimum	0.0011	0.0141		0.0085				Native
Syzygium sp.	0.0007	0.0089		0.0054				Native
Syzygium tetragonum	0.0024	0.0326					0.0032	Native
Tamarindus indica	0.0939	1.2628	0.0859	0.0140	0.0875		0.1111	Introduced
Tarenna campaniflora	0.0002	0.0029		0.0018				Native
Tectona grandis	0.4344	5.8434	0.0066	3.0001	0.4019		0.0631	Introduced

Terminalia alata	0.0050	0.0667					0.0064	Native
Terminalia arjuna	0.0101	0.1361		0.0160	0.0355		0.0088	Native
Terminalia bellirica	0.0517	0.6954		0.3361	0.0000		0.0133	Native
Terminalia catappa	0.0019	0.0258		0.0033			0.0020	Native
Terminalia chebula	0.0055	0.0735		0.0443				Native
Terminalia citrina	0.0133	0.1790	0.0000	0.0271	0.0093		0.0125	Native
Tetrameles nudiflora	0.0714	0.9602		0.5788				Native
Thespesia populnea	0.0023	0.0315	0.0617					Native
Thyrsostachys oliveri	0.0003	0.0044			0.0085			Native
Toona ciliata	0.0091	0.1228		0.0239			0.0080	Native
Trema orientalis	0.0469	0.6315		0.1220	0.0120		0.0408	Native
Trema tomentosa	0.0006	0.0082			0.0157			Native
Trevesia palmata	0.0012	0.0155		0.0094				Native
Trewia nudiflora	0.2475	3.3295	0.0037	0.1473	0.2482		0.2852	Native
Turpinia pomifera	0.0016	0.0219		0.0132				Native
Vatica sp.	0.0024	0.0322		0.0194				Native
Vitex glabrata	0.0378	0.5081		0.2950			0.0018	Native
Vitex negundo	0.0007	0.0091		0.0055				Native
Vitex peduncularis	0.0222	0.2980		0.1702			0.0015	Native
Vitex pinnata	0.0256	0.3447		0.2078			0.0000	Native
Vitex quinata	0.0054	0.0722		0.0198			0.0038	Native
Walsura robusta	0.0037	0.0496		0.0299				Native
Xylocarpus granatum	0.0394	0.5303				1.3144		Native

Xylocarpus mekongensis	0.1216	1.6360				4.0550		Native
Ziziphus jujuba	0.0247	0.3318	0.0051	0.0231	0.1443		0.0208	Native

Appendix 5.2.1: Above ground biomass by species and Zones

Scientific Name	AGB (t/ha)	Total AGB (Million t)	Distribution of AGB into Zones				
			CZ	HZ	SZ	SuZ	VZ
Abroma augusta	0.0011	0.0150		0.0090			0.0000
Acacia auriculiformis	0.6516	8.7643	0.0355	1.0303	5.1783		0.4184
Acacia catechu	0.0064	0.0856		0.0043	0.0061		0.0073
Acacia farnesiana	0.0035	0.0470	0.0159		0.0088		0.0033
Acacia longifolia	0.0015	0.0204			0.0391		
Acacia mangium	0.0910	1.2235	0.0064	0.4127	0.1409		0.0446
Acacia nilotica	0.0190	0.2554	0.1132				0.0191
Actinodaphne angustifolia	0.0046	0.0613		0.0370			
Adenantha pavonina	0.0008	0.0113			0.0216		
Aegiceras corniculatum	0.0001	0.0017				0.0041	
Aegle marmelos	0.0556	0.7480	0.0084	0.0193	0.3758		0.0498
Aglaia chittagonga	0.0529	0.7117	0.0163	0.0381	0.1915		0.0522
Aglaia cucullata	0.0294	0.3950				0.8983	0.0032
Aglaia odoratissima	0.0085	0.1145		0.0025			0.0106
Aglaia spectabilis	0.0602	0.8096	0.0000	0.0719	0.0921		0.0620
Aidia sp.	0.0252	0.3396		0.2047			

<i>Albizia chinensis</i>	0.1473	1.9805	0.0302	0.4519	0.3474		0.0998
<i>Albizia lebeck</i>	0.2665	3.5839	0.6171	0.4521	0.0830		0.2391
<i>Albizia lucidior</i>	0.0801	1.0778	0.1322	0.0476	0.1540		0.0822
<i>Albizia odoratissima</i>	0.0564	0.7587	0.0563	0.3854	0.0579		0.0058
<i>Albizia procera</i>	0.3361	4.5211	0.1970	1.2490	0.1709		0.2182
<i>Albizia richardiana</i>	0.4101	5.5163	0.2069	0.1654	0.0816		0.4919
<i>Albizia</i> sp.	0.0020	0.0268					0.0026
<i>Aleurites moluccana</i>	0.0004	0.0049					0.0005
<i>Allophylus cobbe</i>	0.0004	0.0056		0.0034			0.0000
<i>Alphonsea ventricosa</i>	0.0030	0.0404		0.0047			0.0031
<i>Alseodaphne petiolaris</i>	0.0004	0.0060		0.0036			
<i>Alstonia macrophylla</i>	0.0030	0.0403	0.0117	0.0078			0.0021
<i>Alstonia neriifolia</i>	0.0126	0.1700		0.0035			0.0159
<i>Alstonia scholaris</i>	0.0020	0.0271		0.0069			0.0015
<i>Anacardium occidentale</i>	0.0114	0.1540	0.1178	0.0275			0.0047
<i>Anisoptera scaphula</i>	0.0009	0.0120		0.0073			
<i>Annona reticulata</i>	0.0287	0.3857	0.0189	0.0027	0.0077		0.0355
<i>Annona squamosa</i>	0.0036	0.0486	0.0264				0.0034
<i>Anogeissus acuminata</i>	0.1238	1.6656		0.9122	0.0715		0.0111
<i>Antidesma acidum</i>	0.0016	0.0215		0.0048	0.0259		
<i>Antidesma khasianum</i>	0.0146	0.1967	0.0021	0.0162	0.1357		0.0095
<i>Aphanamixis polystachya</i>	0.0689	0.9271	0.1109	0.2523	0.0939		0.0389
<i>Aporosa aurea</i>	0.0022	0.0298	0.0016	0.0146			0.0005

Aporosa wallichii	0.0009	0.0118		0.0071			
Aquilaria agallocha	0.0085	0.1148		0.0460	0.0250		0.0025
Ardisia sp.	0.0027	0.0360		0.0217			0.0000
Areca catechu	1.3137	17.6701	4.2669	0.2144	0.1021		1.4567
Artocarpus chama	0.1138	1.5307	0.0070	0.7648	0.1623		0.0168
Artocarpus heterophyllus	1.0082	13.5602	0.6292	0.9750	7.7192		0.7331
Artocarpus lacucha	0.0238	0.3207	0.0462	0.0568	0.0654		0.0163
Artocarpus sp.	0.0007	0.0098					0.0010
Averrhoa bilimbi	0.0014	0.0192			0.0000		0.0019
Averrhoa carambola	0.0185	0.2495	0.0135	0.0056	0.0210		0.0215
Avicennia alba	0.0078	0.1054	0.1218			0.0396	0.0026
Avicennia officinalis	0.1822	2.4509	0.2986			5.6971	
Azadirachta indica	0.1715	2.3072	0.0287	0.0691	0.2260		0.1989
Azadirachta sp.	0.0037	0.0502					0.0048
Baccaurea ramiflora	0.0056	0.0757		0.0193	0.0683		0.0008
Balanostreblus ilicifolius	0.0018	0.0247		0.0008	0.0447		
Bambusa jaintiana	0.0022	0.0296		0.0000	0.0000		0.0029
Bambusa vulgaris	0.0133	0.1784	0.0242	0.0000	0.0735	0.0407	0.0107
Barringtonia acutangula	0.0509	0.6851	0.0000		0.4312		0.0444
Bhesa robusta	0.0005	0.0066		0.0040			
Bixa orellana	0.0013	0.0179		0.0025	0.0175		0.0004
Boehmeria glomerulifera	0.0022	0.0295		0.0178			
Bombax ceiba	0.1422	1.9131	0.0218	0.2748	0.3910		0.1199
Bombax insigne	0.0113	0.1526		0.0257	0.0679		0.0072

Borassus flabellifer	0.9574	12.8765	0.5154	0.0261	6.3677		0.8928
Bouea oppositifolia	0.0022	0.0290		0.0016			0.0025
Bridelia squamosa	0.0005	0.0061			0.0117		
Bridelia tomentosa	0.0047	0.0634		0.0304			0.0012
Brownlowia elata	0.0104	0.1405		0.0847			
Bruguiera gymnorrhiza	0.0070	0.0936			0.0156	0.2119	
Bruguiera sexangula	0.0419	0.5631				1.3958	
Butea monosperma	0.0030	0.0403		0.0000	0.0168		0.0030
Caesalpinia cucullata	0.0001	0.0016		0.0010			
Calliandra umbrosa	0.0013	0.0179		0.0108			
Callicarpa arborea	0.0590	0.7931		0.4540			0.0039
Calophyllum inophyllum	0.0034	0.0454					0.0044
Calophyllum polyanthum	0.0072	0.0973	0.0089	0.0559			
Calotropis gigantea	0.0046	0.0619		0.0125			0.0040
Camellia sp.	0.0002	0.0025		0.0015			
Canarium resiniferum	0.0006	0.0079			0.0151		
Carallia brachiata	0.0022	0.0291		0.0133			0.0007
Carallia sp.	0.0073	0.0982		0.0547		0.0187	
Careya arborea	0.0008	0.0111		0.0067			
Caryota mitis	0.0179	0.2414		0.0092			0.0218
Caryota urens	0.0020	0.0269					0.0026
Cassia bakeriana	0.0018	0.0241		0.0000			0.0023

Cassia fistula	0.0103	0.1391	0.0310	0.0048	0.0876		0.0067
Cassia javanica	0.0011	0.0146		0.0088			
Cassia roxburghii	0.0023	0.0310					0.0030
Castanopsis armata	0.0046	0.0622		0.0375			
Castanopsis castanocarpa	0.0334	0.4491		0.0306			0.0385
Castanopsis indica	0.0508	0.6832		0.3874	0.0044		0.0037
Castanopsis lanceifolia	0.0050	0.0676		0.0270		0.0566	
Castanopsis tribuloides	0.0069	0.0924		0.0557			
Casuarina equisetifolia	0.0070	0.0945	0.1080			0.0054	0.0036
Cedrela cumingianus	0.0040	0.0532		0.0084	0.0617		0.0007
Celastrus paniculatus	0.0002	0.0029		0.0017			
Celastrus stylosus	0.0005	0.0062		0.0037			
Cerbera manghas	0.0009	0.0123		0.0004	0.0108	0.0150	
Cerbera odollam	0.0090	0.1208		0.0722		0.0023	
Ceriops decandra	0.1421	1.9108	0.0132			4.7192	
Chaetocarpus castanocarpus	0.0038	0.0511		0.0308			
Chukrasia tabularis	0.0716	0.9632		0.4504	0.3131		0.0051
Cinnamomum tamala	0.0059	0.0790		0.0019			0.0073
Citrus aurantium	0.0036	0.0479		0.0223			0.0011
Citrus limon	0.0006	0.0077	0.0151				0.0000
Citrus maxima	0.0605	0.8131	0.0265	0.0941	0.1291		0.0556
Citrus medica	0.0018	0.0236	0.0000	0.0051	0.0081		0.0010
Citrus reticulata	0.0014	0.0187		0.0113			

Clausena excavata	0.0003	0.0047		0.0028			
Clausena heptaphylla	0.0006	0.0077					0.0007
Cleistocalyx nervosum	0.0565	0.7598	0.0000	0.1379			0.0513
Cocos nucifera	1.1976	16.1079	2.2434	0.0614	0.7269		1.3985
Cordia dichotoma	0.0015	0.0195					0.0019
Cordia grandis	0.0072	0.0972		0.0347			0.0038
Corypha taliera	0.0516	0.6945		0.4186			
Crateva magna	0.0034	0.0455		0.0038			0.0038
Croton joufra	0.0078	0.1050	0.0258	0.0049			0.0081
Croton tiglium	0.0006	0.0076					0.0007
Cryptocarya amygdalina	0.0015	0.0196		0.0118			
Cynometra ramiflora	0.0147	0.1983		0.0000		0.4914	
Dalbergia ovata	0.0132	0.1775	0.0162				0.0163
Dalbergia reniformis	0.0004	0.0048			0.0092		
Dalbergia sissoo	0.0810	1.0898					0.1052
Delonix regia	0.0072	0.0963	0.0066	0.0152			0.0065
Dendrocnide sinuata	0.0009	0.0123		0.0074			
Derris robusta	0.0072	0.0964		0.0386	0.0163		0.0023
Dillenia indica	0.0235	0.3155	0.0284	0.0605			0.0194
Dillenia pentagyna	0.0138	0.1850		0.0900	0.0333		0.0018
Dillenia scabrella	0.0024	0.0328		0.0198			
Dimocarpus longan	0.0095	0.1284					0.0124
Diospyros blancoi	0.0755	1.0151	0.2174				0.0873
Diospyros malabarica	0.0584	0.7850	0.0045		0.0533		0.0729

