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Project Identification Form (PIF) entry – Full Sized Project – GEF - 7

## Biodiversity protection through the Effective Management of the National Network of Protected Areas

### Part I: Project Information

**GEF ID**

10351

**Project Type**

FSP

**Type of Trust Fund**

GET

**CBIT/NGI** CBIT NGI**Project Title**

Biodiversity protection through the Effective Management of the National Network of Protected Areas

**Countries**

Comoros

**Agency(ies)**

UNDP

**Other Executing Partner(s)**

Ministry of Environment, Agriculture and Fisheries (MEAF)

**Executing Partner Type**

Government

**GEF Focal Area**

Biodiversity

**Taxonomy**

Conservation Finance, Focal Areas, Biodiversity, Protected Areas and Landscapes, Coastal and Marine Protected Areas, Terrestrial Protected Areas, Community Based Natural Resource Mngt, Productive Landscapes, Productive Seascapes, Species, Threatened Species, Wildlife for Sustainable Development, Biomes, Mangroves, Lakes, Sea Grasses, Wetlands, Tropical Rain Forests, Coral Reefs, Rivers, Financial and Accounting, Mainstreaming, Tourism, Agriculture and agrobiodiversity, Fisheries, Land Degradation, Sustainable Land Management, Integrated and Cross-sectoral approach, Sustainable Forest, Income Generating Activities, Community-Based Natural Resource Management, Sustainable Livelihoods, Influencing models, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Demonstrate innovative approach, Stakeholders, Local Communities, Civil Society, Community Based Organization, Non-Governmental Organization, Type of Engagement, Partnership, Participation, Consultation, Information Dissemination, Communications, Behavior change, Education, Awareness Raising, Public Campaigns, Beneficiaries, Private Sector, SMEs, Individuals/Entrepreneurs, Gender Equality, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Access and control over natural resources, Knowledge Generation and Exchange, Access to benefits and services, Participation and leadership, Capacity Development, Capacity, Knowledge and Research

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 0

**Climate Change Adaptation**

Climate Change Adaptation 0

**Duration**

60 In Months

**Agency Fee(\$)**

380,911

**Submission Date**

10/3/2019

## A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-2-7	GET	4,009,589	24,400,000
	<b>Total Project Cost (\$)</b>	<b>4,009,589</b>	<b>24,400,000</b>

## B. Indicative Project description summary

### Project Objective

To conserve terrestrial and marine biodiversity by strengthening management of the UoC's newly created Protected Areas Network through effective co-management with communities for sustainable development.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Strengthening political, legal and institutional framework and capacity for effective management of the national Protected Areas Network (PAN)	Technical Assistance	<p>1.1 Institutional, technical and operational capacity to implement the legal and institutional framework of the national Protected Areas Network (PAN)</p> <p><i>Indicators:</i></p> <p><i>Capacity building in at least 9 institutions for at least 50 people</i></p> <p><i>Development of PAN investment framework and financing strategy</i></p> <p><i>At least 5 private sector partners engaged and mainstreaming biodiversity/PAN conservation</i></p>	<p>1.1.1 Capacity of the new PA agency (Comoros National Parks), DGEF, and Co-management Committees[1] to implement and enforce laws (including national laws and implementation mechanisms regarding CITES)[2], regulations and management systems relating to the PAN is strengthened.</p> <p>1.1.2 Strengthened strategic coordination of agencies, institutions, key ministries (Finance, Tourism, Artisanat) is facilitated to support the effective implementation of PAN management plans.</p> <p>1.1.3 National strategies, development plans and sectoral programmes are harmonized, biodiversity priorities are integrated, and management and operationalisation of the new PAN is supported.</p> <p>1.1.4 An Investment Framework and Financing Strategy is developed to support long-term PAN management.[3]</p>	GET	339,436	1,970,000

### 1.1.5 Strengthened participation of the private sector and public/private partners in conservation of the Comoros' biodiversity.[4]

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[1] The Co-management Committees per National Park comprise representatives from various sectors affected by the NP, including: community representatives from the villages in the NP, Mayors from the Municipalities, representatives from the DGEF, Science Faculty, Gendarmerie, Police, Coast Guard, National Tourism Office, Chamber of Commerce

[2] The Comoros is included in Category 3 under the CITES National Legislation Project and potentially subject to increased scrutiny and pressure to ensure compliance with ratification of the Convention, with potential consequences on value chains that could be developed based on CITES-listed species (Component 3). National CITES legislation and associated implementation mechanisms could also be key supplementary tools for the conservation of CITES-listed species that exist in the target PAs and assist with decision-making on zoning for enhanced biodiversity protection (Component 2).

[3] Financial sustainability is very weak and constitutes the main challenge for the future of Comoros' PA network. The legal frameworks are not adequately developed to ensure revenue generation, such as taxes, entry fees and other environmental taxes. The National Parks created are only starting to develop their business plans and have not finalized their funding needs or budget allocations to ensure effective management of the PAs. Tourism, which should contribute

to generating financing in the protected areas, is not yet developed, including facilities such as housing and dining facilities. The process of creating an environmental fund for Comoros (the FEC) is still underway and has secured Euros 1.5 million from AFD but this is specifically earmarked for Mohéli National Park (where AFD will also invest Euros 6 million from 2020).

[4] The private sector in the Comoros comprises a variety of entities with varying degrees of involvement and affiliation with the new National Parks (ie National Network of Women and Development, National Union of Fishermen, Tour Guides, Federation of Comorian private sector, international luxury perfume companies), and the sector's role in conservation of biodiversity - based on the new Laws and Regulations governing PA management - needs to be acknowledged, addressed and strengthened.

2. Strengthening capacity to improve management and co-management of the national PAN at site level	Technical Assistance	2.1 Increased protection of endemic and key species and habitats through improved management effectiveness across the national PA Network	2.1.1 Biodiversity monitoring and data collection, including development of a national biodiversity database, are developed and applied.[1]	GET	1,866,899	9,988,000
		<i>Baseline will be the hectares under protection as a result of UNDP ID</i>	2.1.2 Management tools (including species management plans for key terrestrial and marine species) are drafted, approved and applied at target sites within the nascent PAs.[2]			
			2.1.3 Successful community co-management models and partnerships are identified, co-adapted and applied at			

*4950 and Indicators will be determined during PPG*<sup>[1]</sup> selected sites within the PAN (e.g. in partnership with NGOs/CBOs working on the ground, such as Dahari).<sup>[3]</sup>

*- Management Effectiveness*

*Tracking Tool (METT) will have baseline as at 2018 PIR of Project ID 4950; Indicators will be set at PPG*

*- number of people participating*<sup>[2]</sup> *in new models of co-management (target being progress in improved management effectiveness at target PA sites, as measured by the scoring system in the METT)*

*- Population of key species at pilot sites remain stable and/or increase*

*Targets for key species will be set at PPG*

<sup>[1]</sup> Biodiversity monitoring will require partnership development and enhancement, where already established (ie with Durrell Wildlife Conservation Trust, University of Bristol, WWF), in order that scientific skills and knowledge can be shared with Comoros's scientific and research entities (ie University of Comoros, Comoros National Centre for Documentation and Scientific Research (CNDRS)).

<sup>[2]</sup> This output will involve the further development of regional partnerships and collaboration with regard to marine and coastal zone management efforts in the Western Indian Ocean. There will be overlap with activities scheduled under Component 1, where the PAGs and Decrees for each PA will be reviewed and analysed for improved application on the ground (ie could involve the development of species management plans, or updates of existing Action Plans, such as those already prepared for Livingstones's Flying Fox *Pteropus livingstonii* and the Green Turtle *Chelonia mydas*).

<sup>[3]</sup> This output will also include facilitation of exchange visits between sites where models of co-management can be demonstrated and co-adapted for application across the PA network.

[1] For example, recommendations are being made to include additional villages in the Karthala NP, which will be confirmed during PPG and delimitation sizes/hectarage will be calculated at that time.

[2] Participants at training events will be targeted representatives from Co-management Committees, Ministry personnel, Community Rangers, Municipal Police, and Masters students studying biodiversity-specific subjects. The selection of attendees ensures that knowledge learned is shared with other individuals within the source community or institution, and that the knowledge learned is applied.

3. Technical  
Improved Assistan

GET

1,188,026

10,200,000



community ce  
livelihoods  
within  
National  
Protected  
Areas  
Network

3.1 Increased area  
under sustainable  
CBNRM and  
improved local  
capacity to  
generate nature-  
based livelihoods

*Indicators and  
Targets*  
*(disaggregated by  
gender):*

*- number of CBNRM  
initiatives that are  
created (starting  
from baseline of  
zero)*

*- % reduction in rate  
of deforestation  
and/or destructive  
agro-fishery  
practices Baseline  
and target will be  
set at PPG*

*- number of women  
receiving artisanal-  
skills training and  
producing products  
for sale (Target will  
be set at PPG)*

*- training materials  
produced that  
focus on financial  
accounting and  
negotiation skills*

3.1.1 Study carried out on ecosystem  
services that are provided at the new PAs,  
results are shared and community  
understanding is enhanced for informed  
decision making.[1]

3.1.2 Nature-based livelihood options[2] that  
will provide long-term security are identified,  
developed and turned into income-  
generating activities.[3]

3.1.3 Training provided to re-develop and  
refine artisanal skills within communities, to  
enhance the value of natural forest and  
coastal resources for biodiversity-friendly  
alternative income-generating activities.

3.1.4 The necessary processes and  
mechanisms required to ensure tangible  
(and maximum) benefits accrue to targeted  
communities are identified and set up.[4]

3.1.5 Partnerships with private sector (for  
investments into value chain development  
for selected products) developed and  
appropriate joint venture agreements  
finalized (based on feasibility studies to be  
carried out) to reduce threats to vulnerable  
ecosystems within selected PAs.[5]

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[1] Linkages will be made to other UNDP,  
UNDP GEF and GCF funded projects on  
climate change adaptation/resilience in  
Comoros. [PIMS ID 5883 "Strengthening  
resilient and adaptive capacities of local

*- number of regional networks that include Comoros' PAs in their advertising for tourism ventures*

government and communities vulnerable to climate change in the Union of the Comoros"; PIMS ID 6257 "Biodiversity Protection through Effective Management of the National Network of Protected Areas]

[2] For example, agro-forestry, medicinal plants and essential oils, dried fruit, vanilla, cloves, wildlife products, but also will include identification and development of marine resources, to ensure marine and coastal zone resilience, including option to develop coral regeneration operations, promotion of atypical (for Comorians) seafood, ecotourism ventures (whale-watching, turtle nest protection, marine recreational activities)

[3] The nature-based products will be clarified following site field visits at PPG and inventory of available natural resources, together with a value-chain analysis and market research study. It will be critical to community motivation that alternative income-generating activities are not only identified, but are launched and benefits are obtained.

[4] Working with the community associations that already exist (or might need to be created under the project), such as Women's Associations, Village Committees, traditional leadership (Village Chief, Religious leaders), to determine how, and ensure that, financial benefits and economic returns are delivered to the appropriate entity and that financial benefits are shared fairly. For example, some benefits may accrue at the individual or household level, whilst others may accrue to an Association or Cooperative level. The project will work with all appropriate groupings and help to develop a community

benefit-sharing mechanism (where required), and assist with financial negotiating and accounting skills (percentage returns from eg ecotourism ventures to villages, income derived from community fishing practices, SMMEs etc) and ensure tangible benefits to communities.

[5] Partnerships will also be strengthened within the region to ensure that the Comoros become active in regional networks and trade agreements representative of the income-generating activities developed under the Project, for example Regional Tour Guide Network, Regional Tourism Exhibitions, The Vanilla Islands Association, etc.

