

Expansion and Strengthening of the Protected Area Subsystem of the Outer Islands of Seychelles and its Integration into the broader land and seascape

UNDAF Outcome(s):	n/a
<p>UNDP Strategic Plan (2014-2017) [Link] Primary Outputs: 2.3. Solutions at local level for sustainable management of natural resources, ecosystems and environmental services, for expanded jobs and livelihoods; and 3.5. Transparent and non-discriminatory legal and regulatory frameworks and policies enabled for sustainable management of natural resources, biodiversity and ecosystems (in line with international conventions and national legislation)</p> <p>Secondary Output: [From <i>UNDP's Biodiversity and Ecosystems Global Framework 2012-2020</i>:] Signature Programme #2: Unlocking the potential of protected areas (PAs), including indigenous and community conserved areas, to conserve biodiversity while contributing to sustainable development. [Link]</p>	
<p>Expected CPD Outcome(s): By 2016, the governance systems, use of technologies and practices and financing mechanisms that promote environmental, energy and climate-change adaptation have been mainstreamed into national development plans. Relevant indicator: Area of terrestrial and marine ecosystems under improved management or heightened conservation status increased by 50 per cent by end of 2016. [Link]</p>	
<p>Expected CPAP Output (s): n/a</p> <p>[<i>Project Objective</i>]: To promote the conservation and sustainable use of coastal and marine biodiversity in the Seychelles' Outer Islands by integrating a National Subsystem of Coastal and Marine Protected Areas (CMPAs) into the broader land- and seascape while reducing the pressures on natural resources from competing land uses. [<i>Project Outcome 1</i>]: Management effectiveness is enhanced within a sample of coastal and marine protected areas (IUCN Category I, II and VI) operating under innovative public-private-civil society partnership agreements. [<i>Project Outcome 2</i>]: Sustainable Development and CMPA management integrated into broader land/seascape in the Outer Islands</p>	
<p>Executing Entity/Implementing Partner: Ministry of Environment and Energy (MEE) - Department of Environment (DOE).</p>	
<p>Implementing Entity/Responsible Partners: Island Conservation Society (ICS), Seychelles Island Foundation (SIF), Save Our Seas / D'Arros Research Centre.</p>	

Brief Description: The project seeks to promote the conservation and sustainable use of terrestrial and marine biodiversity in the Seychelles' Outer Islands by expanding the protected areas system and strengthening protected area management, supported by broad-scale ecosystem planning and sustainable land management activities to conserve ecosystem functions. The project will focus outputs and activities – over a period of five years – to achieve both biodiversity conservation and sustainable land management goals: First, to enable biodiversity conservation, the project will support the official establishment of five new protected areas in the Outer Islands, encompassing 1,237 hectares of terrestrial ecosystems and 76,258 hectares of marine ecosystems. Second, to enable sustainable land management, the project will ensure the establishment of the necessary institutional framework (information and planning systems) to support integrated management of the new PA sites that not only addresses BD conservation but also reduces land degradation impacts.

<p>Programme Period: 2012 - 2016</p> <p>Atlas Award ID: 00075876</p> <p>Project ID: 00087541</p> <p>PIMS #: 4529</p> <p>Start date: Date of signature</p> <p>End Date: + 5 years</p> <p>Mgt Arrangements: NIM</p> <p>PAC Meeting Date: 20 August 2013</p>	<table> <tr> <td>Total resources required (total project funds):</td> <td>\$12,219,549</td> </tr> <tr> <td>Total allocated resources (UNDP managed funds)</td> <td>\$1,935,500</td> </tr> <tr> <td> Regular:</td> <td>\$150,000</td> </tr> <tr> <td> GEF (in award 75876)</td> <td>\$1,785,500</td> </tr> <tr> <td>Other (partner managed resources)</td> <td></td> </tr> <tr> <td> o Government :</td> <td>\$1,042,683</td> </tr> <tr> <td> o CSOs (incl. Foundations) :</td> <td>\$9,131,866</td> </tr> <tr> <td> o Other (private sector)</td> <td>\$109,500</td> </tr> </table>	Total resources required (total project funds):	\$12,219,549	Total allocated resources (UNDP managed funds)	\$1,935,500	Regular:	\$150,000	GEF (in award 75876)	\$1,785,500	Other (partner managed resources)		o Government :	\$1,042,683	o CSOs (incl. Foundations) :	\$9,131,866	o Other (private sector)	\$109,500
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Agreed by (Government):
Department of Environment

Date/Month/Year

Agreed by (UNDP): **Simon Springet**
UNDP Resident Representative

Date/Month/Year



Project Document

Government of Seychelles and UNDP

Executing Agency / Implementing Partner: Ministry of Environment and Energy

United Nations Development Programme

UNDP GEF PIMS 4529 / GEF Secretariat Project ID 4717

Atlas Award 00075876 / Atlas Project ID 00087541

Expansion and Strengthening of the Protected Area Subsystem of the Outer Islands of Seychelles and its Integration into the broader land and seascape

Brief description

Seychelles existing protected area system is primarily situated in the Inner (Granitic) Islands of the country. The Outer Islands of the Seychelles make up more than half of the total number of islands within the archipelago and include nine of the twenty Important Bird Areas (IBAs) of Seychelles, but at present there only two fully gazetted protected areas in the Outer Islands: (i) Aldabra Special Reserve (15,260 ha terrestrial and 23,100 ha marine) and (ii) the African Banks Protected Area (2 ha terrestrial and 3 ha marine), as well as two declared Nature Reserves (Boudeuse and Etoile, each less than 1 ha.). The project seeks to promote the conservation and sustainable use of terrestrial and marine biodiversity in the Seychelles' Outer Islands by expanding the protected areas system and strengthening protected area management, supported by broad-scale ecosystem planning and sustainable land management activities to conserve ecosystem functions. The project will focus outputs and activities – over a period of five years – to achieve both biodiversity conservation and sustainable land management goals: *First*, to enable biodiversity conservation, the project will support the official establishment of five new protected areas in the Outer Islands, encompassing 1,237 hectares of terrestrial ecosystems and 76,258 hectares of marine ecosystems. The project will specifically support: (i) an assessment of the current state (biodiversity, infrastructure, management, resource uses, etc.) of the proposed PA units; (ii) the gazetting, boundary setting and zoning of the new PA units; (iii) the strengthening of management structures and the preparation of management plans for each PA Unit, as well as a strategic business plan for four of the PA units; and (iv) the development of functional and well-trained team of PA staff working in collaboration with private sector partners at each new PA unit. *Second*, to enable sustainable land management, the project will ensure the establishment of the necessary institutional framework (information and planning systems) to support integrated management of the new PA sites that not only addresses BD conservation but also reduces land degradation impacts. The project will specifically support: (i) development of a decision support system to enable integrated natural resource management decision-making; (ii) creation of land use plans (for specific PA units) and an Ecosystem-Wide Zoning and Master Strategy (for the entire Outer Islands); (iii) the restoration of degraded terrestrial ecosystems impacted by unsustainable activities; and (iv) the prevention and control of invasive alien species, many of which impact both ecosystem functioning and the rehabilitation processes of native ecosystems.

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Acronyms

AG	Attorney General
APR	Annual Progress Report
AWP	Annual Work Plan
CBD	Convention on Biological Diversity
CCF	Country Cooperation Framework (UNDP)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO	(UNDP) Country Office
DOE	Department of Environment
DRC	D'Arros Research Centre
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ESSP	(UNDP's) Environmental and social screening procedure
FBOA	Fishing Boat Owners Association
FFEM	Fonds Français pour l'Environnement Mondial
GEF	Global Environment Facility
GIF	Green Islands Foundation
GIS	Geographic Information System
GISP	Global Invasive Species Programme
HDI	Human Development Index
IAS	Invasive Alien Species
IBA	Important Bird Area
ICRAN	International Coral Reef Action Network
ICS	Island Conservation Society
IDC	Island Development Company
IMPASP	Integrated Marine Protected Area Systems Plan
IUCN	International Union for the Conservation of Nature
LME	Large Marine Ecosystem
LPAC	Local Project Appraisal Committee
MCSS	Marine Conservation Society of Seychelles
M&E	Monitoring and Evaluation
MEE	Ministry of Environment and Energy
METT	Management Effectiveness Tracking Tool
MF	Ministry of Finance
MFA	Ministry of Foreign Affairs
MLUH	Ministry of Land Use and Housing
MND	Ministry of National Development
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategy and Action Plan

NCCC	National Climate Change Committee
NGO	Non-Governmental Organization
NIM	National Implementation Modality
NS	Nature Seychelles
PA	Protected Area
PAS	(National) Protected Area System
PC-CTA	Programme Coordinator – Chief Technical Advisor
PCA	Plant Conservation Action Group
PCU	Programme Coordination Unit
PIR	Project Implementation Report
PoWPA	(CBD) Programme of Work on Protected Area
PPR	Portfolio Progress Report
PSC	Project Steering Committee
RCU	(UNDP) Regional Coordinating Unit
RTA	(UNDP) Regional Technical Adviser
SAIAB	South African Institute of Aquatic Biodiversity
SBAA	Standard Basic Assistance Agreement
SCMRT	Seychelles Centre for Marine Research and Technology
SFA	Seychelles Fishing Authority
SHTA	Seychelles Hospitality and Tourism Association
SIDS	Small Island Developing States
SIF	Seychelles Islands Foundation
SNPA	Seychelles National Parks Authority
SOSF	Save Our Seas Foundation
SR	Seychelles Rupee
SRSF	Shark Research Foundation, Seychelles
SWIOFP	South West Indian Ocean Fisheries Project (GEF-UNDP)
TBW	Total Budget and Workplan
TCPA	Town and Country Planning Act
TNC	The Nature Conservancy
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Science and Culture Organization
WHS	World Heritage Site
WIOLab	Western Indian Ocean Land based activities (GEF-UNEP Project)
WIOMSA	Western Indian Ocean Marine Science Association

SECTION I: Elaboration of the Narrative

Executive Summary

1. The Republic of Seychelles is situated in the Western Indian Ocean and encompasses 115 islands in an Exclusive Economic Zone (EEZ) of 1,374,000 sq. km. The Seychelles is a stable democracy with a population of approximately 85,000 inhabitants, most of whom live in the Inner Islands. Seychelles is an upper middle-income country with a high gross domestic product per capita of \$9,028 and a high human development index of 0.845. (Figures from 2010.) The Seychelles Millennium Development Goals Status Report 2010 reveal that the country is on track to achieve most of the Millennium Development Goals, especially for health, education, poverty reduction and environmental sustainability. Since the early 1990s, Seychelles transformed its economy from being mostly agrarian (based on cinnamon and copra crops) to becoming chiefly dependent on tourism and fishing (mainly tuna exports). While this shift was responsible for significant economic growth and improved standards of living, Seychelles has been grappling since 2008 with the issue of public debt and fiscal austerity measures continue to be implemented in the country. Furthermore, both tourism and fishing are vulnerable to piracy, which continues to pose a threat in the Western Indian Ocean (WIO), though it has decreased in Seychelles waters in the past 18-24 months. While tourism and fisheries continue to be the most important economic sectors, the Government has diversified into other areas such as offshore financial services.