Diospyros montana	0.0026	0.0356	0.0155				0.0027
Diospyros nigricans	0.0035	0.0475		0.0237			0.0008
Diospyros ramiflora	0.0043	0.0579		0.0000			0.0056
Diospyros toposia	0.0014	0.0187					0.0018
Dipterocarpus alatus	0.1535	2.0650		1.2448			
Dipterocarpus costatus	0.0061	0.0819		0.0494			
Dipterocarpus gracilis	0.0186	0.2505		0.1188	0.0326		0.0035
Dipterocarpus tuberculatus	0.0069	0.0927		0.0559			
Dipterocarpus turbinatus	0.0731	0.9834		0.5855			0.0012
Dodonaea viscosa	0.0025	0.0331		0.0200			
Drypetes assamica	0.0007	0.0089		0.0054			
Drypetes eglandulosa	0.0074	0.0998		0.0602	0.0000		0.0000
Duabanga grandiflora	0.0541	0.7272		0.3932	0.0243		0.0060
Dysoxylum binectariferum	0.0014	0.0194		0.0117			
Dysoxylum excelsum	0.0001	0.0015			0.0029		
Ehretia serrata	0.0013	0.0174		0.0000			0.0017
Elaeocarpus floribundus	0.0782	1.0518		0.1806	0.6657		0.0391
Elaeocarpus rugosus	0.0002	0.0029		0.0018			
Elaeocarpus tectorius	0.0129	0.1738		0.0248	0.0430		0.0106

Elaeocarpus varunua	0.0004	0.0058		0.0035			
Engelhardtia spicata	0.0285	0.3839	0.0112	0.2233			0.0007
Epiprinus sp.	0.0006	0.0081					0.0008
Erythrina fusca	0.0074	0.0990	0.0572	0.0049	0.0136		0.0053
Erythrina sp.	0.0005	0.0061					0.0006
Erythrina stricta	0.0051	0.0690	0.0182	0.0104	0.0077		0.0037
Erythrina suberosa	0.0007	0.0089		0.0054			
Erythrina variegata	0.0005	0.0073	0.0041	0.0032			
Eucalyptus alba	0.2992	4.0247	0.0570	0.0490	0.3858		0.3585
Eucalyptus camaldulensis	0.6717	9.0341	0.0275	0.0000	0.6530		0.8381
Eucalyptus citriodora	0.0323	0.4351	0.0330	0.0069			0.0393
Euonymus pendulus	0.0135	0.1818		0.1096			
Euphorbia antiquorum	0.0005	0.0070			0.0135		
Eurya acuminata	0.0027	0.0364		0.0220	0.0000		
Excoecaria agallocha	0.7788	10.4746	2.2061			23.1697	0.0001
Excoecaria indica	0.0033	0.0442				0.0325	0.0030
Ficus altissima	0.0483	0.6500	0.0217	0.2620	0.2298		0.0081
Ficus auriculata	0.0002	0.0025		0.0015			
Ficus benghalensis	0.0676	0.9096		0.2486	0.0662		0.0447
Ficus benjamina	0.0044	0.0594					0.0057
Ficus carica	0.0989	1.3308	0.0181	0.5814	0.0000		0.0345
Ficus elastica	0.0259	0.3485		0.2066			0.0006
Ficus hirta	0.0045	0.0599		0.0098			0.0042
Ficus hispida	0.0308	0.4148	0.0127	0.1996			0.0075

Ficus lamponga	0.0474	0.6375	0.0000	0.3746			0.0016
Ficus racemosa	0.0151	0.2027		0.1161	0.0075		0.0006
Ficus religiosa	0.0219	0.2951	0.0180				0.0276
Ficus semicordata	0.0028	0.0376		0.0100			0.0020
Ficus subincisa	0.0006	0.0078					0.0008
Ficus virens	0.0094	0.1268		0.0108	0.0642		0.0073
Firmiana colorata	0.0044	0.0589		0.0117	0.0619		0.0007
Flacourtia indica	0.0002	0.0030		0.0018			
Flacourtia jangomas	0.0052	0.0694		0.0355	0.0203		0.0000
Garcinia cowa	0.0122	0.1643	0.0000	0.0870			0.0019
Garcinia morella	0.0002	0.0030		0.0018			
Garcinia xanthochymus	0.0523	0.7039		0.4243			
Gardenia coronaria	0.0146	0.1965	0.0201	0.1054	0.0016		0.0010
Garuga floribunda	0.0007	0.0100		0.0002			0.0009
Garuga pinnata	0.0636	0.8561	0.0631	0.3972			0.0159
Glochidion arborescens	0.0003	0.0045		0.0027			
Glochidion assamicum	0.0004	0.0058		0.0035			
Glochidion lanceolarium	0.0114	0.1539	0.0239	0.0765		0.0368	
Glochidion multiloculare	0.0006	0.0074	0.0000	0.0045			
Glochidion sphaerogynum	0.0006	0.0074		0.0045			
Glycosmis pentaphylla	0.0278	0.3734		0.0051	0.1042		0.0300
Gmelina arborea	0.2124	2.8567	0.0350	1.4543	0.2200		0.0301
Gossypium arboreum	0.0077	0.1030	0.0054	0.0067			0.0086

Grewia asiatica	0.0078	0.1045		0.0010	0.0729		0.0063
Grewia nervosa	0.0334	0.4492	0.0022	0.2507	0.0469		0.0007
Grewia serrulata	0.0033	0.0440		0.0265			
Grewia tiliifolia	0.0004	0.0054					0.0005
Haematoxylon campechianum	0.0142	0.1913	0.0306	0.0025	0.0199		0.0156
Haldina cordifolia	0.0188	0.2525		0.0587	0.0624		0.0118
Harpullia cupanioides	0.0089	0.1194					0.0115
Helicia excelsa	0.0002	0.0026					0.0003
Helicteres papilio	0.0909	1.2225	0.0723	0.0398	0.1477		0.1007
Heritiera fomes	1.6827	22.6326		0.0208		56.0106	
Hevea brasiliensis	0.3272	4.4015		0.6323	6.4207		
Hibiscus macrophyllus	0.0191	0.2571		0.1550			
Hibiscus tiliaceus	0.0031	0.0415	0.0156			0.0260	0.0022
Holarrhena pubescens	0.0208	0.2800		0.0135			0.0249
Holigarna caustica	0.0213	0.2867		0.1728			
Hopea odorata	0.0112	0.1507		0.0671			0.0038
Hymenodictyon orixense	0.0256	0.3445	0.0132	0.1993			0.0007
Ilex godajam	0.0019	0.0251		0.0151			
Ilex umbellulata	0.0026	0.0350		0.0211			
Intsia bijuga	0.0036	0.0478		0.0077		0.0867	
Ixora subsessilis	0.0006	0.0074		0.0045			
Jatropha curcas	0.0011	0.0148			0.0283		
khaya anthotheca	0.0014	0.0190					0.0018
Kleinhovia hospita	0.0013	0.0177					0.0017
Knema bengalensis	0.0041	0.0546		0.0329			

Lagerstroemia indica	0.0027	0.0368		0.0222			
Lagerstroemia macrocarpa	0.0067	0.0896		0.0540			
Lagerstroemia parviflora	0.0051	0.0680		0.0410			
Lagerstroemia speciosa	0.0109	0.1462		0.0442			0.0070
Lagerstroemia thorelii	0.0420	0.5648	0.0000	0.2005	0.0851		0.0181
Lagerstroemia tomentosa	0.0011	0.0149		0.0090			
Lannea coromandelica	0.1695	2.2799	0.1094	0.0911	0.1097		0.1947
Lawsonia inermis	0.0025	0.0343	0.0280				0.0019
Lepisanthes rubiginosa	0.0019	0.0256		0.0000	0.0334		0.0008
Lepisanthes senegalensis	0.0029	0.0391		0.0186	0.0159		
Lepisanthes tetraphylla	0.0008	0.0113		0.0068			
Leucaena leucocephala	0.0282	0.3798	0.0815	0.0030	0.0000		0.0322
Licuala peltata	0.0003	0.0040		0.0024			
Limonia acidissima	0.0041	0.0548		0.0000			0.0053
Litchi chinensis	0.1241	1.6693		0.0316	0.3015		0.1409
Lithocarpus acuminatus	0.0023	0.0311		0.0188			
Lithocarpus elegans	0.0037	0.0494		0.0298			
Lithocarpus polystachyus	0.0015	0.0206		0.0124			
Lithocarpus sp.	0.0009	0.0123		0.0074			
Litsea glutinosa	0.0027	0.0370		0.0048			0.0028

Litsea monopetala	0.0193	0.2590	0.0040	0.1161			0.0062
Litsea panamanja	0.0005	0.0067		0.0040			
Litsea semecarpifolia	0.0028	0.0380		0.0229			
Macaranga denticulata	0.1089	1.4647		0.8145	0.2176		
Macropanax oreophilus	0.0002	0.0024		0.0015			
Madhuca longifolia	0.0009	0.0126					0.0012
Maesa indica	0.0043	0.0585					0.0056
Mallotus philippensis	0.0166	0.2234	0.0743				0.0179
Mallotus roxburghianus	0.0033	0.0442		0.0089			0.0029
Mangifera indica	1.9307	25.9677	1.0806	0.6712	5.2699		2.0811
Mangifera longipes	0.0084	0.1135	0.0063	0.0355			0.0050
Mangifera sylvatica	0.0026	0.0344					0.0033
Manilkara zapota	0.0040	0.0542					0.0052
Melia azedarach	0.0149	0.2006	0.0459	0.0091			0.0156
Meliosma pinnata	0.0146	0.1957		0.1180	0.0000		
Meliosma simplicifolia	0.0114	0.1536		0.0926			
Memecylon edule	0.0091	0.1228	0.2407				
Mesua ferrea	0.0477	0.6415		0.3586			0.0045
Meyna spinosa	0.0002	0.0023	0.0000	0.0014			
Michelia champaca	0.0042	0.0572		0.0318			0.0004
Micromelum minutum	0.0217	0.2919		0.0025			0.0278
Miliusa longiflora	0.0002	0.0024		0.0014			

Miliusa velutina	0.0035	0.0471		0.0060	0.0561		0.0008
Millingtonia hortensis	0.0078	0.1047			0.0078		0.0097
Mimusops elengi	0.0009	0.0125					0.0012
Mischocarpus pentapetalus	0.0005	0.0061		0.0037			
Mitragyna parvifolia	0.0015	0.0205		0.0016			0.0017
Mitragyna rotundifolia	0.0048	0.0646		0.0305			0.0013
Morinda angustifolia	0.0017	0.0234		0.0141			
Morinda citrifolia	0.0045	0.0606					0.0058
Moringa concanensis	0.0246	0.3313	0.0104	0.0046	0.0249		0.0295
Moringa oleifera	0.0373	0.5020		0.0045	0.0981		0.0428
Morus alba	0.0009	0.0122					0.0012
Murraya koenigii	0.0089	0.1191		0.0025			0.0111
Murraya paniculata	0.0017	0.0226					0.0022
Neolamarckia cadamba	0.1751	2.3553	0.0555	0.3474	0.2689		0.1555
Neonauclea sessilifolia	0.0306	0.4120		0.2484			
Nyssa javanica	0.0033	0.0444		0.0267			
Ochna squarrosa	0.0008	0.0108		0.0065			
Ochna wallichii	0.0069	0.0934		0.0563			0.0000
Olea dioica	0.0078	0.1044		0.0629			
Olea sp.	0.0050	0.0677					0.0065
Oroxylum indicum	0.0037	0.0497		0.0255			0.0007
Other unknowntree	0.0860	1.1561	0.0284	0.2825	0.0615	0.5544	0.0403

Pajanelia longifolia	0.0028	0.0373		0.0225			
Palaquium polyanthum	0.0006	0.0074		0.0045			
Pavetta indica	0.0001	0.0008		0.0005			
Persea bombycina	0.0001	0.0015		0.0009			
Phoebe pallida	0.0052	0.0702		0.0392			0.0005
Phoenix sp.	0.0012	0.0167				0.0414	
Phoenix sylvestris	0.3500	4.7070	0.3879	0.0519	1.1601		0.3686
Phyllanthus acidus	0.0055	0.0745		0.0247	0.0487		0.0008
Phyllanthus emblica	0.0136	0.1831		0.0555	0.0610		0.0057
Pinus kesiya	0.0025	0.0334			0.0180		0.0023
Pithecellobium dulce	0.0012	0.0160	0.0313				
Plumeria alba	0.0195	0.2616		0.1577			
Plumeria obtusa	0.0003	0.0047		0.0028			
Podocarpus neriifolius	0.0029	0.0386		0.0114			0.0019
Polyalthia longifolia	0.0330	0.4445	0.0076		0.0293		0.0411
Polyalthia obliqua	0.0009	0.0118					0.0011
Pongamia pinnata	0.0350	0.4704	0.0146			0.0061	0.0445
Premna bengalensis	0.0017	0.0229		0.0138			
Protium serratum	0.0506	0.6809		0.3507	0.1900		
Prunus ceylanica	0.0012	0.0159	0.0208	0.0032			
Psidium guajava	0.0420	0.5645	0.0433	0.0210	0.0493		0.0465
Pterocarpus indicus	0.0002	0.0022		0.0000			0.0002
Pterospermum acerifolium	0.0012	0.0158		0.0000			0.0015