4. Knowledge management, M&E, & Gender Empowerment	Technical Assistance	4.1 Effective sharing of knowledge supports learning across the project, Comoros and regional SIDS	4.1.1 Gender empowerment strategy developed and used to guide project implementation and M&E at all levels of project activities	GET	424,295	1,080,095
		<p><i>Indicators:</i></p> <p>- 50% women involved in project development and project activities</p> <p>- 50% women benefiting from project income-generating activities</p>	4.1.2 Public awareness on ecosystems/species conservation and the value of the PAN raised through targeted outreach and education campaigns[1]			
			4.1.3 Enhanced Environmental education to support and inspire national pride in the national PAN[2]			
			4.1.4 Lessons learned disseminated locally (ie at project sites), across Comoros and among regional SIDS[3]			

*- Baseline for information sharing will be zero, indicators will be number of brochures produced and disseminated locally; number of posters produced and locations where they are posted; number of schools incorporating environmental education and PA-specific information into their lessons*

4.1.5 Participatory M&E and learning system developed and implemented for adaptive project management

[1] Possibility exists to continue partnership created with Peace Corps in Comoros under Project ID 4950 where Peace Corps volunteers working in village schools on the 3 islands have provided environmental education services at the school and community levels. Future involvement could include organising field trips to PAs, initiating projects on Comoros biodiversity/national history, involvement in poster design competitions, facilitating school preparation and participation at eg, national 'turtle day' events, etc. Consolidation of the partnership will be addressed during PPG.

[2] Sharing of information on Comoros biodiversity and PAN will not only be addressed under Component 4 on Knowledge Management, but activities under Component 1 will target specific liaison and incorporation of the Ministry of Education such that biodiversity issues are mainstreamed into the education sector.

[3] Sharing of knowledge and promotion of Comoros's biodiversity and PA management will be through assisted participation at regional and international Conventions (eg WIOMSA/Protected Area symposia/CBD/CITES) as well as through the production of brochures, posters, films to showcase PAN management successes.

**Sub Total (\$)**

**3,818,656**

**23,238,095**

**Project Management Cost (PMC)**

	GET	190,933	1,161,905
	<b>Sub Total(\$)</b>	<b>190,933</b>	<b>1,161,905</b>
	<b>Total Project Cost(\$)</b>	<b>4,009,589</b>	<b>24,400,000</b>

## C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	Ministry of Environment, Agriculture & Fisheries	In-kind	Recurrent expenditures	9,000,000
Government	Ministry of Environment, Agriculture & Fisheries	Public Investment	Investment mobilized	1,500,000
CSO	AIDE, Comoflora, Ulanga, Dahari, Bimbini, Association Gombessa, Syndicat des Pêcheurs	In-kind	Recurrent expenditures	1,800,000
Donor Agency	World Bank	In-kind	Recurrent expenditures	1,600,000
Private Sector	UCCIA, TELMA, Comores Telecom	Grant	Investment mobilized	2,000,000
GEF Agency	UNDP	Grant	Investment mobilized	500,000
Donor Agency	AFD, World Bank	Grant	Investment mobilized	8,000,000
			<b>Total Project Cost(\$)</b>	<b>24,400,000</b>

**Describe how any "Investment Mobilized" was identified**

Investment mobilized : Several partnerships exist already between individuals, associations, communities and the private sector working in the lucrative and luxury perfume industry; through the project, it is anticipated that additional joint venture agreements will be developed at target sites. These will be identified in more detail during PPG, at which time a detailed value chain analysis will be carried out, identifying not only the available natural resources but also the markets and buyers/partners. The AFD has committed Euros 7.5 million to conservation efforts in the Comoros (Euros 6 million to MNP conservation activities and Euros 1.5 million to the FEC) . The Government of the Union of the Comoros has allocated considerable funds to the operationalization of the National Parks network and the UNDP has approved commitment of core funding to the project.

## D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Comoros	Biodiversity	BD STAR Allocation	4,009,589	380,911	4,390,500
<b>Total GEF Resources(\$)</b>					<b>4,009,589</b>	<b>380,911</b>	<b>4,390,500</b>

## E. Project Preparation Grant (PPG)

PPG Amount (\$)

100,000

PPG Agency Fee (\$)

9,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Comoros	Biodiversity	BD STAR Allocation	100,000	9,500	<b>109,500</b>
<b>Total Project Costs(\$)</b>					<b>100,000</b>	<b>9,500</b>	<b>109,500</b>



## Core Indicators

### Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
54,084.00	0.00	0.00	0.00

### Indicator 1.1 Terrestrial Protected Areas Newly created


Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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### Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
54,084.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Karthala National Park	555576145	Protected area with sustainable use of natural resources	26,214.00						
Mohéli National Park (Mlejelele Forest)	313046	Protected area with sustainable use of natural resources	16,170.00						

Mont Ntringui National Park	555576147	Protected area with sustainable use of natural resources	11,700.00	
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**Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
58,490.00	0.00	0.00	0.00

**Indicator 2.1 Marine Protected Areas Newly created**




Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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## Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
58,490.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Coelacanth Marine Park	555576144	Protected area with sustainable use of natural resources	9,276.00						

Mitsamiouli- Ndroude NP	NA	Protected area with sustainable use of natural resources	2,314.00	
Mohéli Marine Park	313046	National Park	40,400.00	
Shisiwani Marine Park	NA	Protected area with sustainable use of natural resources	6,500.00	

**Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
<b>Female</b>	4,000			
<b>Male</b>	4,000			

<b>Total</b>	8000	0	0	0
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## Part II. Project Justification

### 1a. Project Description

#### 1a. *Project Description.*

##### *1) the global environmental and/or adaptation problems, root causes and barriers*

Geography. The Union of the Comoros (UoC) is a small-island nation occupying a strategic geopolitical position in the Western Indian Ocean and is included in the Madagascar and Indian Ocean Islands Hotspot, as defined by Conservation International.[1] Located in the northern part of the Mozambique Channel, equidistant from the African continent and from Madagascar, the shoreline is 340 km and total land area of the 3 islands is 1862 km<sup>2</sup>, made up as follows: Ngazidja (Grande Comore) 1148 km<sup>2</sup>, Mwali (Mohéli) 290 km<sup>2</sup>, Ndzuani (Anjouan, 424 km<sup>2</sup>). Mount Karthala, an active volcano in southern Grande Comore, is the highest point of the 3 islands at 2361m; Mount Ntringui in Anjouan reaches 1595 m and the maximum altitude in Mohéli is 790 m. The islands have an exceptional geological history, appearing at different geological periods, are isolated from each other by deep ocean trenches of between 300-4000m, and were never in contact with each other (nor with the African continent or Madagascar), with the result that each island has a distinct biophysical and social characteristic. All three islands have extremely fertile soils that are fragile and highly vulnerable to erosion: Grande Comore, with permeable volcanic soils, has only one small crater lake and no permanent watercourse; Anjouan, with fertile clay-loam soils of basaltic origin and a rugged terrain; and Mohéli, the oldest of the three islands, with clay-loam, fertile, often impermeable soils. The climate is tropical and rainfall is abundant everywhere, especially during the austral summer, ranging from 1000 mm of rain per year on coastal areas to an average of 5000 mm on the western slope of Grande Comore, increasing with altitude. Although the hydrographic network on Anjouan and Mohéli was initially relatively dense, this has been reduced considerably, with many springs now dry in the dry season as a result of extensive deforestation that has taken place on the islands, together with the increase in cultivation of annual crops. Reduced water resources, in terms of both quality and quantity, is impacting on the irrigation potential for agriculture and food provision.

Socio-economic context: Whilst the islands contain endemic species of global significance (see below), they are also home to poor rural farmers who depend on agriculture and natural resources for their survival and livelihoods. Over 70% of the population relies on agriculture for their livelihood (staple crops are carbohydrate rich, i.e. manioc, sweet potato, breadfruit, yams and plantain), with main export earnings derived from three cash crop products: ylang-ylang, vanilla and cloves. Agriculture, including fisheries and forestry, contributes 50% of GDP, employs 80% of the workforce and accounts for the bulk of exports. Food production is largely subsistence-oriented, with a large part of the country's food needs being met through imports – for example, significant imports of rice from Pakistan.[2] The small size of available arable land is limiting production capacity and preventing any economies of scale, whilst the geographical isolation of the country, the small size of the domestic markets and the geographical dispersion of the islands result in significant costs in transport and infrastructure. The population estimate at July 2019 is 850,886 with a population density of 395 inhabitants/km<sup>2</sup>, making it one of the most densely populated countries in Africa.[3] Nearly half (42%) of the population of the Comoros is under 15 years of age, and life expectancy is 67 for women and 62 for men. Family law permits polygamy, although this is only practised by 3.3% of the population, and whilst the legal system in Comoros is a mix of customary law, the 1975 French civil code and Islamic religious law and various jurisdictions, they are not always beneficial to women. Comoros has ratified the UN Convention on the

Elimination of all Forms of Discrimination against Women (the 'Bill of Rights' for Women) as well as the Convention on the Rights of the Child. The support of the estimated 300,000 Comorian diaspora is an important source of revenue for the country, with remittances accounting for over 20% of GDP in 2017.[4] Poor farming practices, reliance on bananas, manioc and coconut as food crops, and a rapidly growing population living on a small landscape, have put both biodiversity and communities at risk. The forests are disappearing (6.1% rate of forest loss in Anjouan) as farmers move further into the forested core areas, resulting in reduced biodiversity, land degradation, soil erosion and downstream siltation. Degradation of coastal ecosystems is also taking place due to over-fishing, use of destructive techniques, extraction of sand for construction, and collection of coral for lime. As an island hotspot with unique biodiversity, dire poverty, and limited development options, the UoC is in critical need of conservation and sustainable development assistance.

Biodiversity. The heterogeneous ecological conditions on each island, which are a function of altitude, climate and soil, have resulted in a variety of terrestrial ecosystems and a unique biodiversity on land and in the territorial waters, with high rates of endemism among different groups of fauna and flora, including: 9 endemic reptiles,[5] 3 mammals,[6] endemic invertebrates,[7] and an ever-increasing number of marine fish species. Flora endemic to the Comoros include the orchids,[8] endemic palms,[9] aloe species (*Aloe alexandrei*) and other endemic plants (such as *Polyscias felicis*, *Tambourissa comorensis*, *Impatiens wibkeae*, *Gyrostipula comorensis*, and *Cyphostemma comorensis*). The Comoros also has endemic and regionally endemic tree species, including *Khaya comorensis* and *Weinmannia comorensis*.

Marine species: The African Coelacanth *Latimeria chalumnae* was originally thought to be endemic to the Comoros but is being located in deep-sea caves in other east-African coastal regions. The three endemic fish species are the Combtooth Blenny *Mimoblennius cas*, a new species of Moray Eel, *Gymnothorax hansii* (discovered in 2004), and a short-nosed Sole species *Aseraggodes brevisrostris* (discovered in 2006). Other fish species have been identified during demersal surveys, i.e. Comoro Catshark *Scyliorhinus comoroensis* (known from only one specimen observed 200-400m off Moroni, IUCN Data Deficient) and the Comoros Electric Ray, *Torpedo* sp. (observed on a sandy substrate outside caves and possibly needs genus revision as could be an endemic species to Grande Comore).[10] A study of the marine biota carried out under the UNDP RNAP Project 4950[11] catalogued over 600 species at three primarily coral-reef marine sites where biological knowledge was previously limited and the diversity was suspected, but never proven. The study managed to identify 141 coral species, 397 fish species, 78 species of algae, 16 echinoderms, 26 molluscs and 9 marine phanerogames (aquatic plants). Dive surveys at the basalt dropoff in the new Coelacanth Marine Park showed not only the presence of emblematic species (such as the Coelacanth and various cetaceans), but also revealed a healthy and unique community of sponges, fish and hydrozoans. The zone was described as 'pristine' when compared to other reef sites on the island, and 'atypical' of the region given the impressive basalt dropoff or underwater cliffs.