2. Seychelles forms part of a recognized global biodiversity hot spot and is home to two UNESCO World Heritage Sites (Aldabra Atoll and Vallée De Mai) and to three Ramsar wetland sites. Species richness of both flora and fauna is high, and the islands of the Seychelles are characterised by remarkable levels of endemism as a result of millions of years of evolution in isolation. Nationally, there are 735 species included on the IUCN Red List, one of which is 'Critically Endangered', 9 of which are "Endangered", 76 of which are "Vulnerable", and 112 of which are "Near-threatened". The Seychelles Outer Islands region includes a number of outstanding sites. The Aldabra World Heritage site harbours unique and highly endemic fauna such as the Aldabra Giant Tortoise (*Aldabrachelys gigantea*), the Aldabra Rail (*Dryolimnas cuvieri aldabrensis*), and a population of critically endangered dugongs (*Dugong dugong*). D'Arros and St. Joseph, and possibly Bijoutier, support manta ray aggregations. There are shark and ray nurseries within many of the atoll lagoons, and many important nesting seabird colonies (e.g. Desnoeufts). There are also an abundance of nesting and foraging turtles (e.g. Farquhar). BirdLife International has identified 20 Important Bird Areas (IBA) in the Seychelles, nine of which are located around the outer islands.

3. Seychelles existing protected area system is primarily situated in the Inner (Granitic) Islands of the country. The Outer Islands area of Seychelles, which constitutes more than 80% of the country's Exclusive Economic Zone, only contains four official protected areas, and only one of these, the Aldabra Atoll Special Nature Reserve, situated in the far south-western area of the Seychelles archipelago, is actively managed. The Government of Seychelles owns all but one of the Outer Islands (the exception being privately owned D'Arros / St. Joseph). Of the rest, all but Aldabra (which is managed by the Seychelles Islands Foundation) are leased to the Islands Development Company (IDC), a parastatal formed in 1980 to establish and supervise economic activities on the Outer Islands. The Outer Islands, which were traditionally managed for production of copra (coconut) and timber (casuarina), have transitioned to a tourism-based economic model in the past 10-15 years, with commercial and sport

fishing also being actively pursued. Tourism development, although limited so far to a few islands, has had some negative impacts in terms of habitat transformation, erosion and sedimentation, and increased demand for fisheries resources. Similarly, illegal and legal fishing has impacted specific populations and species in the Outer Islands, particularly sharks, sea turtles, and sea cucumbers. These threats to biodiversity and ecosystem functioning / services are exacerbated by emerging threats in the Outer Islands, including increased fishing pressure (as piracy declines in the region); the impacts of climate change (e.g. sea temperature increases leading to coral bleaching; sea level rise impacts on mangroves, seagrass beds, coastal erosion, and saltwater intrusion; etc.); and the emerging / potential impacts of marine pollution, development of mariculture, and expected oil and gas development in the region. Compounding this problem, the Government of Seychelles has been undertaking fiscal reform and restructuring since 2008, which has significantly decreased the staffing and technical capacities / resources of most government agencies, including the Ministry of Environment and Energy (MEE). As a result, the mandate and scope of activities for both the MEE and the Seychelles National Parks Authority (SNPA) are limited to the Inner Islands.

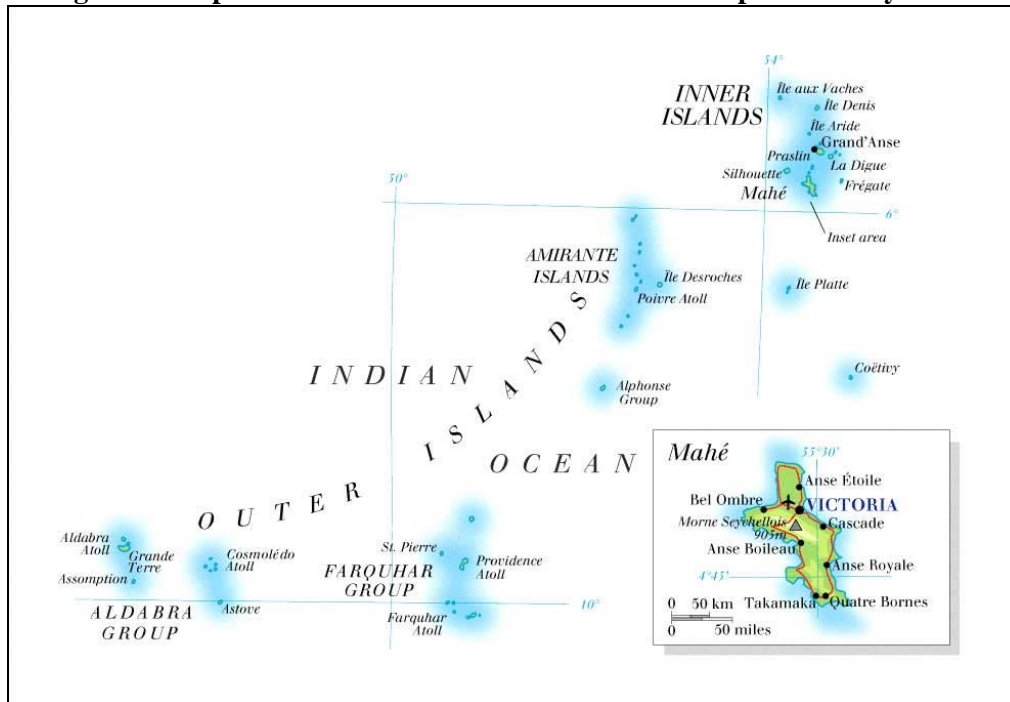
4. In response, the Government has decided to work with NGOs and private partners to expand and strengthen the protected areas system in the Outer Islands, and the proposed project will seek to promote the conservation and sustainable use of terrestrial and marine biodiversity in the Seychelles' Outer Islands by expanding the protected areas system and strengthening protected area management. The designation of the proposed sites as PAs will preserve key terrestrial and marine habitats of the Seychelles' Outer Islands, and will contribute to the functioning of marine conservation corridors stretching from the Aldabra Special Reserve in the far southwest to the northern Inner Islands. In addition, it is ultimately envisaged that these demonstration PA units will be replicated throughout the Outer Islands of the Seychelles, managed under partnerships between the Government, environmental NGOs, and private sector players, with each site employing full time conservation staff engaged in the protection of the marine and terrestrial biodiversity of the islands, the design and implementation of conservation management plans, and the rehabilitation of native ecosystems.

5. Recognizing, however, that biodiversity conservation at selected sites will not achieve the country's goal of integrating conservation and sustainable economic development throughout the Outer Islands, the project is also designed to support broad-scale ecosystem planning to integrate the new subsystem of Outer Islands protected areas into the wider land and seascape. Biodiversity Conservation and Sustainable Land Management (SLM) approaches will be integrated into development processes and plans, and should determine the type of developments that will be allowed in different sites in the region and the allocation of scarce resources such as land, freshwater, and marine resources in a manner that is compatible with the fragility of ecosystems in the Outer Islands and their ability to render services. Furthermore, the initial selection of sites for new protected areas includes new PA units that will range from those corresponding to IUCN Categories I and II, in which conservation will be the primary guiding objective, to those under Category VI, in which a balance between conservation and sustainable use will be sought. All of the new PA units, but particularly those established under a sustainable use classification, will seek to integrate economic development activities (many of which are critical for PA funding) with conservation objectives; furthermore, various sustainable land management activities will be implemented to ensure that development pressures do not negatively impact ecosystem functions, including protection and restoration of native habitats, prevention and control of invasive alien species, and land management to prevent / reduce coastal erosion and/or threats to water resources.

6. As noted above, expansion of the PA estate in the Outer Islands is urgent given the emerging threats to biodiversity and ecosystem functioning. However, the current moment for such an approach is also highly advantageous for several reasons. The Government of Seychelles has not only clarified its desire to delegate PA management authority to NGOs and private partners, it is also actively revising the PA policy and legal framework to enable this. Development of a new national PA policy (expected in

late 2013) and a new PA law (expected in 2014) will clarify the roles and responsibilities of NGOs and private partners as PA managers, and allow them to more efficiently implement PA management planning and carry out enforcement activities. Tourism development in the region is expected to increase in the next few years, and while this has the potential to have some negative impacts, the model for funding protected areas in the Outer Islands is highly dependent on tourism revenues. Similarly, expected oil and gas development in the Outer Islands not only enhances the need for more protection for Outer Island ecosystems, it also presents a potential significant funding source for PA management through offset payments. A potential debt for climate adaptation swap between the Government of Seychelles and the Paris Club of Creditors, expected to be finalized in 2014, will provide another US\$1.9 million/year over 20 years for marine protected area management in the country, much of which is likely to complement the goals and objectives of this project in the Outer Islands.

Figure 1: Map of the Inner and Outer Islands of the Republic of Seychelles



PART I: Situation Analysis

CONTEXT AND GLOBAL SIGNIFICANCE

Socio-Economic Context in the Outer Islands

7. In the Outer Islands, the decline of agricultural activities in the 1970s and 1980s shifted the focus towards tourism and the importance of maintaining marine and terrestrial ecosystems for tourism (aesthetic and resource use) and conservation benefits. To kickstart tourism development on the Outer Islands, the para-statal Islands Development Company (IDC) initially invested in the construction of a hotel on Desroches island to demonstrate viability (this hotel is now run by private operators). Other existing tourism developments includes hotels on Alphonse and Platte islands, a fishing guesthouse on Farquhar, and potential hotels/villas on Poivre, Providence, Coetivy, Farquhar, and several other islands.

Tourism operations in the Outer Islands are all high-end tourism and many of the visitors come specifically for world-class fly fishing (permit, bonefish, etc.) and blue water fishing (sailfish, etc.). All tourism developers on IDC islands, prior to initiating development, are required to sign an agreement stating that they will create a trust fund which will finance conservation management; these trust funds (or island foundations) are then administered by the tourism operators, IDC, ICS (Island Conservation Society) and the Government, and support ICS conservation activities on each island.

8. Recreational / sport fishing is a popular activity in the Outer Islands and one of the primary drivers of tourism to the area. Recreational fishing grounds are situated at Alphonse and St Francois, Poivre, St. Joseph, Desroches, Remire and African Banks, with the fishing season limited to November-April (the months when the Southeast monsoon is not active). Fly-fishing on the reef flats is the most popular recreational fishery, although there is also traditional blue-water fishing, as well as fly-fishing for blue-water species (e.g. marlin). All recreational fishing activities are catch and release. Commercial fishing is also important in the Outer Islands, and fishing pressure around the Outer Islands is likely to increase as fish stocks in the Inner Islands are being depleted. One of the most important commercial fisheries is the sea cucumber fishery, with more than 20 commercially viable species; other fisheries include grouper, octopus, and shark, as well as the industrial pelagic fisheries primarily made up of foreign vessels licenced to fish under the Seychelles flag. Mariculture using species such as Sandfish (sea cucumber), Rabbit fish, Tropical groupers, Yellowfin tuna, and crabs is also being considered for the Outer Islands, as increasing tourism¹ in the country has created significant demand for such commodities, a large percentage of which is currently imported into Seychelles.