Pterospermum semisagittatum	0.0005	0.0071		0.0006			0.0006
Pterygota alata	0.0310	0.4173	0.1293	0.0334			0.0286
Punica granatum	0.0002	0.0029					0.0003
Putranjiva roxburghii	0.0192	0.2583					0.0249
Quercus gomeziana	0.0003	0.0040		0.0024			
Quercus oxyodon	0.0834	1.1222		0.6765			
Rhizophora apiculata	0.0162	0.2182		0.1120	0.0000	0.0804	
Rhizophora mucronata	0.0073	0.0978		0.0589			
Samanea saman	1.2685	17.0619	5.1394	0.0143	1.7866		1.3021
Sambucus javanica	0.0044	0.0588		0.0354			
Sapium indicum	0.0037	0.0494	0.0378	0.0080			0.0016
Sapium insigne	0.0006	0.0081		0.0049			
Sapium sebiferum	0.0007	0.0096		0.0058			
Saraca asoca	0.0006	0.0085					0.0008
Saraca indica	0.0012	0.0158					0.0015
Scaphium scaphigerum	0.0006	0.0083		0.0050			
Schima wallichii	0.1141	1.5346		0.9251			
Schleichera oleosa	0.0096	0.1293		0.0480	0.0489		0.0023
Schleichera sp.	0.0017	0.0225		0.0136			
Semecarpus subpanduriformis	0.0006	0.0083		0.0017			0.0005
Senna siamea	0.0385	0.5179		0.2845			0.0044
Shorea robusta	0.2439	3.2810		0.0239	5.7317		0.0240
Sonneratia alba	0.0002	0.0031	0.0060				
Sonneratia apetala	0.8045	10.8203	20.5162			0.8241	0.0021

Sonneratia caseolaris	0.0288	0.3876	0.7135			0.0587	
Sonneratia griffithii	0.0004	0.0059	0.0115				
Spondias pinnata	0.0464	0.6241	0.0175	0.0373	0.0288		0.0520
Spondias purpurea	0.0033	0.0448					0.0043
Sterculia foetida	0.0184	0.2472		0.1292			0.0032
Sterculia parviflora	0.0065	0.0868		0.0524			
Sterculia villosa	0.0128	0.1726		0.1041			
Stereospermum tetragonum	0.0805	1.0834		0.6531			
Streblus asper	0.0381	0.5130	0.0882	0.0111	0.0597		0.0404
Swietenia macrophylla	0.1806	2.4286					0.2345
Swietenia mahagoni	1.9020	25.5827	0.7100	0.4068	3.2779		2.2050
Swietenia sp.	0.0180	0.2417	0.0712				0.0198
Swintonia floribunda	0.0661	0.8896		0.5363			
Symplocos racemosa	0.0012	0.0160		0.0096			
Syzygium aqueum	0.0076	0.1018		0.0000			0.0098
Syzygium claviflorum	0.0042	0.0561		0.0238			0.0016
Syzygium cumini	0.1723	2.3172	0.0263	0.1790	0.5749		0.1648
Syzygium cymosum	0.0003	0.0045	0.0000	0.0027			
Syzygium firmum	0.0315	0.4235		0.2553			0.0000
Syzygium formosum	0.0014	0.0184					0.0018
Syzygium malaccense	0.0076	0.1019	0.0611				0.0068

Syzygium megacarpum	0.0022	0.0293		0.0177			
Syzygium oblatum	0.0015	0.0202		0.0000	0.0386		0.0000
Syzygium praecox	0.0644	0.8663	0.0058	0.4461			0.0119
Syzygium ramosissimum	0.0007	0.0098		0.0059			
Syzygium sp.	0.0004	0.0059		0.0035			
Syzygium tetragonum	0.0021	0.0277					0.0027
Tamarindus indica	0.0706	0.9502	0.0871	0.0103	0.1392		0.0788
Tamarix indica	0.0075	0.1011	0.1981				0.0000
Tarenna campaniflora	0.0002	0.0031		0.0019			
Tectona grandis	0.8087	10.8765	0.0068	5.7426	1.0963		0.0748
Tectona sp.	0.0008	0.0106					0.0010
Terminalia alata	0.0034	0.0459					0.0044
Terminalia arjuna	0.0175	0.2358		0.0259	0.1059		0.0133
Terminalia bellirica	0.0385	0.5176		0.2612	0.0000		0.0081
Terminalia catappa	0.0009	0.0121		0.0025			0.0008
Terminalia chebula	0.0035	0.0470		0.0283			
Terminalia citrina	0.0110	0.1474	0.0000	0.0216	0.0196		0.0098
Tetrameles nudiflora	0.0224	0.3008		0.1813			
Thespesia populnea	0.0029	0.0393	0.0771				
Thyrsostachys oliveri	0.0006	0.0075			0.0144		
Toona ciliata	0.0057	0.0769		0.0145			0.0051
Trema orientalis	0.0302	0.4062		0.0749	0.0196		0.0262
Trema tomentosa	0.0007	0.0096			0.0184		

Trevesia palmata	0.0007	0.0100		0.0061			
Trewia nudiflora	0.1382	1.8584	0.0042	0.0755	0.5084		0.1415
Turpinia pomifera	0.0008	0.0105		0.0063			
Vatica lanceifolia	0.0018	0.0247					0.0024
Vatica sp.	0.0013	0.0179		0.0108			
Vitex glabrata	0.0298	0.4003		0.2326			0.0014
Vitex negundo	0.0006	0.0083		0.0050			
Vitex peduncularis	0.0210	0.2826		0.1602			0.0016
Vitex pinnata	0.0182	0.2454		0.1479			0.0000
Vitex quinata	0.0040	0.0535		0.0119			0.0033
Walsura robusta	0.0029	0.0387		0.0233			
Xylocarpus granatum	0.0298	0.4013				0.9946	
Xylocarpus mekongensis	0.0839	1.1286				2.7973	
Ziziphus jujuba	0.0371	0.4990	0.0103	0.0221	0.2833		0.0298

Appendix 5.2.3: Total wood biomass, carbon in Biomass and SOC in 30-100 cm soil depth (*here, total wood biomass (TWB) = AGB+BGB+DB*)

Zone	Total wood biomass			Carbon in total wood biomass			SOC in 30cm to 100cm depth		
	t/ha	SE (%)	million t	t/ha	SE (%)	million t	t/ha	SE (%)	million t
Coastal	54.36	19.92	27.73	27.16	19.93	13.85	45.04	9.15	22.98
Hill	60.68	14.14	100.65	30.21	14.31	50.12			0.00
Sal	70.49	16.98	36.81	36.89	17.06	19.26			0.00
Sundarbans	169.53	7.74	68.40	84.86	7.69	34.24	96.20	4.33	38.81
Villages	24.94	10.17	258.31	12.61	10.22	130.58			0.00
All_zones	36.57	6.40	491.90	18.44	6.44	248.05			61.79

Appendix 5.2.4: Volume, AGB and CAGB by Forest Division

Forest Division or District	Plots no	Average Volume (t/ha)	Average AGB (t/ha)	Average CAGB (t/ha)
Forest Divisions				
Chittagong North Forest Division	32	30.19	30.21	14.93
Chittagong South Forest Division	30	41.95	30.42	15.15
Mymensing Forest Division	133	16.62	18.95	9.71
Sundarban East Forest Division	62	138.38	119.69	59.87
Rangpur Forest Division and Social Forest Division, Rangpur	90	11.21	14.47	7.42
Sundarban West Forest Division	112	67.49	80.56	40.42
Cox's Bazar North Forest Division	12	0.80	7.38	3.86
Cox's Bazar South Forest Division	15	29.85	24.68	12.26
Dhaka Forest Division and Dhaka Social Forest Division	112	24.20	35.53	18.61
Sylhet Forest Division	151	13.24	13.68	6.83
Tangail Forest Division	46	24.94	34.47	18.00
Coastal Forest Divisions				
Coastal Forest Division, Bhola	40	62.31	52.09	26.03
Coastal Forest Division, Chittagong	20	25.18	24.63	12.30
Coastal Forest Division, Noakhali	50	50.53	44.32	22.16
Coastal Forest Division, Patuakhali	40	53.87	47.46	23.81
Social Forest Divisions				
Social Forest Division, Bagerhat	37	32.14	43.72	12.41
Social Forest Division, Barisal	26	48.98	30.13	21.89
Social Forest Division, Bogra	48	27.14	26.27	15.50
Social Forest Division, Comilla	64	30.32	16.85	13.22
Social Forest Division, Dinajpur	90	12.74	21.22	8.71
Social Forest Division, Faridpur	58	20.59	26.51	10.74

Social Forest Division, Feni	12	27.90	27.85	13.22
Social Forest Division, Jessore	76	36.20	18.61	14.07
Social Forest Division, Kushtia	41	15.96	19.65	9.57
Social Forest Division, Pabna	42	19.80	19.71	9.93
Social Forest Division, Rajshahi	100	19.24	43.72	9.98
CHT Districts				
Bandarban District	116	30.25	26.28	12.97
Khagrachhari District	77	55.10	67.28	33.95
Rangamati District	126	72.66	71.91	35.78

Appendix 5.2.5: Volume, AGB and CAGB of Wood in Forest Divisions by state forest land and other land

Forest Division	Volume (t/ha)	AGB (t/ha)	CAGB (t/ha)
Bandarban District_BFD_Land	79.66	44.42	21.72
Bandarban District_Other_Land	22.19	23.32	11.54
Chittagong North Forest Division_BFD_Land	36.96	43.30	21.37
Chittagong North Forest Division_Other_Land	27.37	24.76	12.26
Chittagong South Forest Division_BFD_Land	23.73	23.82	11.67
Chittagong South Forest Division_Other_Land	45.61	31.75	15.84
Coastal Forest Division, Bhola_BFD_Land	109.67	85.31	42.58
Coastal Forest Division, Bhola_Other_Land	44.24	39.41	19.72
Coastal Forest Division, Chittagong_BFD_Land	12.67	19.10	9.54
Coastal Forest Division, Chittagong_Other_Land	38.88	30.67	15.33
Coastal Forest Division, Noakhali_BFD_Land	72.31	75.23	37.46
Coastal Forest Division, Noakhali_Other_Land	47.99	40.72	20.37
Coastal Forest Division, Patuakhali_BFD_Land	119.66	89.82	44.85
Coastal Forest Division, Patuakhali_Other_Land	42.05	39.85	20.03
Cox's Bazar North Forest Division_BFD_Land	0.99	9.11	4.76
Cox's Bazar South Forest Division_BFD_Land	43.82	36.22	17.99

Dhaka Forest Division and Dhaka Social Forest Division_BFD_Land	84.07	81.45	43.33
Dhaka Forest Division and Dhaka Social Forest Division_Other_Land	21.00	33.07	17.28
Khagrachhari District_BFD_Land	341.22	457.91	235.41
Khagrachhari District_Other_Land	33.92	38.36	19.03
Mymensing Forest Division_BFD_Land	57.62	91.82	47.83
Mymensing Forest Division_Other_Land	15.41	16.79	8.58
Rangamati District_BFD_Land	124.90	103.88	51.49
Rangamati District_Other_Land	38.72	51.14	25.56
Rangpur Forest Division and Social Forest Division, Rangpur_BFD_Land	0.00	0.00	0.00
Rangpur Forest Division and Social Forest Division, Rangpur_Other_Land	11.23	14.49	7.43
Social Forest Division, Bagerhat_Other_Land	32.14	24.81	12.41
Social Forest Division, Barisal_Other_Land	48.98	43.72	21.89
Social Forest Division, Bogra_Other_Land	27.14	30.13	15.50
Social Forest Division, Comilla_Other_Land	30.32	26.27	13.22
Social Forest Division, Dinajpur_BFD_Land	59.78	46.74	24.38
Social Forest Division, Dinajpur_Other_Land	12.31	16.58	8.57
Social Forest Division, Faridpur_Other_Land	20.59	21.22	10.74
Social Forest Division, Feni_BFD_Land	0.00	0.00	0.00
Social Forest Division, Feni_Other_Land	29.20	27.74	13.84
Social Forest Division, Jessore_Other_Land	36.20	27.85	14.07
Social Forest Division, Kushtia_Other_Land	15.96	18.61	9.57
Social Forest Division, Pabna_Other_Land	19.80	19.65	9.93
Social Forest Division, Rajshahi_Other_Land	19.24	19.71	9.98
Sundarban East Forest Division_BFD_Land	148.60	128.30	64.18
Sundarban East Forest Division_Other_Land	6.30	8.42	4.21
Sundarban West Forest Division_BFD_Land	67.49	80.56	40.42
Sylhet Forest Division_BFD_Land	56.30	52.51	25.71
Sylhet Forest Division_Other_Land	10.03	10.78	5.43
Tangail Forest Division_BFD_Land	38.59	42.02	22.07

Tangail Forest Division_Other_Land	21.55	32.60	16.99
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Section 9: Socio-economic appendices

Appendix 9.1 (a): Quantity of different primary tree and forest products collected across different HTAC from the Sundarbans periphery

Primary tree and forest products	Unit	Sundarbans_1	Sundarbans_2	Sundarbans_3	Sundarbans_4	Sundarbans periphery
Timber	m ³ /HH/year	0.137	0.284	0.522	1.092	0.425
	m ³ /year	15,682	29,335	55,977	63,200	162,641
Poles	no/HH/year	4.700	9.922	7.557	0.745	6.462
	no/year	538650	1026633	810061	43074	2475593
Bamboo	no/HH/year	0.447	4.194	3.070	2.961	2.614
	no/year	51281	433926	329141	171307	1001536
Brooms	bundles/HH/year	3.250	4.992	3.481	1.869	3.609
	bundles/year	372473	516558	373201	108137	1382788
Nypa	bundles/HH/year	4.936	0.948	0.270	0.025	1.753
	bundles/year	565589	98088	28900	1447	671751
Ornamental plants	no/HH/year	2.198	1.215	0.275	00	1.044
	no/year	251844	125729	29529	00	399782
Medicinal plants	kg/HH/year	1.162	1.261	0.834	0.832	1.044
	kg/year	133,175	130,510	89,355	48,118	399,993
Murta	bundle/HH/year	0.015	0.174	0.003	0.097	0.066
	bundle/year	1729	18030	329	5623	25328
Tree seedlings	no/HH/year	0.445	3.616	11.750	5.255	5.416
	no/year	50961	374192	1259537	303998	2074934
Fodder	kg/HH/year	00	00	0.163	12.853	1.798
	kg/year	00	00	17455	743578	688865
Seeds	kg/HH/year	0.132	0.141	0.052	0.001	0.092
	kg/year	15088	14544	5623	51	35299
Fuelwood	kg/HH/year	303.603	447.442	556.632	605.523	461.215
	kg/year	34,791,701	46,296,855	59,669,248	35,031,293	176,698,961
Leaves	kg/HH/year	689.632	790.426	886.759	1061.053	827.870