The bats of the Comoros are of particular interest, with three endemic species. The Comoros Rousette *Rousettus obliviosus* is the smallest of the *Rousettus* species and is a cave-dwelling bat and an 'integrally protected species' in Comoros (i.e. capture requires a permit) and IUCN-categorized as Vulnerable VU (IUCN Red List, 2016).[12] The killing of any species within the Pteropodidae is prohibited in the Comoros. The national Conservation Action Plan for the endemic Livingstone's Flying Fox *Pteropus livingstonii* (Sewall *et al*, 2007) notes 5 key conservation actions that also affects the Comoros Rousette: 1) protection of roost caves at Panga Chilamouinan, Grande Comore, Bakomdrundru, Mohéli, and Mangua Mitsano, Anjouan; 2) carrying out comprehensive field research for additional key roost sites; 3) providing incentives to landowners near roost sites to conserve caves and bats; 4) environmental education to



discourage hunting of all fruit bats: 5) developing a bat population monitoring protocol to track population changes at all roost sites. The fruit bats in the Comoros have small ranges and their survival is thus sensitive to disturbance given the limited available roost sites. Protecting remaining forests is a conservation priority (Sewell, *et al*/2003).[13]

The number of endemic bird species could be as high as 39 (Lagerqvist, 2012)[14] but 34 endemic species are formally recognized, with all restricted-range species occurring in the little-remaining high altitude forests or heathlands.[15] Birdlife International has classified the Comoros archipelago as an endemic area for birdlife and gives it the highest priority level of “critical”, recognising 4 Important Bird Areas (IBA)[16] that contain globally threatened bird species and small-area species. The country has 3 Ramsar sites: Lake Dziani-Boundouni, Mount Karthala and Mount Ntringui,[17] all of which now fall under the protection of the new NP network. The Karthala Volcano and the Highlands of Anjouan have been nominated to be included in the UNESCO World Heritage List, and the island of Mohéli is being considered by UNESCO for inclusion as a Biosphere Reserve.[18]

The 2016 NBSAP identified the various ecosystem services (food, energy, housing, oxygen, water, fibres, firewood and medicinal products, employment, cosmetic products, furniture, musical instruments, cooking equipment, fishing sites) with the following values: agriculture, fisheries, livestock and forestry - US\$ 209 million; coral reefs - US\$ 6.2 million (producing 3000 tonnes of reef fish per year); Mohéli Marine Park - US\$ 3.5 million. Fisheries account for some 40% of the protein intake of the subsistence-based population. A revised evaluation of the ecosystem values is required, especially in the context of biodiversity being included in future national fiscal budgets. For example, the UNDP GEF geothermal project[19] planned in the Karthala National Park could generate considerable revenues from provision of ‘green energy’ to over 75,000 households on Grande Comore through the addition of a premium to existing electricity bills.

Legal & Policy Context. The notion of Protected Areas in the Comoros existed in its national legislation, notably in the **Framework Law on the Environment** (*Loi-cadre No 94-018/A F* modified by *Law No 95-007/AU du 19 juin 1995*), which defined protected areas as ‘national parks’ or ‘natural reserves’, and assigned the responsibility for the creation of NPs to the MEAF. Mohéli Marine Park (or *Parc Marin de Mohéli, PMM*), the first protected area of UoC, was created in April 2001 through a **Presidential Decree** No. 01-053/CE) within the framework of the UNDP-GEF project “Conservation of Biodiversity and Sustainable Development in the Comoros”. Decree 15/178/PR of 21 November 2015 repealed Decree No. 01-053/CE and added a terrestrial area for the protection of the island’s ridge forests to the marine park. The Mohéli Marine Park officially became the Mohéli National Park (*Parc National de Mohéli, PNM*) at the end of November 2015 and its management structure has been the basis upon which the new NPs have been created (i.e. joint management between regional authorities, the park ‘*conservateur*’, and bordering village representatives, including *éco-guards* or community rangers). The Framework Law regulates all activities relating to the sustainable management and conservation of land, coastal and marine biodiversity. The **Fisheries & Aquaculture Code** of 2007 (*No 07-011/AU portant Code des pêches et de l’Aquaculture de l’Union des Comores*) and the **Law on Forest Management** of 2012 (*Loi No 12-001/AU du 09 juin 2012 relative a la gestion forestiere*) delegated the responsibility for marine and terrestrial protected areas to the Fisheries and Forestry authorities respectively and both set their own conditions for the creation of a PA or classified forest. Marine turtles are afforded protection in the Comoros through Order No 01/033/MPE/CAB of May 2001, which adopted an **Action plan for the conservation of marine turtles in the Comoros**. The **Law on the National Protected Area System** (*Loi No 18-105/AU/SAJP sur le Système National des Aires Protégées des Comores*) was passed in December 2018; once the associated Decrees are signed, the NPs become *de facto* protected areas. Separate Decrees have been drafted for each new NP, which await signature for official gazetting of the parks. National legislation for protection of CITES-listed species is in terms of an **Order on the protection of wild fauna and flora species in the Comoros** (No 01/031 MPE/CAB of May 2001)

where the species are categorised as 'integrally' or 'partially' protected. The Comoros became a party to CITES in February 1995 and is currently included in Category 3 under the CITES National Legislation Project. The CITES Secretariat's latest update (July 2019) indicates that the Comoros is in the process of drafting revised legislation, but this is not yet finalised. As a longstanding Party with national implementing legislation still in Category 3, the country risks increased scrutiny and pressure to ensure that CITES-appropriate national legislation is in place, which could jeopardise any potential income-generating activities based on the sustainable use of CITES-listed species. The project will include activities to ensure that the national CITES legislation is fine-tuned and finalised, adopted and implemented (Component 1), in order to ensure that all national laws governing sustainable use of natural resources are streamlined and rational. This will also provide additional livelihood options based on CITES Appendices-listed species (eg *Phelsuma* geckos, coral species, sea cucumbers, etc).[20] Species will be identified during PPG.

Additional regulatory texts that affect the environment include: Decree dating back to 1911 regarding the land tenure system (including Decree of 9 June 1931 reorganizing the land tenure system, amended by Decrees of: 20 July 1930, 09 June 1931, 15 August 1934 and 27 February 1946 and Order 061-180 of 14 June 1961); Law No. 94-037 of 21 December 1994 establishing the Water Code; Law No. 95-007 on Biodiversity; Decree No.01-052/CE of 19 April 2001 regarding Environmental Impact Assessments; Order No.12 -012/VP-MPEEIA/CAB of March 2012 that sets the terms of reference for the Evaluation Committee for Environmental Impact Studies; Order No.01/031/MPE/CAB on the protection of animal and plant species and the 15 MEAs ratified by the State, including the 3 UN Framework Conventions (CBD, UNFCCC and CCD). In order to ensure compliance with environmental laws and regulations, a Decree was passed in 2013 that created Rural Economic Development Centres with the mandate to ensure protection of the environment, conservation of natural resources and respect for governing legislation.[21]

The Protected Area System: challenges and opportunities. In 1994, the GUC endorsed a National Environment Action Plan (NEAP) that provided a comprehensive strategy for management and protection of the environment. This resulted in the Framework Law on the Environment. One of the NEAP's strategic priorities aimed to promote the rational use of natural resources for the benefit of present and future generations. Since 2001, Comoros has had just one NP, the Mohéli Marine Park. To safeguard its biodiversity resources, the GUC worked with the UNDP (Project 4950) to create an additional 5 NPs covering 27% of the country's land surface (50,500 hectares) and 584.90km<sup>2</sup> of coastline (although, at the time of writing, the Decrees designating their creation had not been signed by the President due to political differences within Parliament; it is anticipated that the Decrees will be signed and the NPs will be officially gazetted before PPG). The new NPs (Karthala, Coelacanth, Mitsamiouli-Ndroude, Mont Ntringui, Shisiwani) are administered by the Comoros National Parks agency,[22] a public utility association that, together with the Park Directorate[23] and the Park Co-management Committee, is responsible for, *inter alia*, conservation and management, coordination of scientific and socio-economic studies and enforcement of laws and regulations. The Co-management Committee comprises 26 members representing various sectors affected by the NP, including community representatives from the villages in the NP, Mayors from the Municipalities, representatives from the DGEF, Science Faculty, Gendarmerie, Police, Coast Guard, National Tourism Office, Chamber of Commerce, etc.

The island Directions for Management of the Environment and Forests provide a two-way system for NP management, applying the national laws at site level, but with often insufficient sharing of information for effective insular management. The Rangers hired at the village level are assisted by Municipal police officers in cases of legal infraction, although the process to follow through on arrests and trial reports is weak and it is often the case that anyone arrested is released within 24hrs. Penalties are seldom paid (penalties are set in the new Law on the National Protected Area System). The state of the prisons on the

islands is considered to be a constraint to law enforcement due to the delapidated state and suspected infringement on human rights (Island Procureur, Mohéli, pers.comm June 2019). Improved coordination between each entity involved in law enforcement and application of penalties (Component 1) is needed. The DGEF has offices on all three islands, but with small teams on Anjouan and Mohéli having limited financial resources for the *Agents Forestiers Techniques* to perform their duties at the villagel level, especially given the large distances between the DGEF offices and the NPs.

**Threats to biodiversity.** Although the biodiversity of the Comoros is threatened by a number of issues, including modification of habitat or land use; invasive alien species; over-exploitation; climatic changes; pollution, the main threat is the loss of forest habitat through agricultural encroachment. Specific threats to the marine environment include: destructive fishing practices (specifically net fishing on the reefs at Bimbini), removal of beach sand (particularly at Ndroudé village in north Grande Comore), waste water management (leading to poor water quality at Mitsamiouli in the north of Grande Comore), invasive species (such as red algae *Asparagopsis taxiformis* and a cyanobacterium *Lyngbia* sp, that can cause human skin irritation and also has chemical qualities that deter marine grazers, thereby aiding their spread. The marine environment surrounding the Comoros is unfortunately impacted by a vortex of plastic waste that has been labeled the "Indian Ocean garbage patch".<sup>[24]</sup> Due to strong monsoon winds, the western Indian Ocean also hosts a large concentration of phytoplankton blooms, where strong coastal and open ocean upwellings push nutrients into the upper levels where photosynthesis can occur. These blooms form the basis for the marine food web in the Indian Ocean and account for the economically viable tuna industry as well as numerous migrating marine mammals. However, rising sea temperatures have caused a 20% decline in marine plankton in the Indian Ocean. Ensuring that coastal communities are able to continue harvesting from the oceans and maintaining not only ocean/coastal integrity, but also securing their existence into the future, is a key component of this project. The creation of marine NPs with active community engagement (Mohéli Marine Park) has been a key advance to achieving these goals. The dominant driver for permanent deforestation is shifting agriculture, with the highest rate of deforestation on Anjouan (6.1%). In 2010, Comoros had 132,000 hectares of tree cover, accounting for 79% of land area. Between 2001-2018, a total of 5100 hectares of forest cover was lost (3.8%).<sup>[25]</sup> The dependence of mainly rural communities on natural resources for their livelihoods and weak development of economic activities accentuate human pressures on resources. This pressure is often exerted through the use of unsustainable and destructive farming and fishing methods, such as shifting slash-and-burn cultivation, coral-reef fishing and the use of a plant-based natural fish poison (*Tephrosia*). In addition, the limited size of the territory exacerbates the intensity of population pressure and exploitation of resources, the conversion of vegetation cover and the loss, degradation and fragmentation of habitats. A recent study classified remaining forests as 9% "dense forest" and 27% as "degraded forest". The cultivation of ylang-ylang has experienced a recent boom in the Comoros, particularly on Mohéli (Djando plateau, Mlédjélé, Hamba-Miringoni region) and the Pomoni zone in Anjouan. The need for new plots to increase this crop, as well as the increased need for fuelwood for distillation, is putting additional pressure on forests given the lack of available land for fuelwood plantations. In addition to the main causes of biodiversity loss and land degradation, several sub-factors are impacting on the environment: a) natural fragility of the landscape; b) increasing population surpassing the carrying capacity of the land; c) high degree of poverty; d) unclear and insecure land tenure arrangements; e) absence of alternative livelihood options.