9. Oil and gas development is a potential new and significant economic activity in the Seychelles, possibly including areas of the Outer Islands. Petro Seychelles is currently working with various private companies to conduct exploratory drilling in various parts of the Seychelles EEZ. If economically viable deposits are discovered, production will commence within 5 years. At present there are no plans to refine oil or gas in the Seychelles; barring the discovery of truly immense deposits, it is expected that oil and gas would be exported in raw form.

Environmental Context

10. The 115 islands of the Seychelles can be divided into the Inner Islands (often referred to the Granitics), which are situated on or near to the Mahé plateau, and the Outer Islands, which are distributed throughout the remainder of the EEZ (Figure 1). The Outer Islands encompass (inter alia) several significant islands groups, notably: the Amirantes Group, which includes African Banks, Desroches, D'Arros and St. Joseph's, Poivre, Alphonse and St. François; the Farquhar Group, which includes Providence and Farquhar; and the Aldabra Group, which includes Aldabra, Cosmoledo, Astove and Assumption. The Amirantes are closest to the Granitics; to the southwest of them is the Farquhar group, and in the far south-west are the high coralline islands of the Aldabra group.

11. Seychelles' climate is primarily controlled by 4 factors: monsoonal wind shifts, the south Indian Ocean sub tropical anticyclone, the seasonal migration of intertropical troughs and currents, and sea surface temperature in the South Indian Ocean. In the Amirantes Group (location of 4 of the 5 proposed PA sites), mean annual rainfall is estimated at 1,350mm; this is more than atolls to the southwest (Aldabra 966mm) and less than the granitics to the northeast (Mahe airport 2,378mm). Around 75% of rainfall is during the NW monsoon October/November to April, with December to February generally the wettest months and June-July the driest. Humidity and temperature are greatest during the NW monsoon November- April, the latter normally within the range 25-32°C. Seychelles lies to the north of the

¹ Tourist visitors per year increased from 140,627 in 2006 to 208,034 visitors in 2012, a 48% increase in 7 years.

cyclone belt but there have been some near misses in the Outer Islands to the south, and in December 2006 cyclone Bondo hit Providence and Farquhar, causing extensive damage.

12. Terrestrial ecosystems on the Outer Islands have been significantly impacted by human activities. All of the proposed PA sites were the location of copra (coconut) production beginning in the 1800s. In addition, casuarina was widely planted for wood production, and various islands were impacted by guano mining and agricultural production (e.g. maize, pumpkin, banana, haricot beans, sweet potato, pineapple, tobacco and livestock). The small scale of production and problems with logistics made it difficult for Seychelles to produce copra at competitive rates, and copra production largely ceased in the 1970s and 1980s. More recently, tourism has become the primary economic activity on some Outer Islands (e.g. Desroches & Alphonse), and tourism infrastructure has been the primary driver of habitat change. However, on Desroches tourism development is confined to the westernmost two thirds of the island, with the remainder of the island to remain undeveloped, and similar restrictions are in place for Alphonse. Desroches also has a small IDC village with housing, vegetable and fruit gardens, a sawmill and other structures.

13. Desroches Island is dominated by coconut and casuarina woodlands, although the eastern third of the island is a dense broadleaf forest with many native species. Alphonse Island is now dominated (>70%) by unmanaged coconut forest, while many of the woodland areas are dominated by tall casuarina trees (which do provide good roosting sites for seabirds such as Frigates, Red-footed Boobies and lesser Noddies). There is also a large area of open grassland dominated by various native sedges, grasses and creepers, including a significant number of introduced medicinal plants such as *Turnera angustifolia*, *catharanthas rosens*, *stachytarpheta urticifolia* and *Phyla nodiflora*. At present, only small patches of native trees (*Hernandia nymphaeifolia*, *Morinda citrifolia*, *Pipturus argenteus*) remain on the island. St. Francois Island is primarily casuarina forest on the western side and coconut forest in the middle of the island; however, there are also areas of native forest near the settlement and extensive areas of red mangrove (*Rhizophora mucronata*) along the coastal fringe. Bijoutier Island is dominated by dense coconut forest, although the eastern side is made up of a mixture of native species, mainly *Scaevola*, *Cordia subcordata* and *Guettarda speciosa* with very few coconut seedlings.

14. Invasive Alien Species have impacted the Outer Islands in a significant manner. Ship Rats (*Rattus rattus*) and cats (*Felis catus*) were introduced to many of the islands over one hundred years ago, the latter deliberately, presumably to control the former. Ship rats infest many of the granitics, Amirantes and Outer Islands, feeding on the eggs and chicks of ground-nesting and tree-nesting birds, reptiles, invertebrates, fruits, seeds, cultivated crops and human food waste. Loss of seabird colonies in particular has followed introductions of this and other rat species to islands around the world. Their presence in large numbers provides intense competition for food with native species. Rats can also transmit diseases such as leptospirosis and hepatitis to man. Cats are known predators of Wedge-tailed Shearwaters on Alphonse, and will prevent natural re-colonisation by ground-nesting birds such as Audubon's Shearwater, and inhibit any increase in the populations of ground-breeding species such as White-tailed Tropicbird. The present impact on cats on invertebrates (including crustaceans) and turtle hatchlings is not known but presumably significant. Introduced plant species are widespread on most Outer Islands; these include coconut and casuarina, but also plants introduced for ornamental purposes, particularly around the hotel and IDC village, and for timber, medicinal and domestic use.

15. A more detailed overview of terrestrial ecosystems and ecological functions in the Outer Islands is contained in the [Technical Reports](#).

16. The Seychelles is a globally recognised biodiversity hotspot. According to the Marine Ecoregions of the World (MEOW)² classification scheme, the whole of the Seychelles is recognised as one of nine distinct ecoregions within the western Indian Ocean Province of the Western Indo-Pacific Realm. The Seychelles is also part of a globally recognized Biodiversity Hotspot, known as the "Madagascar and the Indian Ocean Islands Region"³. Species richness of both flora and fauna is high, and the islands of the Seychelles are characterised by remarkable levels of endemism as a result of millions of years of evolution in isolation. Examples of endemics are the Seychelles clown fish (*Amphiprion fuscocaudatus*), the Aldabra Giant Tortoise (*Aldabrachelys gigantea*), the Seychelles bamboo shark (*Hemiscyllium cf. ocellatum*); the Aldabra group of islands host a number of endemic birds such as the Aldabra Rail (*Dryolimnas cuvieri aldabrensis*), Abbott's Sunbird (*Cinnyris sovimanga*, with three endemic subspecies: *C. s. aldabrensis* found on Aldabra Atoll, *C. s. abboti* found on Assumption Island, and *C. s. buchenorum* found on Cosmoledo and Astove Islands). Nationally, there are 735 species included on the IUCN Red List, one of which is 'Critically Endangered', 9 of which are "Endangered", 76 of which are "Vulnerable", and 112 of which are "Near-threatened"⁴. The Seychelles vast EEZ also has a large shelf area relative to other island nations, with numerous submerged banks, which support abundant fisheries resources, and significant populations of globally endangered and critically endangered species, and breeding, foraging and nursery habitats for many focal species.

17. The Seychelles Outer Islands region includes a number of outstanding sites. Most notably the World Heritage site of Aldabra with its unique and highly endemic fauna, and the population of critically endangered dugongs (*Dugong dugong*). Cosmoledo and Farquhar are known to host globally significant fish spawning aggregations. D'Arros and St Josephs and possibly Bijoutier support manta ray aggregations. There are shark and ray nurseries within many of the atoll lagoons, and many important nesting seabird colonies (e.g. Desnoeufs). There are also an abundance of nesting and foraging turtles (e.g. Farquhar) and corals that have shown resilience to coral bleaching (e.g. Alphonse and Farquhar). BirdLife International has identified 20 Important Bird Areas (IBA) in the Seychelles, nine of which are located around the outer islands (BirdLife International, 2012). These include the African Banks, Aldabra Atoll, Boudeuse, Cosmoledo, D'Arros, Desnoeufs, Etoile, Farquhar and Marie Louise. BirdLife International has also identified several potential marine IBA.

18. Among the important marine habitats in the Seychelles are seagrasses, which provide a food source for many organisms, including the 'Endangered' Green sea turtle (*Chelonia mydas*) and Dugong (*Dugong dugong*), nursery area for many fish species, and help to stabilise sediments and maintain water quality. Extensive seagrass beds are known to occur around the outer islands, although the exact extent and total number of seagrass species is currently unknown. Mangroves are also highly important, as they provide a critical nursery habitat for juvenile species and help to protect shorelines from storms, winds, waves, and floods. The Seychelles host 9 species of mangrove, which is the highest number of species in the western Indian Ocean region (along with Madagascar and Zanzibar). In the Outer Islands, extensive mangroves are found in the lagoons of Aldabra, Cosmoledo and Astove, as well as around St. Josephs Atoll, Farquhar (South Islands) and Poivre (South Island). Recent research has highlighted the valuable role of seagrasses and mangroves in sequestering carbon dioxide (CO₂). Near-surface carbon stocks (including the top meter of sediment) have been conservatively estimated as approximately 280 Mg C ha⁻¹ for mangroves^{5,6} and 140 Mg C ha⁻¹ for seagrasses^{7,8,9}. The carbon stocks in vegetated coastal

² Spalding, M.D., Fox, H.E. Allen, G.R. et al. (2007) "Marine Ecoregions of the World: A Bioregionalization of Coastal and Shelf Areas". Bioscience Vol. 57 No. 7, pp. 573–583.

³ Myers N, Mittermeier RA, Mittermeier CG, da Fonseca GAB, Kent J. 2000. Biodiversity hotspots for conservation priorities. Nature 403: 853–858

⁴ IUCN 2012. IUCN Red List of Threatened Species. Version 2012.2. <www.iucnredlist.org>

⁵ Donato DC, Kauffman JB, Mackenzie RA, Ainsworth A, Pflieger AZ (2012) Whole-island carbon stocks in the tropical Pacific: Implications for mangrove conservation and upland restoration. Journal of Environmental Management 97: 89–96.

ecosystems can exceed those of terrestrial ecosystems, including forests, by several times. However, at present carbon emissions from the conversion of vegetated coastal ecosystems are not included in emissions accounting or carbon market protocols, nor are there data or estimates available for blue carbon sequestration or the size of “blue carbon ecosystems”, or the levels of release of GHGs from these ecosystems, for the Seychelles.

19. Coral reefs are perhaps the most important marine habitat for biodiversity, as they harbor a very high number of marine species. There are an estimated 320 species of scleractinian corals found around the Seychelles, all of which are listed on the IUCN Red List, and some of which are listed as 'Endangered', 'Vulnerable' or 'Near-threatened'. Surveys in 1992 to 1993 recorded 51 genera of corals, and 161 species¹⁰. A more recent survey found 139 species of scleractinian corals around Farquhar and 190 species in total around the Amirantes¹¹. There was an extensive mass coral bleaching event in 1997/1998, as a result of anomalously high sea water temperatures and calm conditions, which impacted the entire western Indian Ocean and resulted in the mortality of corals around both the inner and outer islands of the Seychelles. The impact of this event was variable: corals in the lagoons or on reefs that were already acclimated to warm temperatures, or were exposed to localized upwelling or strong currents, demonstrated greater resilience and resistance. Recovery since this event has been equally variable and been influenced by cyclones and other threats.