Primary tree and forest products	Unit	Sundarbans_1	Sundarbans_2	Sundarbans_3	Sundarbans_4	Sundarbans periphery
	kg/year	79029034	81785409	95057894	61385099	61385099
Fruits	kg/HH/year	107.044	196.003	196.726	213.974	173.281
	kg/year	12266860	20280441	21088448	12379032	66386800
Root tubers	kg/HH/year	1.111	1.453	0.124	00	0.752
	kg/year	127263	150327	13304	00	288131
Spices	kg/HH/year	0.025	0.027	0.091	0.008	0.043
	kg/year	2844	2783	9722	476	16564
Wild meat	kg/HH/year	0.011	0.013	0.005	00	0.008
	kg/year	1216	1326	502	00	3050
Fish	kg/HH/year	13.499	9.331	53.589	57.214	30.539
	kg/year	1546919	965485	5744565	3310025	11699960
Shrimp	kg/HH/year	25.931	131.536	4.635	38.853	50.068
	kg/year	2971563	13609999	496894	2247764	19181814
Shrimp fry	no/HH/year	1657.571	326.578	48.242	105.876	591.464
	no/year	189951006	33791046	5171447	6125233	226599130
Crabs	kg/HH/year	26.866	8.142	1.996	1.544	10.712
	kg/year	3078756	842407	213948	89334	4104107

Appendix 9.1 (b): Quantity of different primary tree and forest products collected from different HTAC in the Coastal zone

Primary tree and forest products	Unit	Coastal_1	Coastal_2	Coastal_3	Coastal_4	Coastal
Timber	m ³ /HH/year	0.505	0.667	0.609	0.456	0.581
	m ³ /year	202,126	222,133	109,913	12,279	546,782
Poles	no/HH/year	0.971	0.824	1.431	0.793	0.988
	no/year	388,911	274,564	258,358	21,335	929,690
Bamboo	no/HH/year	2.488	3.277	4.207	1.594	3.042
	no/year	996,158	1,091,501	759,564	42,879	2,862,231
Brooms	bundles/HH/year	1.549	2.087	1.814	1.798	1.802
	bundles/year	620,211	695,259	327,452	48,373	1,695,708
Medicinal plants	kg/HH/year	0.153	0.136	0.084	0.533	0.148
	kg/year	61,406	45,455	15,086	14,348	138,959
Murta	bundle/HH/year	0.43	1.118	0.525	0.484	0.704
	bundle/year	172,206	372,541	94,830	13,022	662,692
Tree seedlings	no/HH/year	17.947	23.687	13.42	16.758	19.285
	no/year	7,187,025	7,889,773	2,422,688	450,914	18,147,149
Fodder	kg/HH/year	16.03	6.959	5.161	5.002	10.464
	kg/year	6,419,394	2,317,866	931,751	134,588	9,846,814
Seeds	kg/HH/year	0.024	0.132	0.037	0.009	0.066
	kg/year	9,759	43,802	6,689	247	62,028
Fuelwood	kg/HH/year	1023.474	1260.495	1328.944	960.155	1161.078
	kg/year	409,863,468	419,848,196	239,915,589	25,835,848	1,092,555,821
Leaves	kg/HH/year	626.068	900.29	954.848	693.622	785.706
	kg/year	250,716,949	299,870,427	172,379,646	18,663,983	739,337,057
Fruits	kg/HH/year	80.284	235.961	213.421	132.162	162.353
	kg/year	32,150,735	78,594,362	38,529,107	3,556,220	152,771,293
Spices	kg/HH/year	0	0.003	0	0	0.001
	kg/year	0	928	0	0	977
Fish	kg/HH/year	23.33	5.565	5.071	6.604	13.098
	kg/year	9,342,914	1,853,525	915,393	177,704	12,324,707

Primary tree and forest products	Unit	Coastal_1	Coastal_2	Coastal_3	Coastal_4	Coastal
Shrimp	kg/HH/year	0	0.529	0	0	0.197
	kg/year	0	176,347	0	0	185,590

Appendix 9.1 (c): Quantity of different primary tree and forest products collected from different HTAC in the Hill zone

Primary tree and forest products	Unit	Hill_1	Hill_2	Hill_3	Hill_4	Hill
Timber	m ³ /HH/year	0.202	0.745	0.443	0.558	0.445
	m ³ /year	73,475	199,994	72,899	41,274	387,694
Poles	no/HH/year	0.452	0.262	0.762	3.321	0.707
	no/year	164,219	70,388	125,407	245,420	615,175
Bamboo	no/HH/year	10.5	41.088	16.357	82.625	27.095
	no/year	3,817,185	11,023,201	2,693,349	6,106,826	23,582,926
Brooms	bundles/HH/year	0.576	4.044	1.681	3.798	2.121
	bundles/year	209,556	1,084,811	276,742	280,698	1,846,426
Ornamental plants	no/HH/year	0	0.013	0	0	0.004
	no/year	0	3,549	0	0	3,447
Medicinal plants	kg/HH/year	0.521	0.297	0.581	0.455	0.461
	kg/year	189,466	79,597	95,589	33,595	400,835
Murta	bundle/HH/year	0.000	0.000	0.004	0.011	0.002
	bundle/year	0	0	582	780	1431
Tree seedlings	no/HH/year	0.793	0.000	0.000	0.068	0.328
	no/year	288,149	0	0	5,005	285,837
Fodder	kg/HH/year	82.825	66.169	27.005	43.280	62.851
	kg/year	30,110,198	17,751,948	4,446,657	3,198,826	54,704,691
Seeds	kg/HH/year	0.000	0.053	0.264	0.222	0.090
	kg/year	0	14,194	43,504	16,395	78,134
Fuelwood	kg/HH/year	1180.043	1172.213	1201.010	1488.205	1208.632
	kg/year	428,990,472	314,481,304	197,755,905	109,993,232	1,051,976,372
Leaves	kg/HH/year	318.380	94.609	96.462	61.136	183.171
	kg/year	115,743,301	25,381,799	15,883,304	4,518,580	159,429,039
Fruits	kg/HH/year	138.962	179.643	230.276	288.259	182.958
	kg/year	50,518,113	48,194,570	37,916,703	21,305,208	159,244,256
Bamboo shoots	kg/HH/year	0.111	7.297	2.585	19.303	4.431
	kg/year	40,528	1,957,747	425,631	1,426,702	3,857,103

Primary tree and forest products	Unit	Hill_1	Hill_2	Hill_3	Hill_4	Hill
Mushroom	kg/HH/year	0.159	0.346	0.772	3.010	0.588
	kg/year	57,887	92,931	127,095	222,440	511,973
Root tubers	kg/HH/year	0.025	0.455	1.338	8.941	1.195
	kg/year	8,962	122,170	220,271	660,865	1,040,252
Other vegetables	kg/HH/year	4.703	9.517	11.985	30.359	9.868
	kg/year	1,709,647	2,553,258	1,973,375	2,243,810	8,588,627
Spices	kg/HH/year	0.008	0.126	0.422	0.117	0.138
	kg/year	2,813	33,695	69,431	8,621	120,341
Wild meat	kg/HH/year	0.011	1.019	0.000	2.209	0.500
	kg/year	4,048	273,310	0	163,258	435,275
Other animal products	kg/HH/year	0.000	0.080	0.654	6.248	0.698
	kg/year	0	21362	107608	461784	607847
Fish	kg/HH/year	5.869	17.525	31.180	46.064	18.075
	kg/year	2,133,547	4,701,730	5,134,036	3,404,609	15,732,627
Shrimp	kg/HH/year	0.007	0.310	0.231	5.442	0.613
	kg/year	2,611	83,059	37,989	402,246	533,514
Crabs	kg/HH/year	0.296	0.356	0.610	3.865	0.687
	kg/year	107,547	95,527	100,449	285,667	597,904

Appendix 9.1 (d): Quantity of different primary tree and forest products collected from different HTAC in the Sal zone

Primary tree and forest products	Unit	Sal_1	Sal_2	Sal_3	Sal_4	Sal
Timber	m ³ /HH/year	0.003	0.183	0.105	0.071	0.094
	m ³ /year	3,701	282,762	79,157	16,946	370,747
Bamboo	no/HH/year	0.000	4.519	10.617	11.110	8.710
	no/year	0	6,974,376	8,002,014	2,638,053	17,757,559
Brooms	bundles/HH/year	0.000	0.591	1.732	1.198	0.646
	bundles/year	0	912,401	1,305,205	284,449	2,557,763
Medicinal plants	no/HH/year	0.000	0.656	1.229	1.117	0.558
	no/year	0	1,011,740	926,664	265,172	2,211,122
Murta	bundle/HH/year	0.000	0.000	0.000	0.027	0.001
	bundle/year	0	0	0	6,391	5,639
Fodder	kg/HH/year	0.024	0.653	2.069	20.841	1.787
	kg/year	34,578	1,007,961	1,559,774	4,948,722	7,081,831
Fuelwood	kg/HH/year	8.803	51.446	104.777	123.950	50.750
	kg/year	12,565,280	79,400,331	78,972,982	29,432,347	201,066,847
Leaves	kg/HH/year	0.183	395.890	824.566	597.955	350.490
	kg/year	261,850	611,002,287	621,498,784	141,986,161	1,388,598,087
Fruits	kg/HH/year	7.328	183.368	247.159	253.464	135.190
	kg/year	10,460,119	283,003,387	186,290,960	60,185,668	535,605,108
Other vegetables	kg/HH/year	0.193	0.000	0.000	0.843	0.116
	kg/year	274,943	0	0	200,217	460,272
Spices	kg/HH/year	0.000	0.233	0.003	0.000	0.085
	kg/year	0	359,751	2,600	0	338,371
Fish	kg/HH/year	0.000	0.000	0.000	0.880	0.047
	kg/year	0	0	0	209,036	184,434

Appendix 9.1 (e): Quantity of different primary tree and forest products collected from different HTAC in the Village zone

Primary tree and forest products	Unit	Village_1	Village_2	Village_3	Village_4	Village
Timber	m ³ /HH/year	0.227	0.229	0.249	0.17	0.23
	m ³ /year	2,207,188	2,222,963	1,476,131	259,255	6,185,092
Poles	no/HH/year	0.611	0.803	1.163	0.273	0.797
	no/year	5,945,133	7,807,990	6,887,524	416,605	21,440,356
Bamboo	no/HH/year	7.33	8.71	14.899	9.207	9.737
	no/year	71,328,818	84,668,725	88,238,776	14,069,993	261,953,123
Brooms	bundles/HH/year	1.521	2.24	1.803	1.62	1.865
	bundles/year	14,798,587	21,776,675	10,678,413	2,476,128	50,173,887
Ornamental plants	no/HH/year	0.631	0.801	0.611	0.381	0.678
	no/year	6,141,061	7,788,788	3,620,556	581,816	18,242,389
Medicinal plants	kg/HH/year	0.868	0.94	0.556	0.63	0.809
	kg/year	8,446,269	9,133,739	3,292,730	963,429	21,770,996
Murta	bundle/HH/year	0.331	0	0.008	0.006	0.113
	bundle/year	3,220,517	0	45,397	9,577	3,030,551
Tree seedlings	no/HH/year	0.131	0.101	1.464	2.01	0.53
	no/year	1,275,129	981,283	8,670,362	3,071,637	14,270,884
Fodder	kg/HH/year	7.566	13.676	10.999	3.834	10.501
	kg/year	73,625,356	132,946,886	65,142,844	5,858,642	282,511,724
Seeds	kg/HH/year	0.029	0.027	0.033	0.007	0.028
	kg/year	286,789	259,131	197,457	9,992	757,318
Fuelwood	kg/HH/year	397.703	344.258	757.873	312.424	458.227
	kg/year	3,870,037,908	3,346,657,854	4,488,472,954	477,423,716	12,327,647,131
Leaves	kg/HH/year	891.488	863.891	742.114	534.591	827.536
	kg/year	8,675,038,118	8,398,204,590	4,395,137,962	816,923,857	22,263,131,284
Fruits	kg/HH/year	191.011	215.559	193.579	153.228	198.989
	kg/year	1,858,720,364	2,095,526,742	1,146,463,099	234,152,609	5,353,376,775
Root tubers	kg/HH/year	0.201	0.25	0.063	0.007	0.177
	kg/year	1,958,008	2,429,337	374,317	11,257	4,765,932

Primary tree and forest products	Unit	Village_1	Village_2	Village_3	Village_4	Village
Other vegetables	kg/HH/year	1.387	1.22	2.386	0.16	1.497
	kg/year	13,492,739	11,855,323	14,132,367	244,110	40,273,070
Spices	kg/HH/year	0	0.076	0	0	0.029
	kg/year	0	736,749	0	0	772,235
Fish	kg/HH/year	18.474	3.392	3.42	0.086	8.267
	kg/year	179,773,929	32,976,913	20,254,691	132,047	222,396,450
Shrimp	kg/HH/year	0.162	0.091	1.642	0	0.477
	kg/year	1,573,401	885,198	9,727,355	0	12,822,605
Crabs	kg/HH/year	0.03	0	0	0	0.01
	kg/year	292,431	0	0	0	269,976