The current barriers to achieving full operationalisation of the new National Park landscape include: **1) gaps in policy, regulatory and institutional frameworks** to coordinate efforts and ensure a coherent national approach to management of biodiversity and addressing sustainable development. A harmonized interpretation of laws and regulations is needed for effective control over forestry and marine resource extraction and protection; **2) limited capacity (ie personnel, equipment, financial resources, data, knowledge)** to manage the newly created NPs and protect marine and terrestrial biodiversity. Without a supporting database on the status of the biodiversity, decision-making is not based on accurate information/data. Public awareness at airports and seaports regarding biodiversity conservation and the new laws governing NPs is wanting; **3) The lack of alternative biodiversity-friendly income generating activities** is

impeding full engagement of affected communities in NP co-management practices. Various value-chain studies have been carried out in the country but few have been realised on the ground or had to consider the new regulatory framework in place for NP management. This has resulted in cost-benefit imbalances at the community level where livelihoods are being impacted through restrictions on wildlife and natural resource use and inadequate provision of viable alternatives. To maintain the initial enthusiasm for biodiversity conservation and NP creation, communities need to be accompanied in the identification and development of public-private partnerships and businesses, such as ecotourism and agroforestry, that will provide tangible livelihood gains; **4) insufficient outreach and management of knowledge** regarding the unique biodiversity of the Comoros, the successful co-management arrangements at, eg Mohéli Marine Park, and the alternative livelihood options available to communities impacted by the protection of natural resources through the creation of the NPs network. Whilst efforts have been made to share lessons learned and experiences gained, this needs to be further coordinated and strengthened to ensure that the new network of stakeholders is empowered to provide feedback to local, national, regional and international forums dedicated to the disciplines that will be addressed through enhanced management (including biodiversity knowledge, management skills, co-management models and ecotourism publicity).

### *2) the baseline scenario and any associated baseline projects*

The newly created NP network in the Comoros is the principal means of protecting the unique and endangered biodiversity on the islands whilst also ensuring continuous means to support the livelihoods of the communities. The first NP created in 2001 – Mohéli Marine Park – resulted from the UNDP GEF project *Conservation of biodiversity and sustainable development in the Federal Islamic Republic of the Comoros*, followed by the UNDP GEF project (PIMS ID 4950) *Development of a national network of terrestrial and marine protected areas representative of the Comoros' unique natural heritage and co-managed with local village communities*, when 5 additional NPs were added to the protected area landscape. This GEF7 project is providing the necessary groundwork to effectively operationalize the nascent PA Network and launch the financing mechanism for the Comoros Environmental Fund (FEC) while mobilizing donor interest. The baseline investment by the Government of the Comoros and donor agencies is supporting the creation and continued management of the NPs, including the creation of an NP-specific agency (Comoros National Parks), the hiring of personnel and provision of basic infrastructure, and operational costs. Still in its early phase, the Comoros National Parks is establishing a robust baseline for future investments and continued inputs to managing the Parks landscape. Needs persist and the efforts to secure a sustainable financing mechanism is one of the key issues required to ensure that the NP system continues into the future.

Support is being provided by an empowered local community base from villages within and adjacent to the NPs, which although primarily voluntary in nature, will develop over time to become more grounded in economic inputs based on a healthy natural environment. Donor agencies in the Comoros providing support to communities include the French Development Agency (AFD), the World Bank and various UN agencies (FAO, UNESCO, UNICEF). Public awareness initiatives dealing with the environment and conservation needs are currently limited and centre around the UNDP-GEF funded project to expand the NP network. The MEAF is currently implementing a Watershed Management Project (US\$5,000,000) where extensive reforestation and capacity-building efforts are being implemented with communities in and around the new NPs. Additional projects being carried out include a UNDP Green Climate Fund (US\$55,000,000)[26] project and a UNDP GEF (ID 9040) geothermal project in the Karthala NP (US\$40,000,000).[27] University research programmes are underway in the Comoros, including a forest mapping project on Anjouan (Bangor University) that is also investigating options for forest restoration and testing alternative fuelwood and mulch tree species eg *Grevillea* species.

### *3) the proposed alternative scenario and expected outcomes and components of the project*

The project will address the barriers and challenges described in the sections above and will be implemented at the newly created NPs across all three of the islands comprising the Union of the Comoros (UoC), particularly where management and co-management capacity need to be strengthened, and where nature-based alternative livelihood options are required for sustainable development. This project builds on a project being carried out in the UoC (UNDP GEF PIMS 4950), which will close out in April 2021 and which has undergone a mid-term review to assess progress and provide recommendations for completion. This PIF has been drafted taking into consideration the recommendations from the MTR and, during PPG, will further incorporate any additional recommendations that may arise as a result of any implementation reviews. The alternative scenario is centred on a community-inclusive multi-stakeholder collaboration at national and local scales.

The project objective is to: **To conserve terrestrial and marine biodiversity by strengthening management of the UoC's newly created Protected Areas Network through effective co-management with communities for sustainable development** and is structured around four components, as follows:

**Component 1: Strengthening political, legal and institutional frameworks and capacity for effective management of the national Protected Areas Network (PAN)** with an anticipated outcome that **Institutional, technical and operational capacity to implement the legal and institutional framework of the national Protected Areas Network (PAN)**. Under this Component, the project will carry out activities on 5 inter-related issues: (1) Capacity of the new PA agency (Comoros National Parks), DGEF, and Co-management Committees[28] to implement and enforce laws (including national laws and implementation mechanisms regarding CITES), regulations and management systems relating to the PAN is strengthened; (2) strengthened strategic coordination of agencies, institutions, key ministries (Finance, Tourism, Artisanat) is facilitated to support the effective implementation of PAN management plans; (3) national strategies, development plans and sectoral programmes are harmonized, biodiversity priorities are integrated, and management and operationalization of the new PAN is supported; (4) an investment Framework and Financing Strategy is developed to support long-term PAN management; (5) strengthened participation of the private sector and public/private partners in conservation of the Comoros' biodiversity. The NPs and newly-created Comoros National Parks agency (Law No. 18-105/AU/SAJP), remain to become fully operational (although it is anticipated that this will be the case by the end of 2019, ie upon completion of UNDP Project ID 4950). New Decrees have been drafted but have not yet entered into force, with the result that the necessary institutional set up per park is not yet clarified. Although it is anticipated that the legal, strategic and institutional frameworks will be in place prior to commencement of this Project, this Component includes activities to ensure that the PA agency is indeed operational and that all appropriate institutional setups and regulatory texts are in place. Additionally, there is concern amongst key community stakeholders that cross-sectoral ministerial engagement on issues that affect PA management and integrity are unclear, for example with regard to plans at the Ministry of Transport to develop the road infrastructure on the islands; the Project will address this through ensuring strategic inter-ministerial dialogue happens from the outset, as well as ensuring that the obligatory Environmental Impact Studies (required under the new PA Law) for any new infrastructure development (such as roads) within the PAs are carried out. Linkages between this project and other UNDP GEF-funded projects in Comoros dealing with chemicals and waste (UNDP Child project *Indian Ocean Regional Project*, PIMS ID 5483 "Implementing Sustainable Low and Non-Chemical Development in SIDS [ISLANDS]) will be investigated to include provision to address the terrestrial and marine litter crisis in the country, which has profound influence on PA integrity (Component 2) and the ability to develop alternative-income generating activities (Component 3). In collaboration with the Direction National de l'Artisanat, activities will be programmed to develop skills and potential markets for plastic and other waste materials that are otherwise dumped into the rivers, oceans and natural habitats (further information is provided under Component 3 on income-generating activities).

**Component 2. Strengthening capacity to improve management and co-management of the national PAN at site level.** The Outcome will be **Increased protection of endemic and key species and habitats through improved management effectiveness across the national PA Network** and 4 outputs are envisaged that will address: (i) biodiversity monitoring and data collection, including development of a national biodiversity database, are developed and applied; (ii) management tools (including species management plans for key terrestrial and marine species) are drafted, approved and applied at target sites within the nascent PAs; (iii) successful community co-management models and partnerships are identified, co-adapted and applied at selected sites within the PAN (e.g. in partnership with NGOs/CBOs working on the ground such as Dahari). Whilst inputs have been made to assist the GUC with biodiversity monitoring and training, needs persist and this project will build on the training already provided to rangers under Project ID 4950 on monitoring and inventories. Site-level capacity to ensure PA governance has been identified as a key need, and it is important that biodiversity knowledge is translated to the local level for improved co-management at selected sites, including the facilitation of exchange visits between sites. Such information sharing and training will develop knowledge of Comoros's environment and ecosystems, the importance of the flora and fauna of the Comoros, and the impacts on ecosystem services related to biodiversity decline. Training methods and tools, including theoretical models and statistical tools to monitor populations over medium- and long-term, will be shared with national scientists, PA personnel, the National PA Agency and others. Based on scientific surveys and knowledge sharing, the project will assist the GUC to refine PA zoning (ie through designation of Key Biodiversity Areas, KBAs[29]) to ensure that key sites for eg, Livingstone's Bat, nesting sea-birds (such as Brown Noddy *Anous stolidus*, Sooty tern *Sterna fuscata*, Red-footed Booby *Sula sula*, Masked Booby *Sula dactylatra*), and other key species (such as marine turtles that nest in high numbers on the Comoros) are designated and afforded full protection. Efforts will continue to strengthen community engagement in the co-development of sustainable land and coastal management plans and practices that will reduce threats to key species (marine and terrestrial) and ensure alternative livelihood options are secured. Revised and enhanced plans will be piloted at selected sites in the PA network under Component 3 (specific sites will be determined during PPG).

**Component 3. Improved community livelihoods within National Protected Areas Network.** The Outcome will be **Increased area under sustainable CBNRM and improved local capacity to generate nature-based livelihoods** and 5 outputs will be delivered, namely: (i) study carried out on ecosystem services that are provided at the new PAs, results are shared and community understanding is enhanced for informed decision-making; (ii) nature-based livelihood options that will provide long-term security are identified, developed and turned into income-generating activities; (iii) training provided to re-develop artisanal skills within communities, to enhance the value of natural forest and coastal resources for biodiversity-friendly alternative income-generating activities; (iv) the necessary processes and mechanisms required to ensure tangible (and maximum) benefits accrue to targeted communities are identified and set up; (v) partnerships with private sector (for investments into value chain development for selected products) developed and appropriate joint venture agreements finalized (based on feasibility studies to be carried out) to reduce threats to vulnerable ecosystems within selected PAs. During PIF preparation, a clear request was made to include activities that demonstrate the value of the ecosystem services provided by the PAs and communicate this to the stakeholder communities for enhanced and informed decision-making. Watershed management is a key requirement for this Component as the islands develop climate change mitigation programmes, and the Project will work in tandem with other projects being carried out that address this issue, such as the UNEP GEF project (PIMS ID 5694)[30] and the UNDP GCF project (GCF Project ID FP094) on Climate Change Mitigation. This output is key to enable communities to make co-management decisions, as the connection between conservation of ecosystem services and values of biodiversity has not been adequately addressed, although the linkages between deforestation and water supply and land degradation are recognised. Various studies have been carried out on the potential natural resources that could be utilised for alternative livelihoods but these have not been translated effectively into actual reality on the ground. Creating alternative income-generating activities that will provide long-term security has been identified as a key need for the communities living alongside the newly created NPs. It is vital that activities are based on actual market demand and, to this end, a specialist value chain expert will be hired to ensure that the project will deliver tangible benefits. Innovative options will be explored in marine protected areas, including the feasibility of developing coral regeneration operations similar to those being initiated in the Seychelles, as well as marine & coastal ecotourism ventures in line with the GUC's Tourism Strategy. The relatively weak institutional arrangements in the Comoros for tourism have been highlighted[31], but development of tourism ventures based on the UoC's 'valuable' natural

sources could place the Comoros in an unique position and allow it to stand out as a desired destination from its regional competitors. Tourism can be an important sustainable source of income for PAs and conservation of cultural heritage assets, but requires that appropriate adjustments be made in alignment with sustainable and responsible tourism standards. The project will assist the GUC and co-management associations to engage with private sector and investors to explore further the potential for PA/natural heritage tourism.[32]

**Component 4. Knowledge management, M&E, and Gender Empowerment.** This Component will result in the improved sharing of information among communities, government agencies, key stakeholders and partners and will build awareness and strengthen engagement and motivation to conserve biodiversity and protect island ecosystems. The projected Outcome is the **Effective sharing of knowledge supports learning across the project, Comoros and regional SIDS**, which will be delivered through the following 5 outputs: (i) a gender empowerment strategy developed and used to guide project implementation and M&E at all levels of project activities; (ii) public awareness on ecosystems/species conservation and the value of the PAN raised through targeted outreach and education campaigns; (iii) enhanced environmental education to support and inspire national pride in the national PAN; (iv) lessons learned disseminated locally (ie at project sites), across Comoros and among regional SIDS, with opportunities for learning exchanges within the region; (v) participatory M&E and learning system developed and implemented for adaptive project management. Women in the Comoros are generally included in decision-making processes and benefit-sharing, and profit from a matrilineal society that ensures that women inherit family land, own their own houses and are able to obtain micro-credits for small enterprise creation. However, gaps in empowerment remain and the project will ensure that a gender strategy is formulated that will guide all activities under the Project and that women are included in all capacity building, training, co-development of plans, and participation in all consultations and activities. Under Project ID 4950, a communications platform was created through the Steering Committee, where members shared information on the successes, constraints, progress, etc of the project, as well as a website for the Comoros National Parks and a database on the park boundaries. However, these are not being updated nor capitalized on to the extent envisaged and this project will develop the necessary national skills and update the information needed for effective sharing of lessons learned and overall knowledge management into the future. Given the newness of the PAs, signage at local site level, as well as at national focal points, such as the island airports, will also be addressed. The project will assist the GUC to attend key symposia and regional meetings that will improve the image of its PA network successes, conservation priorities and species survival. Furthering national knowledge and pride in its unique biodiversity will be a guiding objective.