20. Marine flora and fauna in the Seychelles include 350 species of macroalgae (chlorophyta, phaeophyta and rhodophyta), 450 species of bivalves, 150 echinoderms including 33 species of sea urchin, 32 starfish, 35 sea cucumbers (holothurians), 9 crinoids, and 44 ophiuroids. A large number of sponges are known to occur in the Seychelles, 18% of which are thought to be regional endemics, and 165 shrimp species have been identified, of which many are endemic. More than 1,000 coastal fishes occur in the Seychelles, among them 400 reef-associated species and 2 endemic species. Two new species of sharks (*Squalus lalannei* and *Centrophorus seychellorum*) have recently been described, and the whale shark (*Rhincodon typus*) is a regular migrant to Seychelles waters. The outer islands also supports important spawning aggregations of Grouper, some of which are included on the IUCN Red List (e.g. the "Endangered" Napoleon wrasse *Cheilinus undulatus*, "Vulnerable" Black-saddled Coral Grouper, *Plectropomus laevis*, and the "Near-threatened" Brown-marbled Grouper *Epinephelus fuscoguttatus*). Large aggregations of mantas are known to occur around the St Josephs and Alphonse. The shallow lagoons of several islands also serve as a breeding ground, nursery and feeding ground for species such as the sicklefin lemon shark (*Negraprion acutidens*), tawny nurse shark (*Nebrius ferrugineus*), blacktip reef shark (*Carcharhinus melanopterus*) and sting rays (*Pastinachus sephen*, *Himantura granulate* and *Urogymnus asperrimus*). Seychelles hosts four species of marine turtles, including the 'Critically Endangered' Hawksbill (*Eretmochelys imbricata*) and 'Endangered' Green turtle (*Chelonia mydas*), both of which nest and forage around the outer islands, and the 'Endangered' Leatherback (*Demochelys coriacea*) and Loggerhead (*Caretta caretta*) turtles. 25 species of cetaceans are known to frequent the waters around the Seychelles, including 'Endangered' whale species such as the Sie Whale (*Balaenoptera borealis*), Blue Whale (*Balaenoptera musculus*) and Fin Whale (*Balaenoptera physalus*), and 'Vulnerable' species such as the Sperm Whale (*Physeter macrocephalus*), and 8 species of dolphin. There is a small

⁶ Kauffman JB, Heider C, Cole TG, Dwyer K, Donato DC (2011) Ecosystem carbon stocks of Micronesian mangrove forests. *Wetlands* 31: 343–352

⁷ Fourqurean JW, Duarte CM, Kennedy H, Marba N, Holmer M, et al. (2012) Seagrass ecosystems as a globally significant carbon stock. *Nature Geoscience* 5: 505–509

⁸ Duarte CM, Chiscano CL (1999) Seagrass biomass and production: a reassessment. *Aquatic Botany* 65: 159–174.

⁹ Vichkovitten T, Holmer M (2005) Dissolved and particulate organic matter in contrasting *Zostera marina* (eelgrass) sediments. *Journal of Experimental Marine Biology and Ecology* 316: 183–201

¹⁰ Rosen, B. (1979) Check list of recent coral records for Aldabra (Indian Ocean). *Atoll Research Bulletin*. 33: 1-24.

¹¹ Obura D (2012) The Diversity and Biogeography of Western Indian Ocean Reef-Building Corals. *PLoS ONE* 7(9): e45013. doi:10.1371/journal.pone.0045013.

population of dugong (*Dugong dugon*, classified as Vulnerable by IUCN) found around Aldabra; the dugong is the most endangered marine mammal in the Western Indian Ocean.

21. The Seychelles hosts a high level of plant diversity, with 69 endemic plant species, including 6 endemic palm species in the Vallée de Mai on Praslin. In the Outer Islands floral diversity and endemism is lower (although there are 15 known floral endemic species in the Outer Islands); these coralline islands have developed from the slow accretion of coral living in shallow waters and are generally small, flat and geologically much younger than the granitic islands. Original forests on the outer islands were mainly composed of indigenous broadleaved trees such as *Cordia subcordata*, *Calophyllum inophyllum* and *Guettarda speciosa*, but the majority of the native vegetation has been disturbed by human activity, particularly coconut and casuarina (*Casuarina equisetifolia*) plantations, phosphate mining, guano digging, and the building of airstrips. However, some native forests, including the coastal woodland on the southern and northeastern areas of Desroches, are still largely intact.

22. Terrestrial fauna include 5 endemic species of bats, of which the Sheath-Tailed bat is currently classified as critically endangered; 3 species of terrestrial snake, of which 2 are endemic; more than 20 species of lizards, skinks and geckos and 3 endemic species of terrapins. Aldabra has the largest surviving wild population of giant tortoises in the world (around 140,000). Seychelles has the highest ratio of amphibian endemics of any island group in the world; the country supports 12 endemic amphibian species. Desroches Island is the only known site for two species of endemic cockroaches (*Delosia ornata* and *Margatteoidea amoena*) (Betts, 2009).

23. Seychelles harbours 254 bird species, comprised of 63 breeding species, 28 annual migrants, and 163 vagrants; of this total, 188 have been recorded in the Outer Islands, and 124 are found at the sites of proposed project: Alphonse (96 species), Desroches (65 species), D'Arros (63 species), St Josephs (50 species), Farquhar (47 species), St François (47 species), and Poivre (49 species). There are 13 endemic species of birds in Seychelles, all of which are globally threatened. The Seychelles hosts vast numbers of breeding seabirds, both in the granitic and outer islands. Some colonies host more than one million birds and are among the largest in the Indian Ocean and the world (e.g. Frigate spp.). In the Outer Islands, Farquhar is recognised as an Important Bird Area (IBA), by Birdlife International due to significant numbers of breeding seabirds found on the islets; Goëlettes island supports a huge breeding colony of Sooty Terns (*Sterna fuscata*) (200,000 to 400,000 pairs), as well as Roseate Terns (*Sterna dougallii*), Black-naped Terns (*Sterna Sumatrana*), Red-footed Booby (*Sula sula*) and the Brown Noddy (*Anous stolidus*). Desroches and Alphonse islands support colonies of Wedge-tailed Shearwaters and other migratory wading birds and terns. Bijoutier and Saint François islands meet IBA criteria for four species of congregatory water birds: Black-napped Tern, Saunders' Tern (*Sterna saundersi*), Crab Plover (*Dromas ardeola*) and Ruddy Turnstone (*Arenaria interpres*). D'Arros Island is an IBA, and there is a strong case to extend the IBA to St. Joseph, which has the largest population of roseate terns (about 300 pairs) and wedge tailed shearwaters (about 300,000 pairs) in the outer islands.

24. A more detailed overview of the biodiversity of the Seychelles is contained in the [Technical Reports](#).

Protected Area System: Current status and coverage

25. The islands of Seychelles cover 45,530 ha of land and a vast marine area spanning 137,400,000 ha. At present, 20,921 ha of terrestrial landscapes and 34,847 ha of marine seascapes are designated as protected (see Table 1); the existing areas represent 47% of the terrestrial area but <1% of Seychelles Exclusive Economic Zone (EEZ). At present, the majority of the protected areas are situated around the Inner Islands. In 2011 the Government of Seychelles announced its intention to proclaim nine new

terrestrial protected areas, of which eight are in the Outer Islands including: (i) South Island Farquhar National Park; (ii) Goëlleles Island (Farquhar) and Banc de Sable Special Reserves; (iii) Grand and Petite Polyte Cosmoledo Special Reserve; (iv) Grand Ile (Cosmoledo) Area of Outstanding Natural Beauty; (v) Saint François and Bijoutier National Park; (vi) Assumption Island National Park; (vii) Desnoufs Island Area of Outstanding Natural Beauty; and (viii) South Island (Poivre) National Park. If and when these sites are fully gazetted, the Seychelles will become the first country globally to designate more than 50% of its terrestrial territory as protected. However, none of the sites as designated in the Cabinet Memorandum include any marine areas.

26. The Outer Islands of the Seychelles make up more than half of the total number of islands within the archipelago. These islands hold nine of the twenty Important Bird Areas (IBAs) of Seychelles, but at present there only two fully gazetted protected areas in the Outer Islands: (i) Aldabra Special Reserve (15,260 ha terrestrial and 23,100 ha marine) and (ii) the African Banks Protected Area (2 ha terrestrial and 3 ha marine), as well as two declared Nature Reserves (Boudeuse and Etoile, each less than 1 ha.). The Aldabra Special Reserve is internationally recognised as a UNESCO World Heritage site. The island is managed by the Seychelles Islands Foundation (SIF), funded through cross-subsidisation from the country's other UNESCO World Heritage Site, Vallée de Mai Nature Reserve on Praslin Island. The African Banks Protected Area and Boudeuse and Etoile Nature Reserves are effectively 'paper parks' with no active conservation management. To date, ecological monitoring and conservation in the Outer Islands has been carried out primarily by the Seychelles Islands Foundation (at Aldabra), the Island Conservation Society (at Desroches and Alphonse islands), and the D'Arros Research Centre (on the private island of D'Arros). Neither the Ministry of Environment and Energy nor the Seychelles National Park Authority have any significant conservation activities in the Outer Islands; furthermore, the Government of Seychelles has made it clear that PA management in the Outer Islands will be outsourced to NGOs and private partners for the foreseeable future.

27. All of the outer islands of Seychelles (except D'Arros and St Joseph Atoll) are owned by the Seychelles Government, and the majority (with the exception of Aldabra) are leased to Islands Development Company (IDC), a parastatal formed in 1980 to establish and supervise economic activities on outer islands. In 2004 IDC signed a MoU with the Island Conservation Society (ICS) that appoints ICS as conservation advisors on all islands owned by IDC. In 2007, this MoU was strengthened into an agreement endorsed by the Ministry of Environment.

Table 1: The Protected Areas Estate of Seychelles*

Designation Type <i>IUCN</i> <i>Category</i>	Official Name	Management Authority	Terrestrial Area (hectares)	Marine Area (hectares)	Total Area (hectares)
Special Reserve <i>Cat. Ib</i>	Cousin Special Nature Reserve	Nature Seychelles	27	170	197
	Aride Island Special Nature Reserve	Island Conservation Society	68	0	68
	Aldabra Atoll Special Nature Reserve	Seychelles Islands Foundation	15,260	28,120	43,380
	La Digue Special Veuve Reserve	Seychelles National Parks Authority	21	0	21
	Recif Island Special Reserve	Department of Environment	13	0	13
	Vallee de Mai	Seychelles Islands Foundation	19	0	19
National Park <i>Cat. II</i>	Silhouette Island National Park	Silhouette Foundation	1,860	3,045	4,905
	Moyenne Island National Park	Private	9	0	9
	Morne Seychellois National Park	Seychelles National Parks Authority	3,102	0	3,102
	Praslin National Park	Seychelles National Parks	530	0	530

Designation Type <i>IUCN</i> Category	Official Name	Management Authority	Terrestrial Area (hectares)	Marine Area (hectares)	Total Area (hectares)
		Authority			
Nature Reserves <i>Cat. IV</i>	Beacon, Booby, Boudeuse, Etoile, Ile aux Vaches, Les Mamelles, King Ross	Department of Environment	10	0	10
Protected Area <i>IUCN Cat. II</i>	Iles Cocos, Ile La Fouche, Ilot Platte	Seychelles National Parks Authority	1	0	1
	African Banks	Ministry of National Development	1	819	820
Marine National Park <i>Cat. II</i>	Baie Ternaie	Seychelles National Parks Authority	0	87	87
	Curieuse	Seychelles National Parks Authority	0	1,176	1,176
	Port Launay	Seychelles National Parks Authority	0	30	30
	St. Anne	Seychelles National Parks Authority	0	1,400	1,400
TOTALS			20,921	34,847	55,769

* Additional information on existing protected areas is provided in the project's [Technical Reports](#).