Appendix 9.1 (f): Quantity of different primary tree and forest products collected nationally

Primary tree and forest products	Unit	National
Timber	m ³ /HH/year	0.231
	m ³ /year	7,652,955
Poles	no/HH/year	0.770
	no/year	25,460,815
Bamboo	no/HH/year	9.291
	no/year	307,157,373
Brooms	bundles/HH/year	1.744
	bundles/year	57,656,571
Nypa	bundles/HH/year	0.020
	bundles/year	671,751
Ornamental plants	no/HH/year	0.564
	no/year	18,645,617
Medicinal plants	kg/HH/year	0.754
	kg/year	24,921,905
Murta	bundle/HH/year	0.113
	bundle/year	3,725,640
Tree seedlings	no/HH/year	1.052
	no/year	34,778,804
Fodder	kg/HH/year	10.733
	kg/year	354833926
Seeds	kg/HH/year	0.028
	kg/year	932,778
Fuelwood	kg/HH/year	449.191
	kg/year	14,849,945,132
Leaves	kg/HH/year	752.214
	kg/year	24,867,665,671
Fruits	kg/HH/year	189.580
	kg/year	6,267,384,231
Bamboo shoots	kg/HH/year	0.117
	kg/year	3,857,103
Mushroom	kg/HH/year	0.015
	kg/year	511,973
Root tubers	kg/HH/year	0.184
	kg/year	6,094,316
Other vegetables	kg/HH/year	1.492
	kg/year	49,321,970
Spices	kg/HH/year	0.038
	kg/year	1,248,488
Wild meat	kg/HH/year	0.013
	kg/year	438,325
Other animal products	kg/HH/year	0.018
	kg/year	607,847
Fish	kg/HH/year	7.935

Primary tree and forest products	Unit	National
	kg/year	262,338,179
Shrimp	kg/HH/year	0.990
	kg/year	32,723,522
Shrimp fry	no/HH/year	6.854
	no/year	226,599,130
Crabs	kg/HH/year	0.150
	kg/year	4,971,988

Appendix 9.2 (a): Value of primary tree and forest products collected by the HHs

Zone	HTAC	All primary products		Primary products excluding fisheries	
		Average value (BDT/HH/year)	Total value (million BDT/year)	Average value (BDT/HH/year)	Total value (million BDT/year)
Sundarbans periphery	Sundarbans periphery	49,354	18,908	22,697	8,695
	Sundarbans_1	34,262	3,926	14,496	1,661
	Sundarbans_2	66,408	6,871	20,191	2,089
	Sundarbans_3	42,861	4,595	26,793	2,872
	Sundarbans_4	61,301	3,546	35,751	2,068
Coastal	Coastal	30,113	28,336	26,402	24,844
	Coastal_1	24,901	9,972	18,326	7,339
	Coastal_2	33,511	11,162	32,088	10,688
	Coastal_3	36,874	6,657	34,949	6,309
	Coastal_4	24,630	663	23,066	621
Hill	Hill	20,509	17,851	18,644	16,227
	Hill_1	15,730	5,718	15,030	5,464
	Hill_2	20,980	5,628	19,015	5,101
	Hill_3	23,737	3,908	21,015	3,460
	Hill_4	33,666	2,488	28,707	2,122
Sal	Sal	13,828	54,784	13,822	54,762
	Sal_1	552	787	552	787
	Sal_2	20,638	31,852	20,638	31,852
	Sal_3	22,821	17,201	22,821	17,201
	Sal_4	24,254	5,759	24,254	5,759
Village	Village	21,560	580,015	20,435	549,763
	Village_1	21,589	210,083	19,522	189,968
	Village_2	20,779	202,000	20,349	197,816
	Village_3	23,873	141,386	22,729	134,609
	Village_4	16,443	25,127	16,428	25,104
National		21,171	699,894	19,791	654,292

Appendix 9.2 (b): Quantity of different Non Wood Forest Products collected across zones

NWFP	Unit	Sundarbans periphery			Coastal			Hill			Sal			Villages			National		
		TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both
Barks	kg/HH/year	0.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0.00	0.00
Bamboo	No/HH/year	2.61	0	0	3.04	0	0	11.98	14.4	0.71	4.48	0	0	9.74	0	0	8.893	0.37	0.01
Cane	No/HH/year	0	0	0	0.26	0	0	0	0	0	0	0	0	0	0	0	0.007	0.00	0.00
Nypa	bundle/HH/year	1.08	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0.012	0.00	0.00
Ornamental plants	no/HH/year	1.04	0	0	0	0	0	0	0	0	0	0	0	0.68	0	0	0.564	0.00	0.00
Medicinal plants	kg/HH/year	1.04	0	0	0.15	0	0	0.39	0.05	0.02	0.55	0	0.0	0.81	0	0	0.751	0.00	0.00
Murta/ patipata	bundle/HH/year	0.07	0	0	0.70	0	0	0	0	0	0	0	0	0.11	0	0	0.113	0.00	0.00
Fodder	kg/HH/year	1.80	0	0	10.46	0	0	41.46	9.58	11.8	1.79	0	0	10.50	0	11.8	10.170	0.25	0.31
Seeds	kg/HH/year	0.09	0	0	0.07	0	0	0.02	0.07	0	0	0	0	0.03	0	0	0.026	0.00	0.00
Fruits	kg/HH/year	173.2	0.0	0.0	162.3			128.6	26.2	28.1	135.1			198.9			188.14	0.69	0.74
Bamboo shoots	kg/HH/year	0	0	0	0	0	0	0.07	4.18	0.18	0	0	0	0	0	0	0.002	0.11	0.00
Mushrooms	kg/HH/year	0	0	0	0	0	0	0.08	0.44	0.07	0	0	0	0	0	0	0.002	0.01	0.00
Root tubers	kg/HH/year	0.75	0	0	0	0	0	0.01	1.18	0.01	0	0	0	0.18	0	0	0.153	0.03	0.00
Other vegetables	kg/HH/year	0	0	0	0	0	0	4.23	3.21	2.42	0.12	0	0	1.50	0	0	1.344	0.08	0.06

Spices	kg/HH/year	0.04	0	0	0	0	0	0.04	0.01	0.09	0.09	0	0	0.03	0	0	0.035	0.00	0.00
Wild meat	kg/HH/year	0.01	0	0	0	0	0	0	0.50	0	0	0	0	0	0	0	0.0002	0.01	0.00
Other animal products	kg/HH/year	0	0	0	0	0	0	0.22	0.46	0.02	0	0	0	0	0	0	0.006	0.01	0.00
Honey	kg/HH/year	0.03	2.1	1	0	0	0	0	0	0	0	0	0	0.30	0	0	0.242	0.02	0.00
Lianas and vines	kg/HH/year	0.18	0	0	0	0	0	0	0	0	0.17	0	0	0	0	0	0.022	0.00	0.00
Thatching materials	bundle/HH/year	0	0	0	0.01	0	0	0	0.34	0	0	0	0	0	0	0	0.000	0.00	0.00
Reeds	bundle/HH/year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0.00	0.00
Brooms	bundle/HH/year	3.61	0	0	1.80	0	0	0.19	1.92	0	0.65	0	0	1.86	0	0	1.693	0.05	0.00
Bee wax	kg/HH/year	0.003	0.0	0.0	0	0											0.0000	0.00	0.00
Wax	kg/HH/year	0	0.0	0													0.00	0.00	0.00

Appendix 9.2 (c): Value (BDT/HH/year) of different Non Wood Forest Products collected across zones

NWFP	Sundarbans periphery			Coastal			Hill			Sal			Villages			National		
	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both	TOF	Forest	Both
Barks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000
Bamboo	392.28	0	0	573.68	0	0	1113.1	414.4	31.90	489.59	0	0	1547.0	0	0	1367.79	10.912	0.8398
Cane	0	0	0	19.83	0	0	0	0	0	0	0	0	0	0	0	0.5644	0.0000	0.0000
Nypa	119.18	23.16	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3812	0.2684	0.0000
Ornamental plants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000

Medicinal plants	87.10	0	0	10.78	0	0	13.64	1.71	0.76	43.95	0.12	0.48	59.07	0	0	55.0164	0.0592	0.0780
Murta/patipata	10.58	0	0	99.34	0	0	0.12	0.15	0	0.23	0	0	19.36	0	0	18.7335	0.0038	0.0000
Fodder	7.19	0	0	41.86	0	0	165.84	38.32	47.24	7.15	0	0	42.00	0	0	40.6803	1.0089	1.2438
Seeds	27.64	0	0	19.78	0	0	4.75	22.18	0	0	0	0	8.44	0	0	7.8807	0.5839	0.0000
Fruits	10250.41	0.60	3.66	12201.20	0	0	5088.05	977.46	1023.73	8649.21	0	0	9507.26	0	0	9373.3684	25.7415	26.9951
Bamboo shoots	0	0	0	0	0	0	2.16	120.74	5.25	0	0	0	0	0	0	0.0568	3.1788	0.1382
Mushrooms	0	0	0	0	0	0	13.49	72.82	13.32	0	0	0	0	0	0	0.3551	1.9171	0.3507
Root tubers	30.71	0	0	0	0	0	0.35	40.63	0.31	0	0	0	6.35	0	0	5.5309	1.0698	0.0082
Other vegetables	0	0	0	0	0	0	84.66	64.20	48.50	3.07	0	0	33.27	0	0	29.6685	1.6903	1.2768
Spices	5.07	0	0	0.10	0	0	2.73	0.79	5.00	7.94	0	0	2.87	0	0	3.4214	0.0209	0.1317
Wild meat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000
Other animal products	0	0	0	0	0	0	7.17	15.39	0.67	0	0	0	0	0	0	0.1888	0.4052	0.0176
Honey	10.91	791.38	0	0.43	0	0	0	0	0	0	0	0	118.67	0	0	96.7083	9.1711	0.0000
Lianas and vines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000
Thatching materials	0	0	0	5.64	0	0	0	131.56	0	0	0	0	0	0	0	0.1605	3.4637	0.0000
Reeds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000
Brooms	74.16	0	0	36.04	0	0	23.88	203.67	0.51	46.61	0	0	39.55	0	0	40.2837	5.3621	0.0135
Bee wax	0.00	0.00	0.00													0.0000	0.0000	0.0000
Wax	0	13.62	11.17													0.0000	0.1579	0.0000

Appendix 9.3 (a): Quantity of collected primary tree and forest products sold by different HTAC in the Sundarbans periphery

Primary tree & forest products	Unit	Sundarbans_1	Sundarbans_2	Sundarbans_3	Sundarbans_4	Sundarbans periphery
Timber	m ³ /HH/year	0.014	0.118	0.260	0.516	0.186
	m ³ /year	1,659	12,254	27,847	29,839	71,238

Primary tree & forest products	Unit	Sundarbans_1	Sundarbans_2	Sundarbans_3	Sundarbans_4	Sundarbans periphery
Poles	no/HH/year	0.000	0.045	2.513	0.000	0.779
	no/year	0	4,618	269,402	0	298,475
Bamboo	no/HH/year	0.000	2.459	1.311	1.475	1.273
	no/year	0	254,420	140,553	85,340	487,755
Brooms	bundles/HH/year	0.095	0.927	0.491	0.000	0.430
	bundles/year	10,943	95,883	52,582	0	164,866
Nypa	bundles/HH/year	2.809	0.086	0.039	0.000	0.837
	bundles/year	321,925	8,849	4,169	0	320,648
Medicinal plants	no/HH/year	0.196	0.000	0.204	0.046	0.125
	no/year	22,470	0	21,920	2,645	47,725
Tree seedlings	bundle/HH/year	0.000	3.113	0.944	2.221	1.442
	bundle/year	0	322,141	101,237	128,480	552,307
Fuelwood	kg/HH/year	0.256	21.419	9.210	2.449	9.074
	kg/year	29,331	2,216,215	987,332	141,670	3,476,241
Leaves	kg/HH/year	0.365	16.411	3.856	0.658	5.858
	kg/year	41,793	1,698,079	413,309	38,093	2,244,214
Fruits	kg/HH/year	23.372	79.091	70.689	74.011	59.935
	kg/year	2,678,308	8,183,547	7,577,670	4,281,731	4,281,731
Root tubers	kg/HH/year	0.035	0.218	0.000	0.000	0.070
	kg/year	4,020	22,532	0	0	26,649
Spices	kg/HH/year	0.000	0.011	0.061	0.000	0.022
	kg/year	0	1,103	6,546	0	8,255
Fish	kg/HH/year	9.602	5.554	43.739	45.643	23.814
	kg/year	1,100,306	574,653	4,688,665	2,640,565	9,123,555
Shrimp	kg/HH/year	16.200	112.288	3.014	37.579	41.360
	kg/year	1,856,464	11,618,481	323,142	2,174,050	15,845,636
Shrimp fry	no/HH/year	1641.744	304.965	48.193	105.876	581.022
	no/year	188,137,295	31,554,749	5,166,181	6,125,233	222,598,710
Crabs	kg/HH/year	24.202	7.807	1.522	1.170	9.665

Primary tree & forest products	Unit	Sundarbans_1	Sundarbans_2	Sundarbans_3	Sundarbans_4	Sundarbans periphery
	kg/year	2,773,397	807,768	163,186	67,666	3,702,820

Appendix 9.3 (b): Quantity of collected primary tree and forest products sold by different HTAC in the Coastal zone