#### *4) alignment with GEF focal area strategies*

The project is aligned specifically with the GEF Biodiversity Focal Area BD-2-7: Address direct drivers to protect habitats and species, and Improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate. The project will assist the GUC to improve its biodiversity policy planning and review, and will include a degree of biodiversity mainstreaming through activities under Component 1 to create a multi-sectoral dialogue to ensure that any changes in landscape or seascape production practices are biodiversity-positive. The project is focused on improving management of the newly established Protected Area estate in the Comoros and, in this regard, is aligned with the GEF's strategy and aim to strengthen individual and institutional capacities to manage protected areas such that they achieve their conservation objectives.

#### *5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing*

Recognising the urgency to protect key biodiversity sites and safeguard remaining natural capital, the Government of the Comoros has made considerable investment in the creation of a network of Protected Areas as the principal means to protect the unique and endangered biodiversity on the islands whilst also ensuring continuous means to support the livelihoods of the communities. This baseline investment by the Government of the Comoros and donor agencies also includes the creation of the Comoros National Parks, an agency specifically focused on management of the Protected Area landscape, as well as the hiring of personnel, the provision of basic infrastructure, and operational costs. Still in its early phase, the Comoros National Parks is establishing a robust baseline for future investments and continued inputs to managing the Parks landscape.

The GEF project will complement baseline investments by the Government of the Union of Comoros to improve management of the new Protected Area network by addressing three problem areas where gaps have been identified (see the baseline scenario above): i. insufficient inter-sectoral knowledge and coordination of legal mechanisms for conservation resulting in poor law enforcement, continuous land degradation, encroachment and destructive harvest practices; ii. inadequate management capacity and tools for the protection of biodiversity and co-management of natural resources in the new Protected Area landscapes leading to uncontrolled incursions into protected landscape (marine and terrestrial) and declines in local species; iii. Failure to provide legal alternative income-generating activities for communities affected by the creation of the new PAs, thereby lessening anthropogenic pressures on the resources whilst guaranteeing livelihoods.

The incremental approach of the project will be to: a) reduce the threat from encroachment and further degradation of the UoC's Protected Area Network (PAN) through application of effective co-developed park protection protocols, thereby allowing the stabilisation and, ultimately, recovery of the biodiversity of these areas; b) strengthen management of the PAN through effective and improved engagement of, and co-management with, communities to achieve biodiversity conservation goals; and c) reinforce the Government's policy for community engagement in PA management and conservation; and d) build on the Government's commitment (in its PA Expansion Strategy) to provide communities within the PAs with livelihood options compatible with nature. Without project interventions, the fragmentation of the island habitats and degradation caused by the range of threats identified above will not only continue, but will most likely accelerate as human populations increase. The unsustainable timber extraction and poaching will continue, leading to land and biodiversity losses, and could drive some species to local extinction. There will be insufficient investment in protected area management, resulting in the loss of unique biodiversity.

Baseline practices	Alternatives to be put in place by the project	Global Environmental Benefits
Lack of coordination and capacity among agencies reduces the effectiveness of the new NPs and conservation efforts, and allows land degradation, encroachment, destructive harvest practices to continue unchecked	- Review, revise, validate and implement new Laws and Regulations for management of the new NPs to enhance PA management and ensure application of national laws governing biodiversity (marine and terrestrial) protection and use, as well as ensure adherence to CI	- Improved management and protection of 50,500 hectares of gazetted NPs (see targets and indicators – to be confirmed) - Additional conservation management regimes through indirect repli



<p>Poor management of new NPs and low capacity to control incursions and monitor wildlife leads to biodiversity loss due to unsustainable land use practices, ineffective conservation efforts and illegal harvest of wild resources</p> <p>Uncontrolled incursions into protected landscapes (marine and terrestrial) and use of key species continues, resulting in local declines and possible extinctions, particularly given the rate of microendemism</p> <p>Habitat fragmentation and degradation trends caused by the range of identified threats will continue and likely accelerate</p>	<p>use, as well as ensure adherence to GEF TES</p> <ul style="list-style-type: none"> <li>- Inter-institutional and inter-sectoral coordination will address development priorities and conservation needs to reduce negative impacts on PAs</li> <li>- Capacity development within key Ministry and new Agency mandated to manage PAN</li> <li>- Improved understanding nationally and at local project sites of the value of biodiversity and improved livelihoods that can arise from its conservation and sustainable use</li> <li>- Inclusion and training of relevant judiciary and legal practitioners on environmental crimes and pursuit through environmental law system</li> <li>- Private sector enterprises are integrated into dialogue with communities and government to reduce unsustainable and/or illegal exploitation of threatened species</li> <li>- Community-based microenterprise ventures provide alternative 'wildlife friendly' livelihoods at project sites to reduce pressures on the environment and involvement in unsustainable and/or illegal extraction of natural resources</li> <li>- Biodiversity surveys are carried out to determine key conservation needs for targeted species</li> <li>- KBAs for endemic species are identified and managed effectively within the PA network</li> </ul>	<p>cation (<u>to be confirmed during PPG</u>)</p> <ul style="list-style-type: none"> <li>- Populations of endemic species at targeted project sites will be protected from unsustainable and/or illegal harvest and loss of habitat through land degradation</li> <li>- Conservation of other endemic and globally significant species, including endemic plant species, ie <i>Weinmania comorensis</i> and <i>Khaya comorensis</i>, Livingstone's Fruit Bat, Moheli Scops-owl, Moheli Warbler</li> <li>- Increase in number of biodiversity-friendly livelihood ventures at project sites</li> <li>- Guaranteed conservation of key endemic, endangered and migratory marine species</li> <li>- Reduced anthropogenic pressures within and surrounding selected sites</li> </ul>
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	<ul style="list-style-type: none"> <li>- PA management plans are revised and strengthened for project sites with emphasis on community engagement for improved conservation and livelihoods</li> <li>- Capacity of PA Agency personnel is strengthened for improved PA and KB A management</li> <li>- Production activities such as coastal fisheries and agriculture are better regulated and monitored, thereby reducing threats to the protected areas</li> <li>- Livelihoods of PA resident and neighbouring communities are diversified with increased income and opportunities for wildlife-friendly and sustainable livelihood options</li> </ul>	
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By safeguarding wildlife habitats in the PAN, the project will contribute to biodiversity conservation with direct local and global benefits. Addressing systemic changes to enforcement of national/international laws and regulations on biodiversity conservation, the project will enhance the conservation of key endemic and threatened species, particularly at the project sites (but also potentially at a broader and even national level through improved governance mechanisms and border controls). As a result of this work, the project will contribute to the following SDGs: SDG 1, SDG 5, SDG 6, SDG 8, SDG 12, SDG 14, SDG 15, and SDG 17.

#### *6) global environmental benefits (GEFTF)*

Given the loss of habitat and fragmentation taking place, all fauna and flora species are in need of protection and strengthened management practices, making the Comoros a high priority for the conservation of biodiversity of global importance. The archipelago is located within one of the 36 global biodiversity hotspots recognized by Conservation International and in one of the 35 critical regions identified by the World Wildlife Fund ("Madagascar and the West of the Indian Ocean"). The project will contribute to global environmental benefits through the improved management of newly-gazetted terrestrial and marine Protected Areas in the Union of the Comoros. Five new PAs were created with the support of UNDP (Project ID 4950) and have provided for the conservation of globally important species, for example, marine turtles are returning to nest at beaches that have been designated as marine parks (Bourjea *et al*, 2015). However, PA management skills are limited and the project is designed to ensure strengthened national capacity on vital scientific and governance issues. Improving sustainable land and coastal use practices for conservation of key species and ecosystems, together with providing sustainable, biodiversity-friendly livelihood options, will assist Comoros to prevent the extinction of endangered and endemic species (including the endemic Livingstone's

Bat *Pteropus livingstonii*, precious woods such as *Khaya comorensis*, and the many endemic birds living in the PA network). By coordinating a cross-sectoral approach to the project's outputs and components, and ensuring integration of land management activities with the GUC's 'rapid development' strategy and the conservation objectives of the MEAF, will ensure long-term socio-economic benefits based on healthy ecosystems.

The Union of the Comoros includes 3 Ramsar sites (Lake Dziani Boundouni, Mount Karthala and Mount Ntringui) and 4 Important Bird Areas (Moheli Highlands, Anjouan Highlands, Mount Karthala and La Grille). The residual forests of Anjouan are of high biodiversity interest given the number of endemic and endangered species, including the arborescent heather savanna of *Philippia* species, the orchid and tree ferns, the endemic, threatened (by hunting) birds (Comoro Founingo or the Pigeon *Alectroenass ganzini*), and the endemic large bats. The Karthala National Park includes the quaternary volcano and is of global interest due to the rate ofendemism, including endangered bird species such as the Karthala Scops Owl (*Otus pauliani*), Karthala Flycatcher (*Humblotia flavirostris*) and the Karthala Zosterops (*Zosterops moroniensis*). The floral diversity of the islands and Hotspot includes the Madagascar Cycad (also called the Comoros Cycad *Cycas thouarsii*), the endemic Fig tree *Ficus tiliifolia* and the precious wood *Khaya comorensis*.

In terms of global marine environmental benefits the marine NPs created in the UoC include fringing coral reefs, seven species of mangrove, the most abundant being *Rhizophora mucronata* and *Avicennia marina* (120ha of mangrove swamps across the 3 islands, 75% of which exists on Mohéli),[1] and foraging grounds in the Anjouan area for the Green Turtle *Chelonia mydas* and the dugong. The Comoros is losing 8% of its mangroves per year (at a rate of 0.3ha/yr), clearance for infrastructural development being the main driver of mangrove deforestation. The seagrass species in the Comoros (8 species have been identified) are mainly found in Mohéli National Park (90%), with seagrass beds located within the Marine Park system. Seagrass beds are important foraging grounds and their specific conservation, through development of seagrass management plans, are required in the region. The Coelacanth Marine National Park on Grande Comore is not only an important global coral reef and volcanic cave system, but is also an important area for the Long-billed Dolphin (*Stenella longirostris*), Bottlenose Dolphin (*Tursiops truncatus*) and the Spotted Dolphin (*Stenella attenuate*), and at least 12 species of whale, including the humpback whale (*Megaptera novaengliae*), Orcas (*Orcinus ca*), the Dwarf Orca (*Feresa attenuata* – seen in large groups of up to 500 individuals), the Southern Right Whale (*Eubalaena australis*) and Bryde's Whale (*Balaena edeni*). The Coelacanth *Latimeria chalumnae* is of global interest as a 'living fossil' and is listed as Critically Endangered on the IUCN Red List. As noted previously, the number of marine fish in the coastal waters of the Comoros increases with each marine survey and this project will assist in raising awareness globally regarding the vulnerability and need for protection of a key biodiversity hotspot where species continue to be discovered.