PROJECT SITE INFORMATION

Table 2: Overview of PAs targeted by this project

Island Group	Area	Name	Area_ha	PA Classification	IUCN Category
Alphonse Group	Marine	Alphonse Group to 1km from reef flat	12,830.00	Sustainable Use Area	6
	Terrestrial	Alphonse	160.90	Sustainable Use Area	6
	Terrestrial	St. Francois	32.09	Strict Nature Reserve	1
	Terrestrial	Bijoutier	1.29	Strict Nature Reserve	1
Total Alphonse			13,024.28		
Desroches	Marine	Desroches Atoll to 1km from reef flat	34,300.00	Sustainable Use Area	6
	Terrestrial	Desroches	368.50	Sustainable Use Area	6
Total Desroches			34,668.50		
Poivre	Marine	Poivre to 1km from reef flat	2,838.00	Sustainable Use Area	6
	Terrestrial	Poivre - South Island	136.98	TBD	tbd
Total Poivre			2,974.98		
Farquhar Atoll	Marine	Farquhar to 1km from reef flat	22,290.00	Sustainable Use Area	6
	Terrestrial	Goelettes	25.87	Strict Nature Reserve	1
	Terrestrial	Banc du Sable	8.00	Strict Nature Reserve	1
	Terrestrial	South Island	368.20	National Park	2
Total Farquhar			22,692.07		
D'Arros & St. Joseph	Marine	D'Arros & St. Joseph Atoll	4,000.00	Sustainable Use Area	6
	Terrestrial	St. Joseph	135.17	Strict Nature Reserve	1
Total D'Arros & St. Joseph			4,135.17		

			% of proposed area	
<i>Total Marine</i>		76,258.00	98.40	
<i>Total Terrestrial</i>		1,236.99	1.60	
<i>Total Sustainable Use Area</i>		76,787.40	99.09	
<i>Total National Park</i>		505.18	0.65	
<i>Total Strict Nature Reserve</i>		202.41	0.26	
Total		77,494.99		

28. With the exception of the D'Arros / St Joseph Atoll, which is privately owned, all of the Outer Islands of the Seychelles, as well as the surrounding marine environment (from the high water mark to the outer boundaries of the EEZ), are under the authority of the national government, and the population of the Seychelles enjoy public rights of access and resource use. Apart from the D'Arros / St. Joseph and Aldabra atolls, the remaining Outer Islands are leased for a period of 99 years to the Islands Development Company (IDC).

29. Five islands / island groups have been selected as new official Protected Areas in the Outer Islands of the Seychelles: Desroches, Alphonse (Alphonse, St. Francois and Bijoutier), Poivre (South Island), Farquhar (South Island, Ile Goëlette and Banc du Sable), and D'Arros (St. Joseph). As detailed below, each site includes both terrestrial and marine areas. Several of the islands were included in the list of proposed new protected areas in a 2011 Seychelles Cabinet Memo proposing designation of new PA sites¹²; the other sites were selected by the Seychelles Ministry of Environment and Energy (MEE), in consultation with the Island Conservation Society (ICS), the Islands Development Company (IDC), the Save Our Seas Foundation, and other stakeholders.

30. Selection of these five sites was based on a number of factors. The owners of D'Arros Island, which is the only privately owned island in the Outer Islands, have come to an agreement with the Government of the Seychelles to establish an official protected area at the site. Therefore the site was selected as part of this project both because of this on-going process and because the island owners have significant financial resources and a strong commitment to conservation and managing the site as a protected area, as well as the globally significant biodiversity found at the site. As for the other 4 islands / island groups selected to become new PAs, these are leased from the Government by IDC (as are almost all of the Outer Islands). These islands were selected as the sites for official Protected Areas based on several criteria:

- **Tourism Development:** The islands have already or are poised to have tourism development, which will provide significant and on-going financing for Protected Area management at each site. Given the remote location and difficult logistics of reaching these islands, the issue of selecting sites that can generate sustainable financing is a critical one. Two of the islands, Desroches and Alphonse, already have hotels and/or villas on them. It is expected that additional tourism development will take place on those islands, and that new tourism developments will take place on the other two islands (Farquhar and Poivre); in all cases, tourism developers / operators will be required to collect fees from visitors that will go towards PA management (it is important to note that tourism development on Desroches and Alphonse will be limited to areas specific in the Land Use Plans for each island and that these PAs are to be classified as Sustainable Use Areas; as for Farquhar and Poivre, tourism development will only take place on islets that are not included within the PA boundaries). In addition, it is expected that hotel operators will provide other contributions to PA management, such as providing food for PA staff, providing logistical support to marine monitoring activities (through the use of boats and equipment), and participating in beach clean ups and beach profiling activities (among others).
- **Logistics, Infrastructure and Personnel:** Each of the islands has a functioning airstrips; given the uncertainty of the piracy risk in the western Indian Ocean, the ability to travel to and supply the islands by air is an important consideration for PA management (as well as for the potential for tourism development). Furthermore, ICS already has a conservation team on Desroches and

¹² "Proposal to designate 96% of Curieuse Island, South & Goëlettes Islands (Farquhar), Polyte islands and Grande Ile (Cosmoledo), Desnoeuvs Island, Saint Francois & Bijoutier Islands, Assumption Island and South Island (Poivre) as Protected Areas under the National Park and Nature Conservancy Act"

Alphonse islands, with accommodations and offices, and an on-going agreement for the hotels on each island to feed the ICS staff (future PA staff). On Farquhar and Poivre, there are already IDC facilities that can be converted to provide accommodation and offices for ICS staff.

- Biodiversity & Ecosystem Values: A number of gap analyses and mapping studies have been carried out for the Outer Islands. Some of these studies have identified Outer Islands not included in this project as critically important for biodiversity and ecosystem functions. These would include islands such as Aldabra, Cosmoledo, Astove, and Assumption, among others. In the case of Aldabra, this is already an official Protected Area. Cosmoledo, Astove and Assumption were all considered for this project as well, but their extremely remote location, lack of infrastructure, and absence of any potential tourism development, made them unfeasible as sites for Protected Areas. Furthermore, all of the selected islands / island groups contain globally significant biodiversity and ecosystems that merit their inclusion in the Protected Areas system of the Seychelles. In addition, because Farquhar and the selected sites in the Amirantes Group of islands do not form part of the Aldabra Group of islands, they encompass a different mix of terrestrial and marine habitats that are not currently represented in the official PA system, and due to their position relative to one another and within the overall Seychelles archipelago, a system that included PA sites at Aldabra, Farquhar and the Amirantes would create a valuable network that protected important biodiversity corridors within the western Indian Ocean.

31. In summary, the decision on site selection for new Protected Areas was made using both ecological criteria and functional criteria. Given the costs and challenges of establishing protected areas in the remote Outer Islands of the Seychelles, this approach is believed to be the most likely way to sustainably protect important ecosystems while avoiding the creation of “paper parks”. It is also important to note that these sites are considered by stakeholders as demonstration sites, with varying levels of resource use and development, which collectively can provide models for replication at almost all of the other Outer Island sites.

32. With regard to the proposals of specific IUCN PA categories, and corresponding national PA categories, for each new PA site, these were made based on several factors. One factor was the official government policy, as expressed in the 2011 Cabinet Memorandum, which designated the PA categories for several of the proposed PA sites in this project: South & Goëlettes Island (Farquhar) Special Reserve, Saint Françoise & Bijoutier Nature Reserve, and South Island (Poivre) Nature Reserve (these all correspond to IUCN category I). Seychelles is currently in the process of revising its national PA policy, including creating new PA categories, and the project is using the categories stated in the new draft PA policy (so that the aforementioned sites will be called “Strict Nature Reserves”), but regardless the project is abiding by the designations as stated in the official Cabinet Memorandum. These designations also correspond with the ecological / development conditions at these sites; none of these islands has any on-going development or habitation on them, and all have globally significant ecosystems / species (particularly in the marine environment); and thus they deserve the highest level of protection possible under Seychelles policy/law. As for the sites of Desroches and Alphonse islands, these will be classified as Sustainable Use Areas (corresponding to IUCN category VI); the reason for this is that both islands already have significant human populations and infrastructure, including tourism developments, and these islands are likely to see increased development in the future (although approx. 50% of each islands will be designated as nature reserves where no development will be permitted). Finally, the decision to make the D’Arros and St. Joseph PA site a Strict Nature Reserve was made jointly by the private owners of that site and the Government of Seychelles. All of the preceding explanation applies to the terrestrial components of the PA units. For the marine components of each PA unit (extending 1 km. from the edge of the reef flat), these areas all will be designated as Sustainable Use Areas, as some forms of fishing will continue to be allowed at these sites. This will allow for effective monitoring and protection while also allowing fishermen to gain a sustainable livelihood from the marine environment (a priority for both the government and the people of the Seychelles). The use of this variety of PA categories, adopted based on

the existing and planned uses for the different sites, the level of past and current threat/degradation, and the importance of the ecosystems/species found at each site, is an adaptable and sound model that can be used to select PA categories for future PA sites in the Outer Islands.

33. Summary data about each of the five PA sites is provided in the tables below; more detailed profiles are provided in the project's Technical Reports.

Desroches: The proposed Desroches Sustainable Use Area comprises 368 hectares of terrestrial ecosystems and 34,300 hectares of marine ecosystems in the Outer Islands of the Seychelles.