Primary tree and forest products	Unit	Coastal_1	Coastal_2	Coastal_3	Coastal_4	Coastal
Timber	m ³ /HH/year	0.130	0.250	0.348	0.309	0.217
	m ³ /year	51,887	83,196	62,796	8,304	204,077
Poles	no/HH/year	0.000	0.020	0.000	0.037	0.009
	no/year	0	6,643	0	1,002	8,132
Bamboo	no/HH/year	0.328	1.408	1.835	0.449	0.988
	no/year	131,330	468,828	331,316	12,085	929,245
Brooms	bundles/HH/year	0.082	0.000	0.000	0.000	0.035
	bundles/year	32,965	0	0	0	33,059
Murta	no/HH/year	0.140	0.339	0.116	0.254	0.214
	no/year	55,993	112,957	20,855	6,835	201,084
Tree seedlings	bundle/HH/year	1.899	7.787	0.751	0.481	3.853
	bundle/year	760,629	2,593,602	135,614	12,935	3,625,912
Fuelwood	kg/HH/year	78.009	6.561	9.324	2.973	37.402
	kg/year	31,239,642	2,185,336	1,683,253	80,002	35,195,051
Leaves	kg/HH/year	1.359	14.871	20.287	7.786	9.784
	kg/year	544,075	4,953,346	3,662,362	209,500	9,206,895
Fruits	kg/HH/year	18.503	119.401	109.927	36.291	72.042
	kg/year	7,409,935	39,770,457	19,845,195	976,507	67,790,765
Fish	kg/HH/year	20.298	4.367	3.944	5.771	11.141
	kg/year	8,128,622	1,454,644	711,973	155,275	10,483,352
Shrimp	kg/HH/year	0.000	0.418	0.000	0.000	0.156
	kg/year	0	139,222	0	0	146,518

Appendix 9.3 (c): Quantity of collected primary tree and forest products sold by different HTAC in the Hill zone

Primary tree and forest products	Unit	Hill_1	Hill_2	Hill_3	Hill_4	Hill
Timber	m ³ /HH/year	0.135	0.673	0.369	0.529	0.378
	m ³ /year	48,961	180,540	60,694	39,112	329,337
Bamboo	no/HH/year	4.882	34.508	6.779	52.624	18.264
	no/year	1,774,846	9,257,900	1,116,262	3,889,419	15,896,756
Brooms	bundles/HH/year	0	3.103	0.372	1.09	1.1
	bundles/year	0	832,414	61,213	80,579	957,512
Medicinal plants	kg/HH/year	0.372	0	0	0	0.151
	kg/year	135,275	0	0	0	131,803
Seeds	kg/HH/year	0	0	0.053	0	0.011
	kg/year	0	0	8,798	0	9,644
Fuelwood	kg/HH/year	70.061	93.37	33.528	8.829	64.181
	kg/year	25,469,956	25,049,269	5,520,579	652,577	55,862,139
Fruits	kg/HH/year	43.714	79.735	122.02	179.627	82.463
	kg/year	15,891,544	21,391,215	20,091,635	13,276,232	71,774,293
Bamboo shoots	kg/HH/year	0	0.432	0	1.863	0.29
	kg/year	0	115,827	0	137,678	252,375
Mushroom	kg/HH/year	0	0	0	0.279	0.024
	kg/year	0	0	0	20,607	20,935
Root tubers	kg/HH/year	0	0.288	0.184	1.088	0.218
	kg/year	0	77,218	30,223	80,396	189,811
Other vegetables	kg/HH/year	0	0	0	2.192	0.189
	kg/year	0	0	0	162,035	164,614
Spices	kg/HH/year	0	0.09	0.365	0.014	0.104
	kg/year	0	24,260	60,117	1,016	90,498
Other animal products	kg/HH/year	0	0	0	0.88	0.076
	kg/year	0	0	0	65,044	66,080
Fish	kg/HH/year	3.807	13.205	21.223	28.543	12.366
	kg/year	1,383,983	3,542,667	3,494,479	2,109,589	10,763,498

Shrimp	kg/HH/year	0	0.108	0	3.868	0.366
	kg/year	0	28,890	0	285,881	318,493
Crabs	kg/HH/year	0.271	0	0	0	0.11
	kg/year	98,585	0	0	0	96,054

Appendix 9.3 (d): Quantity of collected primary tree and forest products sold by different HTAC in the Sal zone

Primary tree and forest products	Unit	Sal_1	Sal_2	Sal_3	Sal_4	Sal
Timber	m ³ /HH/year	0.001	0.014	0.094	0.032	0.027
	m ³ /year	1,112	21,483	71,063	7,546	107,110
Bamboo	no/HH/year	0	3.399	8.11	8.705	2.92
	no/year	0	5,245,983	6,112,561	2,067,029	13,534,301
Medicinal plants	kg/HH/year	0	0	0.175	0	0.037
	kg/year	0	0	132,202	0	147,472
Fodder	no/HH/year	0	0	0	1.774	0.094
	no/year	0	0	0	421,216	371,641
Fuelwood	kg/HH/year	0	0	0	0.394	0.021
	kg/year	0	0	0	93,604	82,587
Leaves	kg/HH/year	0	0	0	4.928	0.261
	kg/year	0	0	0	1,170,181	1,032,457
Fruits	kg/HH/year	0	87.636	92.65	131.094	58.429
	kg/year	0	135,253,882	69,832,703	31,128,735	231,489,537
Other vegetables	kg/HH/year	0.073	0	0	0.335	0.045
	kg/year	104,740	0	0	79,563	178,245
Spices	kg/HH/year	0	0.233	0	0	0.085
	kg/year	0	359,751	0	0	335,471
Fish	kg/HH/year	0	0	0	0.327	0.017
	kg/year	0	0	0	77,649	68,510

Appendix 9.3 (e): Quantity of collected primary tree and forest products sold by different HTAC in the Village zone

Primary tree and forest products	Unit	Village_1	Village_2	Village_3	Village_4	Village
Timber	m ³ /HH/year	0.132	0.141	0.155	0.092	0.139
	m ³ /year	1,285,037	1,372,239	917,519	141,209	3,736,411
Bamboo	no/HH/year	3.747	2.92	8.379	3.603	4.521
	no/year	36,463,793	28,384,322	49,622,578	5,506,237	121,627,752
Brooms	bundles/HH/year	0	0.099	0	0.084	0.042
	bundles/year	0	966,760	0	128,924	1,129,068
Murta	no/HH/year	0.079	0	0	0	0.026
	no/year	764,527	0	0	0	705,820
Fuelwood	kg/HH/year	7.64	17.017	11.965	1.092	11.88
	kg/year	74,343,346	165,425,802	70,864,413	1,669,032	319,598,492
Leaves	kg/HH/year	1.568	1.399	0	2.531	1.183
	kg/year	15,254,220	13,604,625	0	3,867,725	31,815,058
Fruits	kg/HH/year	54.951	76.507	58.674	38.265	63.144
	kg/year	534,725,559	743,752,091	347,494,774	58,473,673	1,698,766,271
Spices	kg/HH/year	0	0.076	0	0	0.029
	kg/year	0	736,749	0	0	772,235
Fish	kg/HH/year	12.805	1.907	2.986	0.004	5.704
	kg/year	124,601,373	18,539,321	17,686,808	6,103	153,457,768
Shrimp	kg/HH/year	0	0	1.137	0	0.269
	kg/year	0	0	6,731,277	0	7,225,937
Crabs	kg/HH/year	0.03	0	0	0	0.01
	kg/year	292,431	0	0	0	269,976

Appendix 9.3 (f): Quantity of different primary tree and forest products sold nationally

Primary tree and forest products	Unit	National
Timber	m ³ /HH/year	0.135
	m ³ /year	4,448,173
Poles	no/HH/year	0.009
	no/year	306,607
Bamboo	no/HH/year	4.612
	no/year	152,475,809
Brooms	bundles/HH/year	0.069
	bundles/year	2,284,504
Nypa	bundles/HH/year	0.01
	bundles/year	320,648
Medicinal plants	kg/HH/year	0.01
	kg/year	327,001
Murta	no/HH/year	0.027
	no/year	906,904
Tree seedlings	bundle/HH/year	0.126
	bundle/year	4,178,220
Fodder	no/HH/year	0.011
	no/year	371,641
Seeds	kg/HH/year	0
	kg/year	9,644
Fuelwood	kg/HH/year	12.529
	kg/year	414,214,511
Leaves	kg/HH/year	1.34
	kg/year	44,298,624
Fruits	kg/HH/year	63.304
	kg/year	2,092,782,915
Bamboo shoots	kg/HH/year	0.008
	kg/year	252,375
Mushroom	kg/HH/year	0.001
	kg/year	20,935
Root tubers	kg/HH/year	0.007
	kg/year	216,460
Other vegetables	kg/HH/year	0.01
	kg/year	342,859
Spices	kg/HH/year	0.036
	kg/year	1,206,459
Other animal products	kg/HH/year	0.002
	kg/year	66,080
Fish	kg/HH/year	5.563
	kg/year	183,896,683
Shrimp	kg/HH/year	0.712
	kg/year	23,536,583
Shrimp fry	no/HH/year	6.733
	no/year	222,598,710

Primary tree and forest products	Unit	National
Crabs	kg/HH/year	0.123
	kg/year	4,068,851
Energy	kg/HH/year	13.869
	kg/year	458,513,207

Appendix 9.3 (g): Share of collected primary tree and forest products sold across different HTAC and zone (%)

Zone	Location	Timber	Poles	Bamboo	Brooms	Nypa	Medicinal plants	Murta	Tree seedlings	Fodder	Seeds	Fuelwood
Sundarbans periphery	Sundarbans_1	1.354			0.404	1.880	0.196					0.061
	Sundarbans_2	9.370	0.374	3.037	2.190	0.535	0.000		0.156			1.421
	Sundarbans_3	9.509	1.179	4.145	0.589	0.130	0.204		0.488			0.718
	Sundarbans_4	13.130		3.473			0.046		0.740			0.122
	Sundarbans	7.636	0.462	2.568	0.894	0.722	0.125		0.292			0.642
Coastal	Coastal_1	9.965		2.399	0.549			1.942	0.411			1.936
	Coastal_2	11.289	0.100	5.541				2.939	0.858			0.262
	Coastal_3	15.195	0.000	7.536				1.286	0.175			0.724
	Coastal_4	8.540	0.106	3.174				3.866	0.389			0.102
	Coastal	11.291	0.041	4.458	0.234			2.265	0.537			1.049
Hill	Hill_1	6.001		5.079	0.000		0.372				0.000	1.033
	Hill_2	6.319		6.216	2.214		0.000				0.000	1.856
	Hill_3	8.924		6.417	0.503		0.000				0.089	0.755
	Hill_4	11.679		9.495	4.287		0.000				0.000	0.204
	Hill	7.192		6.078	1.137		0.151				0.018	1.150
Sal	Sal_1	0.092		0.000								
	Sal_2	1.004		4.676								
	Sal_3	5.274		7.594			0.175					
	Sal_4	2.936		9.843						0.148		0.197
	Sal	1.673		3.831			0.037			0.008		0.010
Village	Village_1	5.448		3.224				0.537				0.191
	Village_2	8.301		5.290	0.566							1.604
	Village_3	10.965		11.545								0.656
	Village_4	6.388		3.913	0.241							0.039
	Village	7.880		6.008	0.226			0.179				0.828
National		7.213	0.007	5.665	0.231	0.008	0.010	0.210	0.019	0.001	0.000	0.743

Appendix 9.3 (g): Share of collected primary tree and forest products sold across different HTAC and zone (%) (contd.)