#### 7) innovation, sustainability and potential for scaling up.

**Innovation:** The project will make inputs to Protected Area management in the Comoros, which is a relatively new discipline in the Comoros for biodiversity and ecosystem conservation. Community engagement in the creation of the NPs, and the co-development and co-management mechanisms that have been created demonstrate great innovation in a complex country-context with a high degree of poverty and low availability of land. The biodiversity surveys that will be encouraged and carried out will assist in applying innovative co-management decision-making by affected stakeholders. Income-generating activities that are biodiversity-friendly will demonstrate innovativeness on the islands as enterprises will move away from the traditional means of income-generation and explore novel products and markets.

Sustainability. The sustainability of the project relies on the long-term financial and political commitment of the GUC. The project will assist the GUC to explore sustainable financing mechanisms, including identifying innovative partnerships with the private sector, that will enable effective conservation and community engagement. Training the new PA Agency (Comoros National Parks) personnel and adopting a training-of-trainers approach, together with the partnerships and inclusion of national scientists and research agencies, will further the capacity and sustainability of the country's conservation objectives. The spirit of volunteerism and inclusion of communities in PA management from the outset cannot be underestimated and is a firm building block for sustainability after the Project ends. Financial sustainability could be generated from the development of innovative financing mechanisms, such as Debt-for-Nature swaps and Conservation Enterprise Incubators (see 50+Reefs Finance Guide). Such Conservation Enterprises could include ecotourism ventures, for example, that rely on – and contribute to – a healthy ecosystem to attract customers, or artisanal products that use sustainably-sourced materials, which could generate 'biodiversity-friendly' income that benefits communities and conservation.

Scaling up. The Protected Area network in the Comoros is newly created and its management is in its infancy. The new Protected Area Agency exists in name alone. The national park status for each park is based on a delimitation and set boundaries that have encapsulated large portions of each of the three islands. However, the biodiversity status of each park, and the actual conservation needs, remain incomplete. Through the project's inputs, where zoning of the NPs will be addressed, it is possible to create corridors, for example, that could connect the new NPs to other protected reserves under co-management arrangements. By strengthening the capacity of the PA agency, co-management structures, and Rangers across the project sites, will provide valuable lessons to other localities as well as enable the PA Agency to apply management and enforcement tools across the national PA landscape. With regard to the private sector, many value chain studies have been carried out in Comoros, but not all have been acted upon and developed into actual businesses. Successful enterprises have included the high value ylang ylang distillation industry as well as the nascent ecotourism industry. Project activities to strengthen the link with tourism promoters and private sector entities interested in niche ecotourism markets will benefit many more PAs and sites across the Comoros, beyond the pilot target sites, particularly with regard to development of public-private partnerships that promote ecotourism to the new National Parks.

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| Mangroves, salt marshes and sea grass beds. Lugendo, B. 2016. *Regional State of the Coast Report*.

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| <https://www.conservation.org/priorities/biodiversity-hotspots>. The definition of a biodiversity hotspot is that the region must meet two criteria: (i) It must have at least 1,500 vascular plants as endemics (ie a high percentage of plant life found nowhere else on the planet, ie the region is irreplaceable) and (ii) it must have 30% or less of its original natural vegetation, ie it must be threatened.

| [http://ffinetwork.org/about/stay\\_informed/releases/images/Rice\\_Comoros.pdf](http://ffinetwork.org/about/stay_informed/releases/images/Rice_Comoros.pdf)

[3] <http://worldpopulationreview.com/countries/comoros-population/> - for the latest (May 2019) population data from the Comoros

| [https://www.uneca.org/sites/default/files/uploaded-documents/SROs/EA/EA-ICE21/profil\\_comores\\_nov\\_2017.pdf](https://www.uneca.org/sites/default/files/uploaded-documents/SROs/EA/EA-ICE21/profil_comores_nov_2017.pdf)

| Comoro Flapnose Chameleon *Furcifer cephalolepis*, Comoro Day Gecko *Phelsuma comorensis*, Comoro Dwarf Day Gecko *Phelsuma v-nigra*, Comoro Ground Gecko *Paroedura sanctijohannis*, Comoro Clawless Gecko *Ebenavia tuelinae*, 2 Snake-eyed skinks *Cryptoblepharus ater* and *Cryptoblepharus quinquetaeniatus*, Coconut Palm Snake *Lycodryas cococola*, and Comoro Worm Snake *Madatyphlops comorensis*

| Comoro Flying Fox, Comoro Roussette, Anjouan Myotis

[7] Spiders - Pholcid spider *Spermophora lambilloni*, mysmenid spider *Microdipoena comorensis*, jumping spider *Veissella milloti*; butterfly species: *Charaxes nicati*, *Charaxes paradoxa*, *Papilio aristophontes*, *Graphium levassori* moths - *Fodinoidea pupieri*, *Stenochora comorensis*, a stick insect *Adelophasma anjouanense*, a grasshopper *Pissodogryllacris picea*, beetles - *Fodinoidea pupieri*, *Stenochora comorensis*, ants *Pheidole vulcan* and *Tetramorium karthala*, and a land snail *Gulella decaryi*

| Endemic Orchids - *Angraecum scottianum*, *Bulbophyllum comorianum*, *Jumellea anjouanensis*, *Jumellea pailleri*, *Aeranthes virginalis*, and *Vanilla humblotii*

| *Dypsis lanceolata*, *Ravenea hildebrandtii*, and *Ravenea moorei*

0] Heemstra, P. C., *et al.* Fishes of the deep demersal habitat at Ngazidja (Grand Comoro) Island, Western Indian Ocean. South African Journal of Science **102**. September/October 2006

[11] Wickel J., Nicet J.B., Pinault M. et Maharavo J. (2016). Développement d'un réseau national d'aires protégées de l'Union des Comores : Analyse des écosystèmes marins et inventaire de la biodiversité récifale sur Grande Comore et Anjouan. Rapport MAREX pour le compte de l'Union des Comores/programme des Nations unies pour le développement. 65 pages + annexes.

2] Sewall, B.J. 2016. *Rousettus obliviosus*. *The IUCN Red List of Threatened Species* 2016: e.T19757A101292795. <http://dx.doi.org/10.2305/IUCN.UK.2016-2.RLTS.T19757A101292795.en>. Downloaded on 17 July 2019.

3] Sewall, B.J., Granek, E.F. & W.J. Trehwella. 2003. *The endemic Comoros Islands fruit bat Rousettus obliviosus: ecology, conservation and Red List status*. Oryx, Vol. 37. No.3. July 2003.

4] [https://www.cloudbirders.com/tripreport/repository/LAGERQVIST\\_Comoros\\_10\\_2012.pdf](https://www.cloudbirders.com/tripreport/repository/LAGERQVIST_Comoros_10_2012.pdf)

5] <http://Intreasures.com/comoros.html>

6] The four IBAs in the Comoros are Grid, Mount Karthala, Mwali Highlands and Ndzuanu Highlands

7] [http://archive.ramsar.org/cda/en/ramsar-documents-list-anno-comoros/main/ramsar/1-31-218%5E16484\\_4000\\_0\\_\\_](http://archive.ramsar.org/cda/en/ramsar-documents-list-anno-comoros/main/ramsar/1-31-218%5E16484_4000_0__)

8] <https://whc.unesco.org/en/tentativelists/5108/>

9] Project ID 9040 - "Sustainable development of Comoros Islands by promoting the geothermal energy resources"

[20] Addressing national CITES legislation will ensure that all biodiversity trade-related policies are reviewed and incorporated into project activities. The CITES listings of key species will be taken into account when developing biodiversity-friendly value chains (which could include sustainable use of CITES-listed species).

1] [https://www.gouvernement.km/articlesfocus/projet-crcca-les-centres-ruraux-de-d%C3%A9veloppement-%C3%A9conomique-\(crde\)-543.html](https://www.gouvernement.km/articlesfocus/projet-crcca-les-centres-ruraux-de-d%C3%A9veloppement-%C3%A9conomique-(crde)-543.html)

2] <http://comorosparks.com/>

<https://gefportal.worldbank.org>

3] Each NP is governed by a Directorate comprising: the Conservateur, Forest Rangers, Community Mobilisers, Administration & Finance Assistant, Consultants (hired as needed and if funds are available), Support Staff (chauffeurs, security guards, technicians, etc)

4] Discovered in 2010 and extending over 5 million km<sup>2</sup>, the vortex circulates the entire Indian Ocean (from Australia to Africa, including the Mozambique Channel) over a period of 6 years.

[25] <https://www.globalforestwatch.org>

6] Project “Ensuring climate resilient water supplies in the Comoros Islands”

7] Project ID 9040 - “Sustainable development of Comoros Islands by promoting the geothermal energy resources”

8] The Co-management Committees per National Park comprise representatives from various sectors affected by the NP, including: community representatives from the villages in the NP, Mayors from the Municipalities, representatives from the DGEF, Science Faculty, Gendarmerie, Police, Coast Guard, National Tourism Office, Chamber of Commerce

9] The Global Standard for the Identification of Key Biodiversity Areas (IUCN, 2016), which determines the criteria required for identification of KBAs globally, will be followed when determining KBA sites with the National PA Agency. The Standard is available at: <https://portals.iucn.org/library/node/46259>

0] Project Title: Building Climate Resilience through rehabilitated watersheds, forests and adaptive livelihoods

1] Indian Ocean Islands Tourism Sector Review: Comoros. World Bank. July 2013

2] For example through enhanced inclusion and feature in the Vanilla Islands Association, which comprises the official tourist authorities of Mauritius, Reunion, Madagascar, Mayotte, Comoros and Seychelles, and is responsible for the creation and promotion of combined inter-island tourism. Also through development of public-private partnerships that promote ecotourism to the new National Parks.

**1b. Project Map and Coordinates**

**Please provide geo-referenced information and map where the project interventions will take place.**

The three islands of the Union of Comoros are located between 11°20'S to 12°25'S and 43°11'E to 44°32'E. A selection of maps is provided in Annex A of CEO Endorsement Request document.

## 2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

During project development, a large and varied number of key stakeholders, from Government to local communities living in close association with the newly created PAs, were consulted and will continue to be engaged in the formulation of project activities. The PA system in the Comoros was designed specifically with the intention to include active community engagement in the management of the Parks and Reserves created. Civil Society Organisations are also present in all of the PAs and their collaboration and input has been critical to the development of this project, particularly with regard to real needs on the ground for effective conservation and sustainable development. The main partnership with donor agencies is with the AFD<sup>[1]</sup> in terms of the project on Mohéli for the '*Protection of Biodiversity and Resources of Moheli National Park*'. Additional stakeholders from the donor community will be identified during PPG. The project will also partner with the University of Comoros and Scientific Institutions such as The National Center for Documentation and Scientific Research (CNDRS) and the National Research Institute on Agriculture, Fisheries and the Environment (INRAPE), which will be active partners in, and beneficiaries of, the project. Compiling available scientific data at the new PAs is a key deliverable under this project as an important decision-making tool for biodiversity conservation. Scientific expertise at the University and CNDRS will be strengthened through enhanced partnerships with international research bodies and individuals, as well as through collaborative research leading to publication of reports and presentation of findings at national, regional and international symposia and relevant events (for example at future WIOMSA meetings). The respective roles of the key stakeholders are outlined in Table 1.