Table 3: Summary Information on Desroches PA Site

Key Data	
Name and classification of proposed PA site	Desroches Sustainable Use Area (IUCN Category VI: Managed Resource Protected Area)
Location and Size	Desroches lies at 5° 42'S, 53° 39'E, on the eastern edge of the Amirantes group of Seychelles islands, 240 km southwest of Mahe. Desroches is the largest of the islands in the Amirantes group, and being situated only 230km SW of Victoria, it is also the closest to the inner islands. The island is a low-lying sand cay, sat on the southeastern edge of a submerged atoll, on a bank to the east of the main Amirantes Ridge. The island covers 368 ha and is 5.25km and only 0.33km wide at the narrowest point, and has a maximum elevation of 2.4m. The atoll itself is 20km in diameter and it is separated from the Amirantes Ridge by a deepwater trench of up to 1,740m depth. The Protected Area will consist of Desroches Island and the marine seascape extending 1 km. from the edge of the reef flat.
Biome types	<ul style="list-style-type: none"> • Tropical and subtropical dry broadleaf forests (tropical and subtropical, semi-humid) • Tropical and subtropical coniferous forests (tropical and subtropical, semi-humid) • Tropical and subtropical grasslands, savannahs, and shrublands (tropical and subtropical, semi-arid)
Biodiversity	Green and Hawksbill Turtles nest on the beach and beach-crest, particularly on the south and northeast coasts where beach-crest vegetation is least disturbed, and forage in the shallow waters of the lagoon. Marine life is impressive, with extensive coral outcrops, seagrass beds and sand flats, and large numbers of reef fish. The outer reef wall features a series of caves and tunnels which support larger species such as Napoleon Wrasse and Giant Grouper, the latter now scarce in Seychelles. Offshore waters are productive and Desroches is famed for its game-fishing. Dolphins and even Humpback Whales are seen occasionally and large flocks of seabirds gather to feed as pelagic predators such as Yellowfin Tuna drive smaller fish to the surface. There are two small colonies of Wedge-tailed Shearwaters and small numbers of migratory wading birds roost and feed on the airstrip and round the coast, and terns also roost on coastal rocks. The airstrip attracts other migrating birds, some very rare, and rare seabirds have been seen offshore. The interior is dominated by Coconut and Casuarina woodland over the western two thirds with scattered, mainly native broad-leaved trees and shrubs and a grass/sedge/herb ground layer. The easternmost third of the island is unmanaged and woodland is denser, with relic patches of native woodland. The western end of the island provides the habitat for the island's rarest animals: two species of cockroach that have been found nowhere else in the world (<i>Delosia ornata</i> and <i>Margatteoidea amoena</i>).
Threats & Management challenges	In Seychelles terms Desroches has a long history of settlement and development. The majority of the native vegetation was cleared historically to make way for coconut plantations. The coastal vegetation has already been thinned and fragmented adjacent to the hotel developments and villas to afford sea views and beach access, and there is the potential for further tourism development. Although protected by national legislation since 1994, there have been recent incidents of turtle poaching at Desroches. There is a large population of introduced ship rats, with smaller numbers of free-ranging cats and chickens. Desroches is vulnerable to fishing pressure due to its proximity to Mahé; the island is targeted for bourgeois (snapper), other snappers and groupers, and sea cucumbers.

Alphonse: The proposed protected areas for the Alphonse Island Group are the following: the Alphonse Sustainable Use Area (161 hectares); the St. Francois & Bijoutier Strict Nature Reserve (32 and 1 hectares respectively); and the marine area around the island group (12,830 hectares).

Table 4: Summary Information on proposed Alphonse PA Site

Key Data	
Name and classification of proposed PA site	<ul style="list-style-type: none"> • Alphonse Sustainable Use Area (IUCN Category VI: Managed Resource Protected Area) • St. Francois & Bijoutier Strict Nature Reserve (IUCN Category I: Strict Nature Reserve/Wilderness Area)
Location and Size	Alphonse Island lies at 7° S 52° 44' E, with the tiny island of Bijoutier 6 km to the south and St. Francois a further 5 km beyond that; the Alphonse Group is situated 400km southwest of Victoria. The group is often considered to be part of the Amirantes even though it is 87km south of the main Amirantes Ridge. Alphonse Atoll has a land area of 161 ha with a lagoon of 540ha and reef flat of 400ha. St François Atoll is a broad plateau, with a total area of 5,382ha, with peripheral reef-flats occupying 3,732 ha and the lagoon 1,650 ha. The Protected Area will consist of all three islands, and the marine seascape extending 1 km. from the edge of the reef flat.
Biome types	<ul style="list-style-type: none"> • Tropical and subtropical dry broadleaf forests (tropical and subtropical, semi-humid) • Tropical and subtropical coniferous forests (tropical and subtropical, semi-humid) • Tropical and subtropical grasslands, savannahs, and shrublands (tropical and subtropical, semi-arid) (Alphonse and St. Francois only) • Mangrove (subtropical and tropical, salt water inundated) (St. Francois only)
Biodiversity	St. Francois and Alphonse have large lagoons supporting high levels of invertebrates, fish and turtles, the former with substantial fringing mangrove forest. There are extensive areas of corals, sandflats and seagrass beds, sea cucumbers are particularly numerous at St. Francois and Giant Clams abundant in Alphonse lagoon. All three islands have healthy populations of hawksbill [<i>Eretmochelys imbricata</i>] and green turtles [<i>Chelonia mydas</i>], and the reef at St. Francois may be one of the most important foraging areas for immature turtles in the western Indian Ocean. Richness and diversity of marine life is high, both in the two lagoons and in offshore waters, which quickly reach depths of over 1,000 metres. Larger sharks and Manta Rays are still present in good numbers. A spawning aggregation of the grouper Vyey Masata is situated off Bijoutier. St. Francois also supports globally significant numbers Black-naped Terns (<i>Strena sumatrana</i>), crab plover (<i>Dromas ardeola</i>) and Saunders' tern (<i>Strena saundersii</i>). Seychelles' largest concentrations of wimbrel (<i>Numenius phaeopus</i>), ruddy turnstone (<i>Arenaria interpres</i>) and grey plover (<i>Pluvialis squatarola</i>) have also been recorded here, and Alphonse supports a nationally significant roost of up to 4,200 frigatebirds and a colony of Wedge-tailed Shearwaters.
Threats & Management challenges	On Alphonse, seabird numbers and diversity are low, as there are large numbers of introduced ship rats and cats, while Bijoutier and St. Francois are largely rat-free. Poaching of turtles has been a problem in the past (the remains of 111 Hawksbill turtles were found in 2001), but has declined with the opening of the hotel in 2010 and increased presence of ICS staff as well as fishing guides. There is the potential for further tourism development on Alphonse. Alphonse is vulnerable to fishing pressure from Mahe; as for fly-fishing at St. Francois, strict restrictions are in place on numbers of fly-fishermen, gear (barbless hooks only) and practices (all fishing is 'catch and release').

Poivre: The proposed Poivre Protected Area comprises 137 hectares of terrestrial ecosystems and 2,838 hectares of marine ecosystems.

Table 5: Summary Information on Poivre PA Site

Key Data	
Name and classification of proposed PA site	Poivre protected area (classification TBD)
Location and Size	Poivre is coralline atoll situated 270km SW of Port Victoria. The atoll consists of 2 islands: Poivre (111ha) and South Island (137 ha). Ile du Sud is composed of the main island, which is the central finger with two additional projections 'Florentin' and 'Mozambique'. The atoll is 3.5km wide in the north tapering to 2km in the south and covers 1,467ha of reef flats with no central lagoon. Poivre is joined to Ile du Sud by a 750m causeway crossing the reef flat, which dries out at low tide. The Protected Area will consist of South Island and the marine seascape extending 1 km. from the edge of the reef flat.
Biome types	<ul style="list-style-type: none"> • Tropical and subtropical dry broadleaf forests (tropical and subtropical, semi-humid) • Tropical and subtropical coniferous forests (tropical and subtropical, semi-humid) • Tropical and subtropical grasslands, savannahs, and shrublands (tropical and subtropical, semi-arid) • Mangrove (subtropical and tropical, salt water inundated)
Biodiversity	South Island (Poivre) has an important network of wetland systems that provide habitat to water birds especially migratory species. Large numbers of seabirds including Boobies (<i>Sula</i> spp., Roseate tern (<i>Sterna dougalii</i>), Black-naped tern (<i>Sterna sumatrana</i>) have been recorded breeding (Skerret <i>pers. comm.</i>). There are no endemic land birds but significant floral diversity. The reef flats attract migratory bird such as waders and resident herons. The islands of the Poivre atoll host significant numbers of nesting hawksbill (<i>Eretmochelys imbricate</i>) and some Green turtles (<i>Chelonia mydas</i>), and provides foraging habitat for significant numbers of juvenile turtles. Seventy-three fish species from 19 families were recorded during surveys in 2002. These varied in trophic group and size from large lethrinids such as <i>Lethrinus olivaceus</i> to small pomacentrids such as <i>Dascyllus carneus</i> . Labrids were the most recorded (18 species) followed by pomacentrids (11 species) and acanthurids (8 species).
Threats & Management challenges	Poivre is currently only occupied by 4 to 6 IDC staff, who are employed to maintain the island and keep the grass runway cleared. There were plans to construct a fishing lodge for tourism; although all the equipment and building materials were transferred to Poivre, the construction of this facility did not happen. Future tourism development is expected, although no plans have been finalized. Rats and cats are a problem on Poivre, and there have been incidents of turtle poaching. Poivre is vulnerable to fishing pressure due to its proximity to Mahé.

Farquhar: The proposed protected areas for Farquhar including the following: Farquhar (South Island) National Park (368 hectares), Ile Goelettes and Banc du Sable Strict Nature Reserve (26 ha. and 8 ha. respectively), and the marine area around the islands (22,290 hectares).

Table 6: Summary Information on Farquhar PA Site

Key Data	
Name and classification of proposed PA site	<ul style="list-style-type: none"> • Farquhar (South Island) National Park (IUCN Category II: National Park) • Ile Goelettes and Banc du Sable Strict Nature Reserve (IUCN Category I: Strict Nature Reserve/Wilderness Area)
Location and Size	Farquhar is the most southerly of the outer islands (10°10'S; 51°08'E), situated 770 km SSW of Mahe. The atoll covers 17,800 ha (land and sea) and contains ten islands: the two main islands North and South Island cover 799 ha (97 % of the landmass), between which are three small islands known as the Manahas, on the northern rim of the atoll there are four islands, Trois Iles (Despose, Ile du Milieu and Lapin), and then Banc du Sable which is the most western island. Ile Goëlettes is situated on the south. The Protected Area will consist of South Island, Ile Goellettes and Banc du Sable, and the marine seascape extending 1 km. from the edge of the reef flat.