Zone	Location	Leaves	Fruits	Bamboo shoots	Mushroom	Root tubers	Other vegetables	Spices	Other animal products	Fish	Shrimp	Shrimp fry	Crabs
Sundarbans periphery	Sundarbans_1	0.215	9.055			0.117				6.749	6.545	7.809	14.248
	Sundarbans_2	1.134	16.471			0.657		0.178		3.670	4.976	2.935	7.079
	Sundarbans_3	0.482	16.817					0.382		7.740	3.575	2.306	3.872
	Sundarbans_4	0.027	16.332							7.264	5.790	1.145	1.295
	Sundarbans	0.522	14.441			0.213		0.165		6.280	5.107	3.891	7.359
Coastal	Coastal_1	0.113	7.219							5.036			
	Coastal_2	1.042	16.930							1.408	0.220		
	Coastal_3	1.361	18.830							0.589			
	Coastal_4	0.431	12.733							1.494			
	Coastal	0.680	12.969							2.822	0.082		
Hill	Hill_1		6.743							0.752			0.113
	Hill_2		9.991	0.216		0.445		0.484		1.227	0.108		
	Hill_3		16.213			0.258		0.336		3.894			
	Hill_4		22.106	1.691	1.702	1.864	1.585	0.524	0.914	5.904	2.177		
	Hill		11.005	0.211	0.147	0.348	0.137	0.260	0.079	1.990	0.220		0.046
Sal	Sal_1						0.086						
	Sal_2		8.573					0.146					
	Sal_3		13.825										
	Sal_4	0.377	12.672				0.168			0.327			
	Sal	0.020	6.718				0.041	0.053		0.017			
Village	Village_1	0.157	9.088							2.156			0.751
	Village_2	0.212	12.288					0.379		0.401			
	Village_3		10.775							0.800	0.671		
	Village_4	0.211	8.064							0.010			
	Village	0.143	10.647					0.144		1.061	0.159		0.251

National	0.144	10.295	0.006	0.004	0.012	0.008	0.132	0.002	1.071	0.196	0.045	0.291
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Appendix 9.4: Annual income earned by the households from selling primary tree and forest products

Zone	Strata	All primary products		Primary products excluding fisheries	
		Average income (BDT/HH/year)	Total income (million BDT/year)	Average income (BDT/HH/year)	Total income (million BDT/year)
Sundarbans periphery	Sundarbans periphery	28,639	10,972	6,257	2,397
	Sundarbans_1	20,031	2,295	3,544	406
	Sundarbans_2	44,138	4,567	5,398	559
	Sundarbans_3	20,501	2,198	7,514	805
	Sundarbans_4	33,793	1,955	10,856	628
Coastal	Coastal	10,903	10,259	7,732	7,276
	Coastal_1	8,615	3,450	2,842	1,138
	Coastal_2	11,536	3,842	10,398	3,463
	Coastal_3	15,775	2,848	14,357	2,592
	Coastal_4	8,484	228	7,119	192
Hill	Hill	8,527	7,422	7,272	6,329
	Hill_1	4,503	1,637	4,035	1,467
	Hill_2	9,934	2,665	8,473	2,273
	Hill_3	11,094	1,827	9,331	1,536
	Hill_4	16,456	1,216	13,417	992
Sal	Sal	5,223	20,693	5,221	20,685
	Sal_1	25	36	25	36
	Sal_2	7,966	12,294	7,966	12,294
	Sal_3	8,073	6,085	8,073	6,085
	Sal_4	11,475	2,725	11,437	2,716
Village	Village	6,355	170,975	5,592	150,440
	Village_1	6,350	61,789	4,957	48,233
	Village_2	6,185	60,126	5,966	58,002
	Village_3	7,097	42,034	6,186	36,638
	Village_4	4,217	6,445	4,216	6,443
National		6,664	220,321	5,660	187,128

Appendix 9.5: Quantity of processed tree and forest products produced

Zone	HTAC	Wooden furniture		Wooden agricultural appliances		Handicrafts		Ash	
		No/HH/year	No/year	No/HH/year	No/year	No/HH/year	No/year	kg/HH/year	kg/year
Sundarbans periphery	Sundarbans_1	0.311	35,664	0.000	0	4.517	517,591	0.000	0
	Sundarbans_2	0.585	60,561	0.000	0	0.614	63,537	0.000	0
	Sundarbans_3	1.085	116,312	0.000	0	1.911	204,847	0.000	0
	Sundarbans_4	2.319	134,179	0.000	0	2.754	159,339	0.000	0
	Sundarbans periphery	0.895	343,060	0.000	0	2.415	925,087	0.000	0
Coastal	Coastal_1	0.006	2,553	0.000	0	5.604	2,244,190	0.000	0
	Coastal_2	0.070	23,385	0.000	0	0.788	262,528	0.000	0
	Coastal_3	0.003	606	0.000	0	0.427	77,064	0.000	0
	Coastal_4	0.029	773	0.000	0	0.259	6,964	0.000	0
	Coastal	0.030	28,581	0.000	0	2.766	2,602,351	0.000	0
Hill	Hill_1	0.012	4,423	0.000	0	0.582	211,426	0.000	0
	Hill_2	0.242	64,904	0.000	0	4.573	1,226,913	0.000	0
	Hill_3	0.074	12,201	0.000	0	0.419	69,046	0.000	0
	Hill_4	0.061	4,525	0.000	0	2.069	152,888	0.000	0
	Hill	0.098	85,325	0.000	0	1.871	1,628,747	0.000	0
Sal	Sal_1	0.000	0	0.000	0	0.000	0	0.000	0
	Sal_2	0.000	0	0.000	0	0.000	0	0.000	0
	Sal_3	0.172	129,981	0.039	29,768	0.147	110,848	2.178	1,641,721
	Sal_4	0.203	48,166	0.000	0	4.589	1,089,608	0.000	0
	Sal	0.047	187,492	0.008	33,207	0.274	1,085,019	0.462	1,831,357
Village	Village_1	0.046	442,843	0.000	0	0.328	3,188,492	0.000	0
	Village_2	0.056	543,056	0.037	361,713	0.088	852,080	0.000	0
	Village_3	0.144	852,429	0.000	0	0.044	257,657	0.000	0
	Village_4	0.417	637,831	0.000	0	0.023	34,993	0.000	0
	Village	0.092	2,465,742	0.014	379,135	0.154	4,144,781	0.000	0

National		0.094	3,110,201	0.012	412,342	0.314	10,385,986	0.055	1,831,357
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Appendix 9.6: Quantity of processed tree and forest products sold

Zone	HTAC	Wooden furniture		Handicrafts	
		No/HH/year	No/year	No/HH/year	No/year
Sundarbans periphery	Sundarbans_1	0.000	0	3.681	421850
	Sundarbans_2	0.000	0	0.003	340
	Sundarbans_3	0.000	0	1.244	133334
	Sundarbans_4	0.514	29764	1.629	94219
	Sundarbans periphery	0.070	26812	1.653	633105
Coastal	Coastal_1	0.000	0	5.046	2020765
	Coastal_2	0.000	0	0.296	98567
	Coastal_3	0.003	606	0.232	41855
	Coastal_4	0.000	0	0.026	690
	Coastal	0.001	531	2.304	2167737
Hill	Hill_1	0.000	0	0.543	197224
	Hill_2	0.000	0	4.427	1187666
	Hill_3	0.000	0	0.297	48900
	Hill_4	0.000	0	1.402	103649
	Hill	0.000	0	1.729	1504682
Sal	Sal_1	0.000	0	0.000	0
	Sal_2	0.000	0	0.000	0
	Sal_3	0.172	129981	0.000	0
	Sal_4	0.195	46343	4.585	1088687
	Sal	0.047	185884	0.242	960554
Village	Village_1	0.000	0	0.218	2117153
	Village_2	0.000	0	0.000	0
	Village_3	0.000	0	0.000	0
	Village_4	0.251	383083	0.000	0
	Village	0.013	343916	0.073	1954581

National	0.017	557143	0.218	7220660
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Appendix 9.7: Annual income from processed tree and forest products

Zone	HTAC	Average profit (BDT/hh/year)	Total profit (million BDT/year)
Sundarbans periphery	Sundarbans_1	17.55	2.01
	Sundarbans_2	6.70	0.69
	Sundarbans_3	49.26	5.28
	Sundarbans_4	171.37	9.91
	Sundarbans periphery	45.18	17.31
Coastal	Coastal_1	301.58	120.77
	Coastal_2	852.95	284.10
	Coastal_3	363.13	65.56
	Coastal_4	150.96	4.06
	Coastal	512.43	482.19
Hill	Hill_1	160.74	58.43
	Hill_2	454.76	122.00
	Hill_3	31.33	5.16
	Hill_4	732.87	54.17
	Hill	271.28	236.12
Sal	Sal_1	0.00	0.00
	Sal_2	0.00	0.00
	Sal_3	13.78	10.38
	Sal_4	482.85	114.65
	Sal	28.46	112.74
Villages	Villages_1	127.58	1,241.44
	Villages_2	0.00	0.00
	Villages_3	0.00	0.00
	Villages_4	0.00	0.00
	Villages	42.60	1,146.11
Bangladesh	Grand Total	60.330	1,994.47

Appendix 9.8 (a): Number of household members involved in different tree and forest related activities across zones

Zone	HTAC	Primary tree and forest product collection		Processing the tree and forest products		Selling of the tree and forest products	
		no/HH/year	no/year	no/HH/year	no/year	no/HH/year	no/year
Sundarbans periphery	Sundarbans periphery	3.325	1,274,009	0.312	119,359	0.010	3,699
	Sundarbans_1	3.610	413,741	0.378	43,297	0.017	1,908
	Sundarbans_2	3.724	385,277	0.395	40,910	0.003	340
	Sundarbans_3	3.034	325,257	0.224	23,998	0.006	605
	Sundarbans_4	2.580	149,270	0.201	11,609	0.017	971
Coastal	Coastal	2.740	2,578,732	0.196	184,299	0.041	38,317
	Coastal_1	2.724	1,090,952	0.180	71,912	0.049	19,779
	Coastal_2	2.756	918,016	0.260	86,704	0.043	14,454
	Coastal_3	2.745	495,634	0.110	19,932	0.020	3,581
	Coastal_4	2.748	73,956	0.113	3,045	0.004	115
Hill	Hill	2.579	2,244,640	0.227	197,518	0.017	14,934
	Hill_1	2.605	946,927	0.105	38,213	0.010	3,653
	Hill_2	2.564	687,966	0.242	64,866	0.032	8,594
	Hill_3	2.562	421,863	0.309	50,920	0.003	489
	Hill_4	2.548	188,317	0.552	40,810	0.033	2,452
Sal	Sal	1.675	6,634,689	0.020	79,075	0.003	11,720
	Sal_1	0.189	269,318	0.000	0	0.000	0
	Sal_2	2.195	3,388,092	0.000	0	0.000	0
	Sal_3	3.071	2,314,427	0.079	59,879	0.079	59,879
	Sal_4	2.939	697,806	0.059	13,918	0.059	13,918
Village	Village	3.447	92,737,689	0.082	2,215,117	0.004	117,186
	Village_1	3.555	34,596,265	0.079	763,942	0.012	117,619
	Village_2	3.449	33,529,855	0.071	686,438	0.000	0
	Village_3	3.409	20,192,180	0.112	663,025	0.000	0
	Village_4	2.899	4,430,052	0.057	87,539	0.006	9,577

National	3.190	105,469,759	0.085	2,795,368	2,795,368	185,857
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Appendix 9.8 (b): Number of females involved in tree and forest related activities

Zone	HTAC	Primary tree and forest product collection		Processing the tree and forest products		Selling of the tree and forest products	
		no/HH/year	no/year	no/HH/year	no/year	no/HH/year	no/year
Sundarbans periphery	Sundarbans periphery	1.662	636805	0.174	66615	0.005	2057
	Sundarbans_1	1.793	205444	0.285	32616	0.012	1419
	Sundarbans_2	1.799	186151	0.249	25742	0.003	340
	Sundarbans_3	1.548	165906	0.062	6696	0.003	329
	Sundarbans_4	1.370	79249	0.041	2365	0.000	0
Coastal	Coastal	1.364	1283972	0.170	159970	0.020	18406
	Coastal_1	1.289	516144	0.143	57450	0.025	9890
	Coastal_2	1.427	475190	0.236	78511	0.020	6760
	Coastal_3	1.405	253618	0.104	18759	0.008	1419
	Coastal_4	1.437	38654	0.107	2890	0.004	115
Hill	Hill	1.235	1074525	0.071	62176	0.010	8357
	Hill_1	1.254	456020	0.032	11545	0.003	1102
	Hill_2	1.224	328271	0.067	18059	0.023	6256
	Hill_3	1.224	201559	0.097	15956	0.003	489
	Hill_4	1.204	88978	0.212	15646	0.009	660
Sal	Sal	0.899	3561057	0.009	35012	0.001	2088
	Sal_1	0.100	143152	0.000	0	0.000	0
	Sal_2	1.156	1784567	0.000	0	0.000	0
	Sal_3	1.680	1266516	0.035	26130	0.002	1872
	Sal_4	1.606	381333	0.028	6646	0.000	0
Village	Village	1.737	46718852	0.036	981648	0.000	0
	Village_1	1.808	17596036	0.060	583168	0.000	0
	Village_2	1.736	16875596	0.031	302412	0.000	0

	Village_3	1.700	10070336	0.017	102878	0.000	0
	Village_4	1.440	2200124	0.012	17650	0.000	0
National		1.612	53275210	0.039	1305420	0.001	30907

Appendix 9.8 (c): Ratio of female to total family member employed in the specific activities (%)

Zone	HTAC	Primary tree and forest product collection	Processing the tree and forest products	Selling of the tree and forest products
Sundarbans periphery	Sundarbans periphery	50.77	13.31	0.37
	Sundarbans_1	49.34	22.88	0.67
	Sundarbans_2	49.01	19.03	0.33
	Sundarbans_3	52.10	4.00	0.31
	Sundarbans_4	54.34	2.59	0.00
Coastal	Coastal	48.42	9.85	1.42
	Coastal_1	42.18	8.46	1.51
	Coastal_2	53.69	13.13	1.69
	Coastal_3	52.34	6.57	0.79
	Coastal_4	49.80	7.64	0.43
Hill	Hill	45.78	4.18	0.77
	Hill_1	47.62	1.94	0.30
	Hill_2	44.50	4.64	1.75
	Hill_3	44.46	5.06	0.30
	Hill_4	44.69	11.04	0.75
Sal	Sal	29.13	0.32	0.03
	Sal_1	5.96	0.00	0.00
	Sal_2	37.75	0.00	0.00
	Sal_3	48.99	1.13	0.12
	Sal_4	53.06	1.44	0.00
Village	Village	50.18	2.70	0.00
	Village_1	51.11	4.40	0.00
	Village_2	51.18	2.14	0.00
	Village_3	48.40	1.57	0.00
	Village_4	44.94	1.09	0.00
National		47.50	2.78	0.07

Appendix 9.9 (a): Proportion of households involved with different income generating activities across zones (%)