**Table 1: Preliminary list of project stakeholders and their roles in the project**

Stakeholders	Roles and Responsibilities
Ministry of Environment, Agriculture & Fisheries	Operational Focal Point (OFP). Coordination and implementation of GEF projects in Comoros. Key participant in project development and final endorsement of Project Document.
General Direction of Environment and Forests (DGEF)	Mandated with conservation and sustainable management of natural resources and overall management of the Protected Area system. Will be responsible for project implementation, will act as the lead executing agency and will play a critical role in providing technical and logistical support to the project
National Directorate of Fisheries Resources	Main partner in the management of marine parks and will be key to setting up co-management agreements, providing training on fishing techniques and access



Sources	Co-management agreements, providing training on fishing techniques and assuring the creation of no-take marine reserves (where appropriate and/or necessary).
National Directorate for Tourism, including National Tourism Office	Member of Project Steering Committee and will contribute to planning and implementation of ecotourism activities
Direction Nationale de l'Artisanat	Will be key partner in the re-development of artisanal skills at targeted sites as well as key stakeholder in the identification and development of alternative income generating activities.
National Coast Guard	Will be a key partner in management efforts at the Marine National Parks and will contribute to monitoring activities and enforcing regulations on resource use in terms of its ongoing efforts to control illegal fishing in Comorian waters.
National Gendarmerie, National Police, Directorate General of Civil Security	Key stakeholders and project partners to ensure application of new PA laws and regulations in and around the Protected Areas
Focal Points of Multilateral Environmental Agreements	Will contribute to knowledge management and sharing of biodiversity information at international conventions, publication and distribution of reports and brochures
The Directorates of Environment at island level	Working under the MEAF, the island Environment authorities will have a strong role in sustainable management of the NPs and be key recipients of capacity strengthening events. They will be key members of the Steering Committee and will provide key guidance to project activities and resolution at site level
Local communities, village co-management committees and park co-management committees (ie, farmers, loggers, hunters, fishers, collectors and sellers of marine biodiversity, carpenters, craftsmen)	Key beneficiaries and will participate in monitoring, scientific, socio-economic studies as well as key participants in identification and development of alternative income-generating activities. Will also be involved in participatory assessments of PA management effectiveness. Will be: involved in all capacity building efforts at the NPs (Component 2) and beneficiaries of activities to strengthen co-management skills; co-designers and participants in the community structures that exist or need to be created for co-management, alternative income-generating activities, knowledge management, etc; key participants in the co-development of monitoring and protection mechanisms for natural resources in the villages and surrounding NPs; key stakeholders to ensure project success and creation of green value chains based on reality on the ground and real community and market needs
Community leaders, including religious	Religious and customary leaders are highly respected and will be key to raising

us leaders, female leaders of associations and women's groups	g public awareness in their communities. They will also be key resource in developing any conflict mitigation mechanisms
Mayors of the Municipalities concerned, Town and Village Councillors concerned by NPs	Will benefit from training and capacity building activities, particularly with regard to NP co-management needs, techniques and methods, and have key responsibility for public awareness and enforcement of the new Laws relating to NPs
<b>Civil Society Organisations</b> : AIDE, Comoflora, Intervention Group for Sustainable Development, Association for the Preservation of Gombessa, Friends of Nyumbadju, Friends of Karthala, Junior Chamber International, Association of Innovation and Research for Development, Ecotourism House, Moidjio, Action Comores Anjouan, Organization for the Integrated Management of Natural Resources in Ndzuani, Dahari	Will be involved in public awareness regarding co-management of PAs, community mobilization for development (reforestation and protection of water and soil resources), monitoring and participatory research on biodiversity, participants in PA threat assessments and management effectiveness
<b>Private sector</b> : Tourist guides, Chamber of Commerce, Industry and Agriculture in Ndzuani, Mwali and Ngazidja, Federation of the Comorian private sector, National Network Women and Development, National Union of Fishermen; Telma and Comores Telecom	Will be key stakeholders in the development and promotion of ecotourism, development of economic activities and finding ways to enhance the value of natural resources at PAs and target sites. Will also be key participants in enforcement efforts at the National Parks (Component 1). Other private sector entities could be identified and included in the list of stakeholders during PPG and project implementation.
<b>Media</b> : Local and national radio and television broadcasting companies, print media (eg Al-Watwan, the Gazette), electronic news channels	Will contribute to information campaigns on key project issues, ie the importance of biodiversity and ecosystem services for the livelihoods of local populations and will be invited to all main project public awareness events
The University of Comoros (UdC), The National Center for Documentation and Scientific Research (CNDRS), INRAPE, The Geographic Information System (GIS) Department, National Bureau of Geology	Active collaboration in conservation training events and biodiversity surveys, research and analysis

Rural Centres for Economic Development (CRDE)	Will contribute to public awareness efforts and be the liaison interface between the project, GUC and communities; will also provide guidance on land tenure issues and assist with environmental law enforcement efforts within the communities
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| The AFD has committed an additional Euros 6 million to conservation in MNP and is currently developing its project document and workplan. The final inputs to MNP governance and biodiversity protection will be available during PPG, at which time precise activities can be programmed for Mohéli that will avoid duplication of effort and, further, create synergies between the PA network across the 3 islands. The AFD is also contributing Euros 1.5 million to the FEC that has been set up in the Comoros to ensure long-term financing security for the PA network.

### 3. Gender Equality and Women's Empowerment

**Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

During the PPG phase, a gender strategy will be developed and used to guide all project activities and ensure the involvement and active participation of women and men. When the project is further developed during PPG, project sites will be visited and selected for pilot activities, based on the resources available for PA management, biodiversity conservation, ecotourism development, green value chain enterprises, etc. At this time, taking into serious consideration the cultural and religious traditions and expectations, equality of outcome will be the predominant objective, recognizing that in the Comoros, some daily subsistence activities are the responsibility of the women in the household. The matrilineal society in the Comoros already bestows a number of gender-favourable benefits and the project will be cognizant and respectful of this. The project will include activities that will address any gender gaps regarding access to and control over natural resources, as well as strengthen the participation of women in decision-making processes and enhance their income-generating potential. Women are acknowledged in Comoros to be active participants in co-management of Mohéli Marine Park, and the project will act to adapt and replicate this at new NPs. The gender strategy will ensure an inclusive approach throughout the project and the results framework will include indicators and set targets that reflect balanced social and economic benefits. The M&E plan to be developed will also ensure adherence to gender-sensitive indicators.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes**

**closing gender gaps in access to and control over natural resources; Yes**

**improving women's participation and decision-making; and/or Yes**

**generating socio-economic benefits or services for women. Yes**

**Will the project's results framework or logical framework include gender-sensitive indicators?**

Yes

#### 4. Private sector engagement

**Will there be private sector engagement in the project?**

Yes

**Please briefly explain the rationale behind your answer.**

The Private sector will be engaged in the project in several ways and at site, national, and regional levels, for example during pilot activities in demonstration landscapes, where income-generating activities based on sustainable use and management of natural resources will be created. Whilst this will predominantly be small-scale farmers, fishers and enterprises earning from the use of marine and terrestrial resources, as well as from the creation of artisanal industries, there will also be the possibility to engage with larger private sector entities in the diversification and delivery of livelihood and value-added opportunities for communities, for example through creation of eco-tourism ventures and green value chains. Specific opportunities for private sector engagement will be developed in more detail during the PPG phase and individual co-financing commitments will be secured at that time. The private sector in the Comoros operating in the agricultural, fishing and tourism sectors have not engaged, nor do they have expertise, working with communities at the newly created PAs. The private sector in the Comoros is limited and its engagement in environmental issues has not been investigated or exploited to a significant degree.

## 5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Climate change: The Intergovernmental Panel on Climate Change has predicted a rise in air temperature of between 1.4°C-3.7°C by 2100 for the Comoros region, a sea level rise of 20 cm over the next 50 years, and annual rainfall fluctuations of -2% to +20%. Consequences of climate change are already being experienced in the Comoros, with 45% coral bleaching and localised coastal erosion across the three islands, impacting on mangrove, seagrass beds and turtle nesting habitats.[1] Further risks are outlined in Table 2 below.

**Table 2: Risk analysis and mitigation measures**

Risk	Risk Rating	Risk Mitigation Measures
<b>Social Risks</b>		
Lack of political support for the project	Low	Cooperative development of project activities with MEAF. Detailed stakeholder engagement plan developed and followed during project implementation.
Institutional knowledge and capacity remains weak for the management of the entire national PA landscape	Low	Project activities have been designed specifically to address this risk and provide capacity building and training to Government, NGO, academic and community stakeholders. Technical and scientific expertise will be drafted in from the region (and internationally) to build PA management skills and provide 'training of trainers'
Lack of financial means to hire necessary personnel to manage the PAN, carry out activities in the field, and ensure sustainability of the PAN	High	Project activities will be designed to assist the GuC with the design of a sustainable financing strategy to ensure that funding exists to maintain the management of the NPs
Conflicts among community stakeholders regarding roles in the project and access to natural resources	Moderate	Extensive consultation with stakeholders and collaborative project design with communities, associations and leaders
Strengthening law enforcement could impact communities to continue	Low	Project activities are designed to provide alternative income-generating activities to mitigate potential losses in subsistence/revenue from

inue livelihood practices		m unsustainable or illegal practices
Communities and private sector opt for short-term gain from natural resource use rather than sustainable use	Moderate	Convincing public awareness and creation of alternative income-generating activities that provide solid financial benefits
Communities continue to use destructive fishing, livestock and agroforestry practices	Moderate/ High	Coordinated and targeted law enforcement together with strengthened co-management at the NPs
<b>Environmental Risks</b> - Land tenure uncertainty in the new PA landscape could impact on project efforts to conserve biodiversity and ensure sustainable livelihoods	Moderate/ High	Through project activities land tenure arrangements will be reviewed and clarified, with particular attention on strengthening the designation of the NPs and zoning of targeted areas for key biodiversity needs and also for community co-management in IUCN PA Category VI areas.
<b>Climate change</b> - Uncoordinated incorporation of climate change issues and other activities in project design	Low	Coordination of project activities with the National Climate Change Response Strategy and other donor agencies to ensure synergy between climate change adaptation and mitigation efforts across the islands.
The Comoros are susceptible to the effects of <b>climate change</b> , including sea level rise, warming ocean temperatures, more frequent and severe cyclones which could impact on project outcomes	Moderate	A key component of the project will be the development of alternative livelihood options designed to reduce stresses on ecosystems within PA landscape, thereby contributing to climate change mitigation. Co-management of coral reefs to attenuate storm damage (97% of a wave's energy is reduced by reefs before it hits the shoreline) and development of ecotourism that incorporates reef conservation in its business models will demonstrate GUC's commitment to provision of a healthy ecosystem for tourists to enjoy, and to mitigate against the effects of climate change

[1] ASCLME 2012. National Marine Ecosystem Diagnostic Analysis. Comoros. Contribution to the Agulhas and Somali Current Large Marine Ecosystems Project (supported by UNDP with GEF grant financing).

## 6. Coordination

**Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.**

The project will be implemented by the Ministry of Environment, Agriculture and Fisheries (MEAF). Given the recent expansion of Comoros' environment portfolio (to more than US\$100 million including GCF, LDCF and GEF projects), a well-staffed and equipped Programme Coordination Unit (PCU) is expected to be established and located in the Ministry to ensure effective strategic and technical coordination of this growing portfolio with effective oversight. The Project Management Unit for this project will sit within the PCU for maximum cooperation and synergies with other Government-led and UNDP-implemented projects. Specific linkages will be established between the following projects, including: (i) Strengthening Comoros resilience against climate change and variability related disaster (ends 2022 – US\$10,751,901); (ii) Sustainable development of Comoros Islands by promoting the geothermal energy resources (ID 9040, ends 2023 – US\$5,936,262); (iii) Strengthening Comoros capacity to manage potable water resources in the context of climate change (GCF ID FP094, ends 2026 – US\$ 44,299,263). The institutional structure of the project will be finalised during PPG. A Project Steering Committee will be established to provide guidance and assist with decision-making and will comprise representatives from the Comoros National Parks agency, DGEF as the Ministerial agency mandated with the conservation of biodiversity in the Comoros, and island authorities. Comoros has a High Risk rating in terms the government's capacity to handle cash transfer from UN entities, as per the results of the Harmonised Approach to Cash Transfers (HACT) Micro Assessment conducted for the Comoros National Park (DGEF). Specifically, DGEF lacks accounting and financial tools, and the agency's financial and accounting management capacities are very weak eg. no audits are undertaken, no financial statements or reports are prepared, and the agency does not have a fixed asset register. Direct payment or direct implementation of the activity by the agency is thus advised in terms of fund transfer modality. This means that UNDP is not permitted to transfer funds directly to Government agencies. Different options for augmenting the government capacity, including identification of a third-party service provider, will be further explored during PPG.