Biome types	<ul style="list-style-type: none"> • Tropical and subtropical dry broadleaf forests (tropical and subtropical, semi-humid) • Tropical and subtropical coniferous forests (tropical and subtropical, semi-humid) • Tropical and subtropical grasslands, savannahs, and shrublands (tropical and subtropical, semi-arid) • Mangrove (subtropical and tropical, salt water inundated) (South Island only)
Biodiversity	<p>The islets of Farquhar (excluding North, South and the Manahas) have been designated as an Important Bird Area. Goëllettes is the most interesting for birds. It is almost treeless but covered in grasses and a few low <i>vouloutye</i> bushes [<i>Scaevola sericea</i>]. There is a huge seasonal colony of about 200,000 – 400,000 pairs of sooty tern [<i>Onychoprion fuscatus</i>] and around 100,000 pairs of brown noddy [<i>Anous stolidus</i>]. In 2006, Island Conservation Society recorded a previously unknown colony of black-naped terns [<i>Sterna sumatrana</i>] at Banc de Sable. Aldabra has the largest total population of this species in the African region but Banc de Sable with 10 – 20 breeding pairs has the largest population on any one island in the region. Black-naped terns also breed on Goëllettes. Studies by Seychelles Fishing Authority have shown that the abundance of some grouper species is about three times greater than in the north Amirantes and up to thirty times that of the granitics. In particular, the density of Napoleon Wrasse [<i>Cheilinus undulatus</i>] is phenomenal. It may be the highest in the world, possibly rivalled only by numbers in the Cocos Keeling. On the edge of the reef, at certain times of year, there are spawning aggregations of thousands of camouflage grouper [<i>Epinephelus polyphekadion</i>] and brown-marbled grouper [<i>Epinephelus fuscoguttatus</i>]. This is in sharp contrast to other parts of the world where many aggregations have totally collapsed. Farquhar is also an important nesting site for turtles. Other fauna of interest includes the gold-dust gecko [<i>Phelsuma latisauda</i>] and coconut crab [<i>Birgus latro</i>].</p>
Threats & Management challenges	<p>Farquhar's isolation has made regular access to the island difficult and very few conservation protection measures have been implemented. The island's proximity to Madagascar is also of concern due to potential fishing pressure from that country. In April 2001, a Madagascan fishing boat was seized at Farquhar after it was found to have several tons of illegally obtained sea cucumbers on board. Uncontrolled poaching of seabird eggs is a threat to the Sooty Tern colony, and poaching may also have contributed to the extinction of some species including Brown Booby (<i>Sula leucogaster</i>) at Farquhar. Rats are present on the larger islands, which prevent re-colonisation by ground-nesting terns, shearwaters and other species, and the introduction of alien plant species may spread from North Island to the southern islands. There were plans to construct a hotel on Farquhar's North Island, which are currently on hold. There is a targeted aggregation fishery for brown-marbled grouper, and there was a fishery for the Hong Kong centred live reef food fish trade (new legislation in 2005 prohibited the live trade reef food fish fishery).</p>

D'Arros: The proposed Protected Area 5 comprises 135 hectares of terrestrial ecosystems on St. Joseph Island and 4,000 hectares of marine ecosystems.

Table 7: Summary Information on the D'Arros PA site

Key Data	
Name and classification of proposed PA site	St. Joseph Strict Nature Reserve ((IUCN Category I: Strict Nature Reserve/Wilderness Area)
Location and Size	D'Arros and St Joseph are situated 255 km WSW from Victoria, Mahe. D'Arros is a flat oval shaped sand cay covering an area of approximately 170 ha, surrounded by sand beaches and an intertidal reef flat covering >100 ha. The island is flat with a maximum elevation of 3 m. The island is separated from the St. Joseph Atoll to its north by a 1.1 km wide and 60 m deep channel. The St. Joseph Atoll comprises a ring of 12 islands (135 ha) situated on a broad reef flat (1,774 ha) surrounding a shallow lagoon (480 ha). The Protected Area will consist of St. Joseph island, and the marine seascape extending 1 km. from the edge of the reef flat around both St. Joseph and D'Arros. Note: D'Arros / St. Joseph are in the process of applying for Ramsar designation.
Biome types	<ul style="list-style-type: none"> • Tropical and subtropical dry broadleaf forests (tropical and subtropical, semi-humid)

	<ul style="list-style-type: none"> • Tropical and subtropical coniferous forests (tropical and subtropical, semi-humid) • Tropical and subtropical grasslands, savannahs, and shrublands (tropical and subtropical, semi-arid) • Mangrove (subtropical and tropical, salt water inundated)
Biodiversity	<p>There are no records of the flora of D'Arros, or any other island in the Amirantes group prior to 1882, by which time the majority of the native vegetation had been substituted with coconut palms. After the island came under private ownership in 1975, the plantation was abandoned and today approximately 66% of the island is overgrown by coconut palms. Remnant native broadleaf trees occur in the narrow coastal strip and in small clumps throughout the interior; large tracts of coconut plantation are currently being cleared and replaced with native broadleaved vegetation. Around St. Joseph Atoll the larger islands are dominated by densely vegetated coconut palms whilst smaller islands (e.g. Petit Cacassaye) are dominated by the native species <i>Pemphis arcidula</i>. Small stands of Mangrove (<i>Rhizophora mucronata</i>) grow along the inner rim of St. Joseph, Benjamin and Chien Islands. D'Arros is an IBA due to an introduced population of the Seychelles Fody. There is a strong case to extend the IBA to St Joseph, which has the largest population of roseate terns (about 300 pairs) and wedge tailed shearwaters (about 300,000 pairs) in the outer islands. Black naped tern also breed and there is a huge roost of Lesser and Greater frigatebirds. St Joseph atoll is rich in marine life; there is evidence of increased turtle nesting numbers since the 1980s, with hundreds of hawksbills and green turtles nesting annually. The waters of D'Arros and St Joseph also provide excellent habitat for significant aggregations of foraging hawksbill and green turtles. Both islands are free of exotic invasive mammals; the eradication of rats from D'Arros has led to an increase in the population of lizards, birds and invertebrates.</p>
Threats & Management challenges	<p>The waters around D'Arros and St. Joseph are subject to significant fishing pressure, including: semi-industrial fishermen harvesting reef fish (especially groupers); shark fishermen (shark finning is legal in the Seychelles and is actively connected to East Asian markets; and sea cucumber fishing (these fishermen often also harvest sharks and turtles). Turtle poaching continues to be a problem as well, although it has decreased in the past several years. Another threat comes from illegal harvesting of wedge-tailed shearwaters; fledglings from the nesting colony of 40,000 birds are killed for their meat. Tourism visitation in the form of charter boats and other small vessels has been documented to cause damage to coral reefs (from inappropriate anchoring, release of wastewater and garbage, and trampling by tourists walking on the reef flats) as well as propeller strikes of turtles and other marine fauna.</p>

Institutional Context

34. The roles and responsibilities of the key public institutions responsible for protected areas and sustainable land management in the Seychelles are briefly described below.

35. The *Cabinet of Ministers* is the highest level decision-making body in Seychelles. The Cabinet of Ministers address national issues related to inter-sectoral planning, coordination and execution.

36. The *Ministry of Environment and Energy* (MEE) has the primary responsibility for environmental management and sustainable development processes. The MEE consists of the following six Divisions: (i) Climate and Environmental Services; (ii) Wildlife Enforcements and Permits; (iii) Public Education and Community Outreach; (iv) Planning, Policy, Risk and Management; (v) Operations, Education and Communications; and (vi) Secretariat. The MEE is also the parent ministry to several institutions, including the Seychelles National Park Authority (SNPA).

37. The *Seychelles National Park Authority* (SNPA) is responsible for the management of all marine and state-owned terrestrial national parks, and the La Digue Veuve Special Reserve. The SNPA currently

has a staff complement of around 95, of which 35 work in terrestrial national parks on trail maintenance, patrolling, fire fighting, IAS control, vegetation management and research. Another 30 SNPA staff work in MPA management, on preventing illegal fishing, collecting fees, monitoring (beaches, turtles, removal of fish traps, lines, nets), installing mooring buoys and research. The SNPA is a budget dependent organization, provided with a fixed budget from government each year to meet all expenses including salaries and running costs. Revenues earned from ticket sales, sale of forest products and other goods and services are currently remitted to government and not retained by the SNPA.

38. The *Seychelles Fishing Authority* (SFA) is responsible for the sustainable management of marine resources in Seychelles (Fisheries Act 1986) and for the management, conservation and protection of fisheries and marine resources (Fisheries Act 2010). SFA is responsible for enforcement, which designates certain species as protected (e.g. marine mammals) throughout the Seychelles territorial waters, as well as the preparation, implementation and review of management plans for the long-term sustainability and optimal utilization of marine resources. The SFA Fisheries Surveillance section inspects fishing vessels that call into Port Victoria (75% were inspected in 2009) and also carries out inspections at sea (45 fishing vessels in 2009). As of 2012, SFA operates a Vessel Monitoring System (VMS) that monitors all Seychelles-flagged vessels within the EEZ.

39. Several government agencies are responsible for monitoring activities and ensuring safety in the marine environment of the Seychelles, including management of the Outer Islands. The *Seychelles Coast Guard* patrols the Seychelles EEZ to detect illegal fishing activities and piracy and responds to crises and disasters at sea. The *Seychelles Maritime Safety Administration* (SMSA) is responsible for providing oversight on shipping, navigation, and maritime safety, including issuing permits to research and recreational vessels. The *Seychelles Ports Authority* (SPA) is responsible for all vessels entering the Seychelles' territorial waters, and around seamounds; with the exception of local boats, all other vessels need to receive port clearance from the SPA. The *Ministry of Land Use and Housing* (MLUH) is responsible for land use planning in both the Inner (Granitic) and Outer Islands.

40. The *Island Development Company* (IDC) is a state-owned parastatal¹³ company responsible for the management of most of the Outer Islands of the Seychelles (Platte, Desroches, Marie-Louise, Remire, Desnoeuf, Alphonse, Providence, Farquhar, Coetivy, Cosmoledo, Astove and Assumption) as well as one of the largest of the inner islands (Silhouette). Its mandate is to provide and manage the facilities and infrastructure of these islands in order to facilitate their ongoing sustainable development. The company has, in turn, partnered with the Island Conservation Society (ICS - see below) to act as its primary advisor and consultant on issues relating to environmental and conservation issues.

41. The environmental NGO community in the Seychelles is a key player in conservation and sustainable development activities, particularly in the Outer Islands where government programs are minimal. A brief description of the roles and responsibilities and activities of the main NGO's involved in conservation and protected area management is presented below.

42. The *Island Conservation Society* (ICS) has been designated by IDC as their main implementing partner for conservation issues on the Outer Islands. Formed in 2000, ICS has a special interest in biodiversity conservation on the Outer Islands, and currently has staff located on the islands of Desroches and Alphonse. Its expertise includes: species conservation; vegetation rehabilitation; eradication of invasive species (rats, cats); endangered species recovery programs; and marine surveys. In addition, ICS

¹³ A parastatal is a corporate body established by Government to run various (often commercial) activities in the manner of a business, with a board of directors and a managing director. The Chairman of the Board and the board members of the parastatal are nominated by Government, and the parastatal is ultimately responsible and accountable to the appropriate "parent" Ministry.

has assumed management responsibility for the Aride Island Special Reserve under a lease agreement with the Royal Society for Nature Conservation (RSNC).

43. The *Seychelles Islands Foundation* (SIF) was formed as a parastatal in 1979 by Presidential Decree. SIF has the mandate to manage both of Seychelles' World Heritage sites, Aldabra Special Reserve and the Vallée de Mai Nature Reserve; Aldabra is one of only two official Protected Areas in the Outer Islands, and the only one that is actively managed.

44. The *Save Our Seas Foundation* (SOSF) and its affiliate the *D'Arros Research Centre* (DRC) manage extensive conservation activities on the privately owned islands of D'Arros and St. Joseph. SOSF funds research, education, awareness and conservation projects focusing on the major threats to the marine environment. While SOSF itself is not a research institute, its contributions of financial, practical and scientific support have facilitated over 150 marine research and conservation projects around the world. In August 2012, SOSF was entrusted with the management of the D'Arros Island Group, and the existing D'Arros Research Centre (DRC) entered into partnership with the SOSF to carry out conservation work.

45. Other potential NGO partners for work in the Outer Islands include the *Marine Conservation Society of Seychelles* (MCSS), which focuses much of its work around the island of Mahé, but generally covers the entire extent of the EEZ. MCSS' expertise lies in: sea turtle monitoring and conservation; cetacean and whale shark monitoring; marine environmental and oceanographic monitoring; monitoring of beach erosion; and environmental mooring installation and maintenance to minimise damage to coral reefs. Additionally, the *Plant Conservation Action Group* (PCA) possesses expertise and experience in native species re-vegetation; plant species assessment and monitoring; management of invasive plant species; and environmental education and awareness.