Zone	HTAC	Collection of primary tree and forest products	Income from primary tree and forest products	Processing tree and forest products	Income from processed tree and forest products	Co-manage d	Social forestry
Sundarbans periphery	Sundarbans periphery	99.47	47.62	23.37	0.67	1.51	0.41
	Sundarbans_1	99.37	41.19	29.11	0.81	3.72	0.56
	Sundarbans_2	99.66	50.30	28.82	0.33	1.29	0.00
	Sundarbans_3	99.26	50.63	16.69	0.56	0.00	0.83
	Sundarbans_4	99.76	49.00	15.39	1.29	0.74	0.00
Coastal	Coastal	94.70	36.62	11.27	2.77	0.15	0.07
	Coastal_1	88.94	30.75	10.42	2.47	0.00	0.00
	Coastal_2	99.23	38.89	14.41	3.66	0.19	0.19
	Coastal_3	99.55	46.47	7.06	1.98	0.49	0.00
	Coastal_4	93.45	36.69	8.21	0.43	0.00	0.00
Hill	Hill	95.31	28.73	14.79	1.48	0.50	0.71
	Hill_1	96.71	22.50	7.51	1.00	0.00	1.19
	Hill_2	94.34	27.52	16.68	2.49	0.91	0.60
	Hill_3	94.14	34.27	18.99	0.30	1.09	0.20
	Hill_4	94.90	49.00	32.48	3.03	0.00	0.00
Sal	Sal	52.65	14.85	0.80	0.24	0.00	0.11
	Sal_1	11.05	0.18	0.00	0.00	0.00	0.00
	Sal_2	69.39	18.49	0.00	0.00	0.00	0.31
	Sal_3	87.16	31.17	2.96	0.42	0.00	0.00
	Sal_4	91.45	27.30	3.20	2.91	0.00	0.00
Village	Village	97.56	31.65	6.13	0.40	0.00	0.17
	Village_1	98.87	29.77	5.47	1.21	0.00	0.50
	Village_2	99.50	29.83	4.56	0.00	0.00	0.00
	Village_3	95.45	39.12	9.75	0.00	0.00	0.00
	Village_4	84.22	22.92	5.36	0.00	0.00	0.00
National		92.06	29.89	6.07	0.48	0.04	0.18

Appendix 9.9 (b): Proportion of households receiving different tree and forest related services across zones (%)

Zone	HTAC	Freshwater/water conservation	Livestock grazing	Shade	Soil quality and fertility	Erosion control	Natural windbreak
Sundarbans periphery	Sundarbans periphery	2.10	17.99	78.08	32.95	29.02	73.12
	Sundarbans_1	2.25	23.65	76.37	43.36	32.29	90.76
	Sundarbans_2	3.58	17.91	82.13	34.03	30.93	83.78
	Sundarbans_3	1.57	9.72	75.13	25.17	23.52	49.11
	Sundarbans_4	0.00	24.83	80.11	26.40	30.67	68.50
Coastal	Coastal	0.01	6.68	89.04	24.12	35.64	73.82
	Coastal_1	0.00	7.43	89.21	20.61	32.25	74.89
	Coastal_2	0.00	4.56	90.11	22.51	36.54	73.45
	Coastal_3	0.00	10.07	86.23	37.44	41.28	72.63
	Coastal_4	0.40	3.48	89.04	19.67	40.73	70.27
Hill	Hill	18.95	16.48	91.83	25.12	27.58	75.64
	Hill_1	10.93	14.36	91.04	19.63	24.57	73.49
	Hill_2	27.32	19.43	91.16	25.47	28.99	80.25
	Hill_3	20.71	14.71	93.87	29.45	29.42	70.17
	Hill_4	23.51	20.55	93.01	39.42	32.40	82.90
Sal	Sal	2.39	13.77	86.02	50.73	41.08	68.30
	Sal_1	1.88	6.55	80.26	34.61	31.57	53.91
	Sal_2	2.36	15.90	90.01	56.68	44.88	73.06
	Sal_3	3.09	22.16	90.34	66.49	49.95	86.19
	Sal_4	3.31	16.18	81.73	59.95	46.30	64.92
Village	Village	6.23	27.87	96.27	53.40	40.66	90.70
	Village_1	5.55	29.46	95.49	56.74	47.52	88.79
	Village_2	5.56	29.76	96.73	62.26	41.35	91.68
	Village_3	8.72	23.07	96.76	35.16	31.05	92.05
	Village_4	4.11	25.71	95.78	50.20	35.20	89.66
National		5.88	25.16	94.51	51.26	40.09	86.93

Appendix 9.9 (b): Proportion of households receiving different tree and forest related services across zones (%) (contd.)

Zone	HTAC	Tourism	Recreation	Aesthetic	Religious/spiritual	Medicinal	Pollution control	Others
Sundarbans periphery	Sundarbans periphery	14.99	14.22	10.50	3.46	52.58	49.31	26.61
	Sundarbans_1	15.70	19.80	14.37	4.36	72.91	61.47	6.21
	Sundarbans_2	19.87	18.24	7.87	6.30	73.90	64.18	15.49
	Sundarbans_3	10.71	7.63	9.35	1.61	23.03	36.19	50.40
	Sundarbans_4	13.27	9.21	10.22	0.06	33.35	23.37	38.34
Coastal	Coastal	16.31	5.05	22.20	0.54	16.53	27.52	54.81
	Coastal_1	14.54	3.19	24.13	0.00	16.04	27.25	63.79
	Coastal_2	14.58	5.92	18.72	0.77	18.04	25.98	50.67
	Coastal_3	24.77	7.74	25.52	1.52	14.97	30.25	42.35
	Coastal_4	15.77	5.63	19.63	0.00	13.75	34.74	48.80
Hill	Hill	9.09	9.44	19.49	1.58	25.39	34.41	35.38
	Hill_1	8.15	7.69	16.42	0.23	25.84	34.04	44.56
	Hill_2	8.47	8.60	22.08	2.69	24.80	38.24	29.17
	Hill_3	11.21	13.06	19.88	2.14	25.47	32.72	29.13
	Hill_4	10.58	11.87	24.06	2.80	25.08	26.88	28.59
Sal	Sal	14.50	20.83	20.55	4.55	32.22	53.15	22.98
	Sal_1	24.30	16.07	28.36	0.09	10.76	35.04	33.64
	Sal_2	10.03	21.72	18.38	5.43	41.63	62.68	22.01
	Sal_3	5.11	26.20	10.06	9.87	51.38	67.24	9.13
	Sal_4	14.08	26.61	22.71	8.56	41.43	58.35	10.30
Village	Village	11.70	14.79	12.94	8.03	58.59	69.68	19.56
	Village_1	6.42	12.65	12.55	3.51	55.22	67.03	16.31
	Village_2	12.41	18.10	12.39	10.83	66.24	79.13	7.31
	Village_3	16.10	12.52	14.91	9.25	51.96	56.90	42.11
	Village_4	20.57	14.71	10.51	11.12	54.61	76.05	27.28
National		12.14	15.09	14.26	7.18	53.29	65.33	21.47

Appendix 9.10: Value of collected tree and forest products used for cooking and heating

Zone	HTAC	BDT/HH/year	Million BDT/year
Sundarbans periphery	Sundarbans periphery	8869	3398
	Sundarbans_1	6888	789
	Sundarbans_2	8423	871
	Sundarbans_3	9937	1065
	Sundarbans_4	11522	667
Coastal	Coastal	5930	5580
	Coastal_1	4997	2001
	Coastal_2	6620	2205
	Coastal_3	6932	1251
	Coastal_4	5089	137
Hill	Hill	24476	21303
	Hill_1	39001	14178
	Hill_2	14681	3939
	Hill_3	15142	2493
	Hill_4	12385	915
Sal	Sal	2435	9647
	Sal_1	89	127
	Sal_2	2692	4155
	Sal_3	5583	4208
	Sal_4	4525	1075
Village	Village	6059	162999
	Village_1	5953	57926
	Village_2	5612	54552
	Village_3	7358	43575
	Village_4	4056	6198
National		6138	202927

Appendix 9.11: Cost of buying tree and forest products used for cooking and heating

Zone	HTAC	BDT/HH/year	million BDT/year
Sundarbans periphery	Sundarbans periphery	1695	649
	Sundarbans_1	2470	283
	Sundarbans_2	1198	124
	Sundarbans_3	1555	167
	Sundarbans_4	1382	80
Coastal	Coastal	3979	3744
	Coastal_1	3886	1556
	Coastal_2	4288	1428
	Coastal_3	2877	519
	Coastal_4	7345	198
Hill	Hill	3210	2794
	Hill_1	3480	1265
	Hill_2	3251	872
	Hill_3	3281	540
	Hill_4	1626	120
Sal	Sal	2842	11261
	Sal_1	2530	3612
	Sal_2	3017	4656
	Sal_3	2917	2199
	Sal_4	3535	839
Village	Village	2452	65970
	Village_1	2299	22376
	Village_2	2214	21520
	Village_3	2445	14479
	Village_4	5258	8035
National		2554	84419

Appendix 9.12: Gap between consumption and collection of tree and forest products used for energy

zone	HTAC	Firewood		Leaves		Energy	
		kg/HH/year	t/year	kg/HH/year	t/year	kg/HH/year	t/year
Sundarbans periphery	Sundarbans periphery	-261.97	-110632	-27.41	-11574	-289.37	-122205
	Sundarbans_1	-366.07	-46242	-25.78	-3256	-391.84	-49498
	Sundarbans_2	-183.91	-20976	-3.20	-365	-187.11	-21341
	Sundarbans_3	-271.08	-32032	-54.07	-6389	-325.15	-38421
	Sundarbans_4	-180.05	-11482	-19.66	-1254	-199.71	-12736
Coastal	Coastal	-351.51	-364602	34.97	36270	-316.54	-328332
	Coastal_1	-285.96	-126234	15.95	7042	-270.01	-119192
	Coastal_2	-406.69	-149318	45.30	16632	-361.39	-132687
	Coastal_3	-329.65	-65600	68.55	13642	-261.09	-51958
	Coastal_4	-692.58	-20543	-7.49	-222	-700.08	-20765
Hill	Hill	-347.26	-333173	2.43	2335	-344.83	-330839
	Hill_1	-305.41	-122386	10.67	4277	-294.73	-118109
	Hill_2	-473.47	-140019	-6.66	-1970	-480.14	-141989
	Hill_3	-335.87	-60962	0.39	71	-335.48	-60890
	Hill_4	-134.05	-10921	0.04	4	-134.01	-10918
Sal	Sal	-189.23	-826423	-2.72	-11870	-191.95	-838294
	Sal_1	-147.50	-232073	-0.82	-1287	-148.32	-233361
	Sal_2	-221.46	-376757	4.96	8440	-216.50	-368317
	Sal_3	-210.13	-174588	-14.87	-12354	-225.00	-186942
	Sal_4	-177.28	-46403	-20.06	-5250	-197.34	-51652
Village	Village	-246.55	-7311674	5.41	160515	-241.14	-7151158
	Village_1	-240.34	-2577986	30.92	331619	-209.42	-2246367
	Village_2	-190.81	-2044725	-19.54	-209400	-210.35	-2254125
	Village_3	-306.66	-2001970	12.41	81008	-294.25	-1920963

	Village_4	-422.78	-712156	-8.67	-14608	-431.45	-726765
National		-246	-8946504	5	175676	-241	-8770828

Note: The negative sign indicates surplus.

Appendix 9.13 (a): Household's total annual income from tree and forest

Zone	HTAC	Income		Income excluding fisheries products	
		Average income (BDT/HH/year)	Total income (million BDT/year)	Average income (BDT/HH/year)	Total income (million BDT/year)
Sundarbans periphery	Sundarbans periphery	29,275	11,216	6,893	2,641
	Sundarbans_1	20,046	2,297	3,559	408
	Sundarbans_2	46,254	4,786	7,515	778
	Sundarbans_3	20,550	2,203	7,563	811
	Sundarbans_4	34,075	1,971	11,138	644
Coastal	Coastal	12,362	11,632	9,191	8,649
	Coastal_1	9,474	3,794	3,701	1,482
	Coastal_2	13,221	4,404	12,083	4,024
	Coastal_3	17,717	3,199	16,299	2,943
	Coastal_4	12,726	342	11,361	306
Hill	Hill	14,703	12,797	13,447	11,704
	Hill_1	7,028	2,555	6,560	2,385
	Hill_2	18,154	4,870	16,693	4,478
	Hill_3	21,431	3,529	19,668	3,239
	Hill_4	22,755	1,682	19,715	1,457
Sal	Sal	9,347	37,032	9,345	37,024
	Sal_1	9,016	12,869	9,016	12,869
	Sal_2	9,742	15,035	9,742	15,035
	Sal_3	8,087	6,095	8,087	6,095
	Sal_4	14,022	3,330	13,984	3,321
Village	Village	8,554	230,135	7,791	209,601
	Village_1	7,763	75,540	6,370	61,984

	Village_2	8,719	84,756	8,500	82,633
	Village_3	10,049	59,513	9,138	54,117
	Village_4	5,592	8,545	5,591	8,543
National		9,160	302,812	8,156	269,619

Appendix 9.13 (b): Percentage of total annual income received by HH from tree and forest

Zone	HTAC	%
Sundarbans periphery	Sundarbans periphery	9.02
	Sundarbans_1	7.02
	Sundarbans_2	7.31
	Sundarbans_3	9.60
	Sundarbans_4	15.37
Coastal	Coastal	5.45
	Coastal_1	4.78
	Coastal_2	5.79
	Coastal_3	6.46
	Coastal_4	5.06
Hill	Hill	6.86
	Hill_1	3.60
	Hill_2	7.12
	Hill_3	10.55
	Hill_4	12.43
Sal	Sal	2.56
	Sal_1	2.33
	Sal_2	2.46
	Sal_3	2.93
	Sal_4	3.47
Village	Village	3.40
	Village_1	2.81
	Village_2	3.83
	Village_3	3.86
	Village_4	1.94
National		3.52