## 7. Consistency with National Priorities

### Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

**If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc**

The Project is consistent with, and contributes to the implementation of a number of national policies, strategies, plans and reports focused on conservation and sustainable development in the Comoros, including: GUC's Strategic Program Framework, wherein biodiversity and conservation of marine and terrestrial ecosystems are embedded; the Poverty Reduction and Growth Strategy Paper (IMF, 2010) which guides national activities on economic growth to reduce poverty and includes an ecological sectoral approach based on fisheries, agriculture and tourism; the NBSAP National Report (2016) particularly with regard to conservation and sustainable use of biodiversity for the development of the country; the Comoros's Protected Area Expansion Strategy (2017-2021)<sup>[1]</sup>; the Policy on Tourism (*Plan d'Aménagement et de Développement Touristique*) drafted in August 2018, that addresses ecotourism, whale-based tourism, and cultural tourism. The project is also consistent with the current National Adaptation Programme of Action being implemented in the country, the Land Degradation Assessment in Drylands and is also aligned with a number of CMS Memoranda of Understanding signed by the UoC, for example the MoU on the Conservation of Migratory Sharks (CMS, 2010), the MoU on the Conservation and Management of Dugongs (*Dugong dugon*) and their Habitats throughout their Range (CMS, 2008), and the MoU on the Conservation of Migratory Birds of Prey in Africa and Eurasia ("Raptors MoU"), which entered into effect in the Comoros in 2015.

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[1] Stratégie d'Expansion du Système National des Aires Protégées aux Comores (2017-2021)

## 8. Knowledge Management

**Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.**

As part of the project's strategy on knowledge sharing and strategic communication and information management, activities will be carried out under Component 4 to capture, analyse and share lessons learned for improved management of the emerging NPs. The knowledge management approach includes the creation of national platforms and knowledge-networks that will bring together existing stakeholder associations and groups where lessons learned and experiences can be shared. The project will also identify and compile available documentation and data that will be necessary for decision-making and improved management of NPs. It will also ensure that best practices in gender mainstreaming will be used to guide project activities and enable disenfranchised community members to become active participants in sharing of needs and experiences. Moreover, the project will provide for the exchange of knowledge and lessons learned with other Indian Ocean SIDS, especially through the regional partnerships with neighbouring Governments (eg Seychelles, Mauritius), donor agencies (eg the World Bank office in Madagascar), environmental NGOs (eg WWF office in Madagascar), and scientific agencies (eg Marine Conservation Society of Mauritius). Through such partnerships, the project will not only learn from experiences within the region on protected area management and community-based conservation, but also share project outputs and outcomes.

**Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).**

<b>Name</b>	<b>Position</b>	<b>Ministry</b>	<b>Date</b>
Youssef Elamine Y. Mbechezi	GEF Operational Focal Point and Director of Environment and Forests	Ministry of Environment, Agriculture and Fisheries	8/28/2018

## ANNEX A: Project Map and Geographic Coordinates

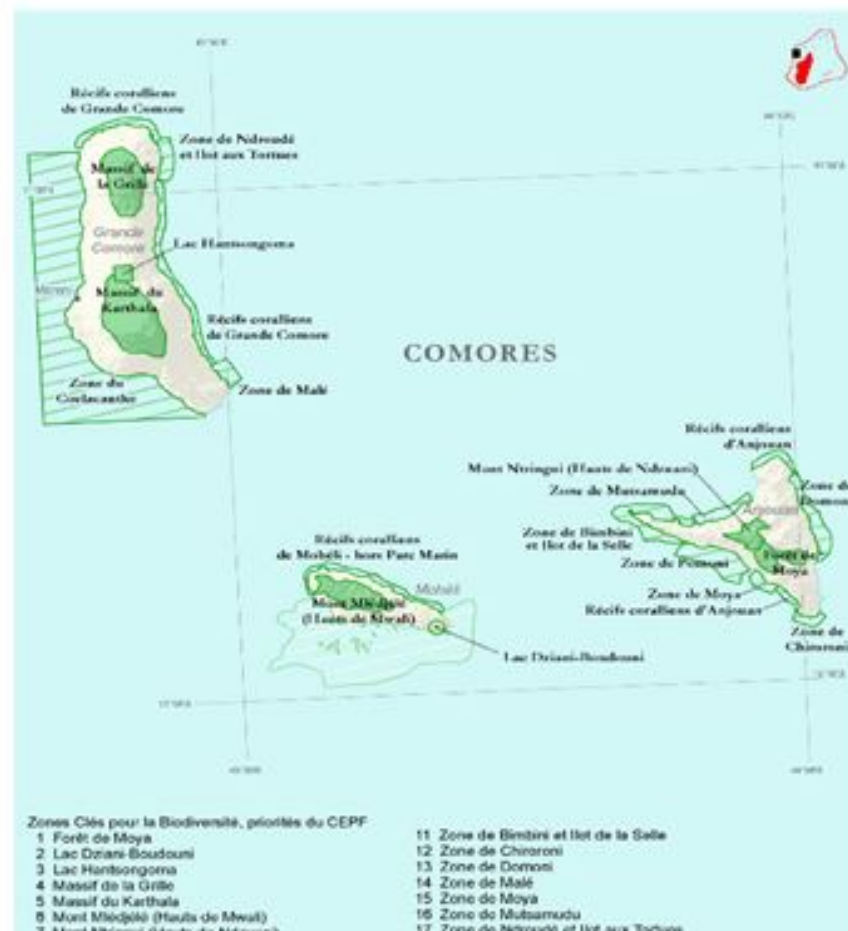
Please provide geo-referenced information and map where the project intervention takes place

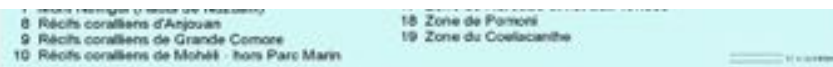
## PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES

Annex A

The three islands of the Union of Comoros are located between 11°20'S to 12°25'S and 43°11'E to 44°32'E.

**Map I:** Maps showing the location of the Comoros within the Madagascar and Western Indian Ocean Hotspot (map on the Left); and Key Biodiversity Areas on each island (map on the Right).





The following maps show the delimitations of each new National Park, together with human population data per village within the NPs:

**Grande Comore** – Mitsamiouli-Ndroudé Marine Park, Coelacanthe Marine Park & Karthala National Park

**Anjouan** – Shisiwani Marine Park & Mont Ntringui National Park

**Mohéli** – Mohéli National Park (encapsulates marine and terrestrial areas)



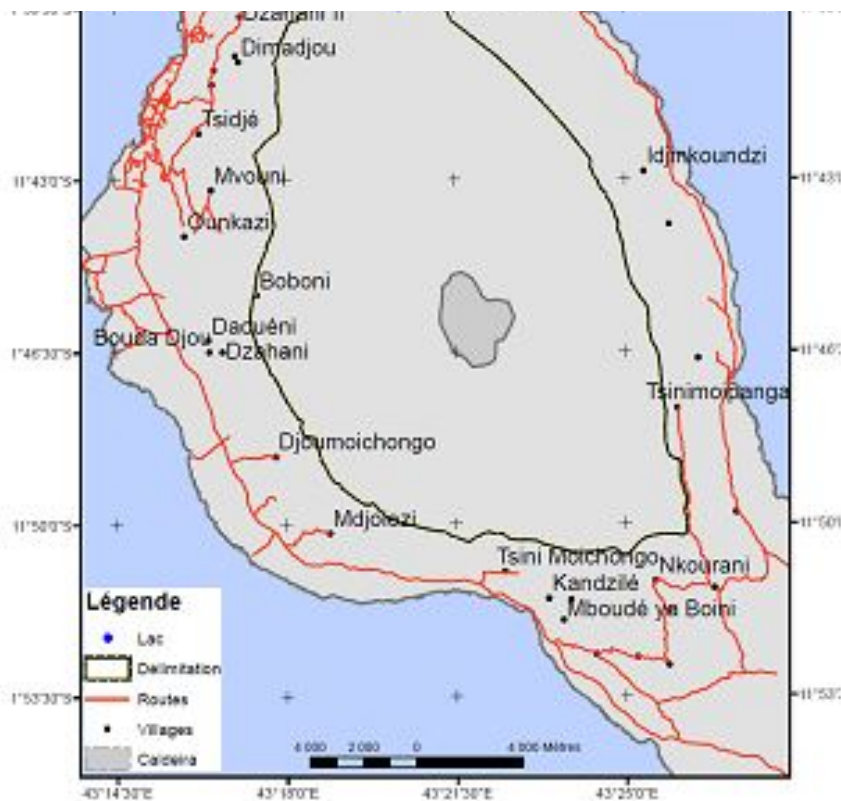
Mistamiouli Ndroude	Habitants
Ndzaouze	3467
Fassi	637
Mitsamiouli	7230
Memboimboini	984
Ouemani	645
Ouellah	5957
Bangoi Kouni	4037
Ivoini	1909
Ndroude	2020
Hantsindzi	3399
<b>TOTAL</b>	<b>30285</b>



Coelacanthé National park	Habitants
Salimani	2227
Banguoi	3649
Singani	2541
Hetsa	1160
Bambani	1410
Dzahadjou	2105
Itsoundzou	176
Mindradou	581
Mandzissani	714
Mlimani	237
Ifoundihé Chamboini	1420
Simamboini	1426
Chindini	2256
Ouroveni	1707
Male	3574
<b>TOTAL</b>	<b>25183</b>



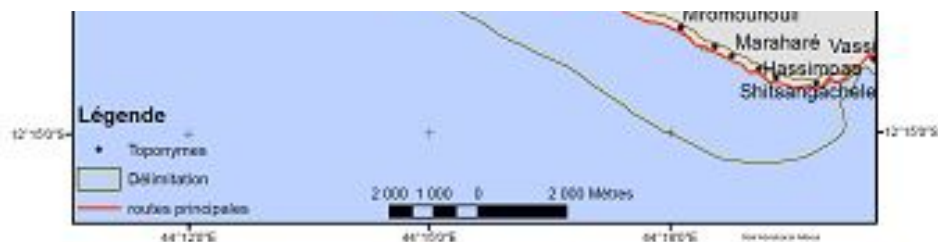
Karthala National Park	Habitants
Mkazi	420
Daoeni	481
Dzahani	645



Mboude Ya Boini	957
Boeuni	1070
Irohe	1274
Mboudadjou	1298
Kandzile	1470
Bahani	2108
Djoumoichongo	2943
Idjikoundzi	3308
Ntsinimoichongo	3466
Mdjoiezi	3643
Ntsinimoipanga	4461
Mvouni	6101
Nkourani	6193
<b>TOTAL</b>	<b>39838</b>



<b>Shiswani National Park</b>	<b>Habitants</b>
Shitsangasheli	190
Mromhouli	661
Milembeni	1145
Mirongani	1336
Vassi	1460
Mjamawe	1492
Hasimpao	1744
Marahara	1074



Maraharé Vassi	1217
Hassimoua	2097
Shitsangachéle	2120
Boungweni	2972
Sima	11697
<b>TOTAL</b>	<b>28888</b>



Mont Ntringui National Park	Habitants
Chandra	7042
Tsembehou	12305
Dindri	9814
Limbi	1964
Ouzouni	1715
Adda Daweni	10545
Moya	12680
Lingoni	6604
Vouani	3542
Iméré	844
M'jimandra	3039
<b>Total</b>	<b>70094</b>







Moneti National Park	Habitants
Itsamia	664
Hagnamoida	942
Hamavouna	1246
Nkangani	1254
Mlabanda	376
Wanani	3134
Siry- Ziroudani	2024
Nioumachoi	4393
Ndrondroni	4367
Ouallah Ii	998
Ouallahi-Mirereni	631
Miringoni	1163
Miremani	231
Barakani	1223
Hamba	590
<b>TOTAL</b>	<b>23236</b>