46. A number of organisations represent private interests in the Outer Islands. *Great Plains Ltd.* is a tourism operator that owns and manages the Alphonse Island Resort; *Collins International* owns and manages the Desroches Island Lodge. Negotiations are currently ongoing for Collins International to take over the sub-lease of Alphonse from Great Plains. The *Fishing Boat Owners Association* (FBOA) is a non-governmental registered organization working with the Seychelles artisanal and semi-industrial fisheries sectors. The FBOA represents fishing boats that are active both on the Mahe plateau and in the Outer Islands. The *Charter Boat Operators Association* represents 5 different charter boat companies who operate throughout Seychelles' waters.

Policy and Legislative Context

47. Seychelles has strong policy and legal framework for environmental management. Environmental concerns are firmly entrenched in the Seychelles' *Constitution* (1993), in which article 38 declares that “*The State recognises the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment and with a view to ensuring the effective realisation of this right the State undertakes... to ensure a sustainable socio-economic development of Seychelles by a judicious use and management of the resources of Seychelles*”.

48. Seychelles recognizes the importance of natural resources and ecosystem services in the economic development of the country; this recognition is expressed in the Seychelles Sustainable Development Strategy 2012-2020 (SSDS), which provides the overarching policy framework for sustainable development in the country. The SSDS covers 13 thematic areas, of which six are of particular relevance to the establishment of protected areas and sustainable land management in the Outer Islands: (i) Biodiversity and Forestry; (ii) Climate Change, (iii) Fisheries and Marine Resources; (iv) Economics of

Sustainability; (v) Land Use, Coastal Zones and Urbanization; (vi) Tourism and Aesthetics; and (vii) Policy, Institutional and Regulatory. Within each thematic area, the SSDS describes and prioritises various support programmes. In the context of protected areas and sustainable land management in the Outer Islands, these include: terrestrial national parks under the Biodiversity and Forestry thematic area; marine protected areas under the Fisheries and Marine Resources thematic area; coastal zones and protected areas development funding programme under the Economics of Sustainability thematic area; and environmental legislation review and enactment / environmental policy and institutional development under the Policy, Institutional and Regulatory thematic area. The Ministry of Environment and Energy (MEE) is the coordinating agency for the SSDS, while implementation is overseen by the SSDS steering committee.

49. The *Seychelles 2017 Strategy* has the vision of doubling the GDP of Seychelles by 2017 through focused fisheries and tourism expansion programmes, the development of the financial services industry and the resultant growth of other economic sectors. To maintain environmental excellence and international ecological standards in achieving this vision, the strategy envisages, *inter alia* the reform of national environmental legislation to conform with international standards and improvement in the management of natural resources. The *Vision 21: Tourism development in Seychelles 2001-2010* also encourages protection of natural resources to underpin tourism development.

50. The *National Biodiversity Strategy and Action Plan* (NBSAP, 1998) identifies the country's vision for biodiversity conservation, and its objectives. A revised and updated NBSAP that fully integrates new aspects of the CBD strategic plan and the Aichi Targets, is currently being formulated for the Seychelles through the UNDP-GEF project "National Biodiversity Planning to Support the implementation of the CBD 2011-2020 Strategic Plan in Seychelles".

51. The *National Strategy for Plant Conservation, 2005-2010* establishes 5 strategic objectives and 14 targets, of which sub-target 4b (*in situ* conservation) envisages 'viable representation of 95% of threatened flowering plant taxa within protected areas'. The *Seychelles Wetland Conservation and Management Policy* (2005) has the objective of the protection and conservation of all wetlands. It defines 5 policy goals targets and a number of targets and activities for each policy goal. In Annex 1a of the policy, ten 'class A' wetlands are proposed for designation as 'wetland reserves' in terms of the National Park and Nature Conservancy Act.

52. At present, the official national policy specific to protected areas in Seychelles is the government white paper *Conservation Policy in the Seychelles* (1971), which accompanied the coming into force of the 1969 National Parks and Nature Conservancy Ordinance (later known as the National Parks and Nature Conservancy Act). This was supplemented by a 2011 Cabinet Memorandum¹⁴ that was officially adopted as the country's expansion strategy for protected areas. In addition, Seychelles is in the process of drafting a new *Seychelles' Protected Area Policy* with support from the UNDP-GEF Project "Strengthening Seychelles' protected area system through NGO management modalities". The policy seeks to provide a national policy framework for the elaboration of legislation and associated guidelines for the establishment, coordination, guidance and management of PAs in Seychelles. The goals of the policy are to achieve an effective and multi-use protected area system that is representative, comprehensive and balanced, and to maintain the highest quality examples of ecosystems within the country by engaging all stakeholders. The new Seychelles Protected Policy will provide a national policy framework for: 1) the elaboration of legislation and associated regulations for the establishment and

¹⁴ Seychelles Government Cabinet Memorandum (2011) "Proposal to designate 96% of Curieuse Island, South & Goëlettes Islands (Farquhar), Polyte islands and Grande Ile (Cosmoledo), Desnoeuufs Island, Saint Francois & Bijoutier Islands, Assumption Island and South Island (Poivre) as Protected Areas under the National Park and Nature Conservancy Act", Presented by Minister for Home Affairs, Environment, Transport & Energy, April 2011.

management of PAs; 2) the coordination and guidance for the planning, management and assessment of the existing (and future) set of protected areas in accordance to other national policies, international standards and best practices; and 3) the fulfillment of regional and international commitments relating to the conservation, protection and sustainable use of biodiversity and associated ecosystems (*inter alia* the CBD, UNFCCC, UNCCD, CMS and CITES). The policy also outlines the concept of co-management and proposes templates for co-management agreements for PAs in Seychelles, including those for NGO and private partner management of official protected areas.

53. Thirteen national commitments will be targeted in order to achieve these objectives, the first of which is “to create new PA categories in accordance to international norms”. Consequently, the policy simplifies the multiple existing PA categories into five new categories, which take into consideration both the local context and at the same time are aligned with internationally adopted definitions established by IUCN and adopted by the UN Convention on Biological Diversity (CBD).

Table 8: Protected Area Categories in the draft Seychelles’ Protected Areas Policy

Proposed Seychelles PA Categories	Descriptions of Seychelles PA Categories	Equivalent IUCN Category
Strict Nature Reserve	An area set aside for the strict protection of biodiversity and/or geological or landform features, where human visitation, use and impacts are strictly controlled and limited to ensure the protection of the area. All other interests and activities are subordinated to this end. Such reserve may serve for scientific research and long term monitoring.	Ia – Strict Nature Reserve
National Park	An area designated for the propagation, protection and preservation of wild life or the preservation of places or objects of aesthetic, geological, prehistoric, historical, archaeological or other scientific interest for the benefit, advantage and enjoyment of the general public and includes in the case of a Marine National Park an area of shore, sea or sea bed together with coral reef and other marine features so set aside	II – National Park
Ecological Reserve	An area set aside for the protection of particular species or habitats, normally subject to regular, active interventions to address the requirements of particular species or to maintain habitats.	IV – Habitat/Species Management Area
Protected land/sea scape	An area of land, with or without coast and sea as appropriate, where natural elements in isolation or through the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity.	V – Protected Landscape / Seascape
Sustainable Use Area	An area that contains modified and/or unmodified natural systems, managed to ensure long term protection and maintenance of ecosystems and services, while providing at the same time a sustainable flow of natural products and services compatible with nature conservation.	VI – Protected Area with Sustainable Use of Natural Resources

54. The *Seychelles National Action Plan for Sustainable Land Management (SLM NAP), 2011* was prepared in response to important socio-economic challenges in the country and in line with the aims and requirements of the UNCCD. Recognizing the crucial importance of land and appreciating the growing threats to land, the *Seychelles SLM NAP* sets out a vision and an activity framework for halting and reversing land degradation in the country.

55. With regard to overall development planning, Seychelles currently does not have an overarching national development plan. Strategy 2017, formulated in 2007, outlined the Government’s vision for twenty-three sectors, with the overall goal of doubling the GDP of Seychelles through the expansion of the fisheries and tourism sectors while preserving its environment and natural resources. The Chapter on environment noted that “*at no point will economic development be allowed to compromise Seychelles’ deserved reputation for environmental excellence and the highest national and international ecological standards will be adhered to throughout.*” Soon thereafter, the Government prepared the “*Vision 2020*”,

which sets out the overall vision for development in Seychelles until 2020 and the priorities and main approaches. However, the financial crisis in 2008 and the resultant macroeconomic and structural reforms in the Seychelles put both the Strategy 2017 and the Vision 2020 on hold. The Government is now working on a Public Sector Investment Program (PSIP), which among other things will be the primary instrument for mobilizing national sources of financing for SLM and INRM, as well as a *Medium – Term National Development Strategy (MTNDS) 2013 – 2017*, which will provide a national blueprint for future actions for key sectors, including sectors relevant to sustainable land management including water, agriculture / food security, tourism and fisheries.

56. Protected areas are regulated under a number of different legal instruments. The *National Parks and Nature Conservancy Act* (1969, as amended) is the primary protected area legislation in the Seychelles; the Act regulates the establishment, management, use and development of four categories of protected areas – Strict Nature Reserve, Special Reserve, National Park and Areas of Outstanding Natural Beauty. The *Wild Animals and Birds Protection Act* (1961) enables the protection of a number of keystone species in Seychelles, in particular all native bird species, turtles, whale sharks and Giant Tortoises, and provides for the establishment and management of Nature Reserves for the purpose of protecting land and sea bird species. The *Protected Areas Ordinance* (1967) is used primarily for reasons of national and internal security (i.e. to to exclude persons/public access from certain areas), it has also been utilised to designate a ‘protected area’ for environmental reasons. The *Forestry Reserves Act* sets out provisions for the designation of ‘forest reserves’, although this category of protected area has to date never been utilised. The *Fisheries Act* (1987) provides for restrictions on the harvesting of specific sensitive species and regulates marine habitat damage; the act also has been used to designate four Shell Reserves and three Fishery Reserves where licenses are required to undertake various fishing activities.

57. The existing array of laws and regulations that directly and indirectly govern management of Protected Areas are, for the most part, out of date, incomplete and in some cases contradictory and hence are in great need of revision. In recognition of this the Seychelles is currently preparing a new PA policy (outlined above) as the first step in writing a new Protected Areas Law for the country, which is expected to be finalized and submitted to the National Assembly in 2014. As outlined in the draft Seychelles’ PA Policy, the new PA legislation will become the principal statute to implement the PA policy and to replace /combine some of the laws and statues listed above. Regulations under the new legislation will include: i) a revised set of protected areas categories; ii) new management objectives and prescriptions for each category or sub-category of PA; iii) a formalized management planning process; iv) methods for measuring management effectiveness; v) a transparent process for PA nomination and designation; vi) stakeholder and public participation in the PA system; vii) new methods of PA governance and co-management; and viii) a formal review process for the new PA Policy.

58. Changes to laws and regulations relating to the environment in the Seychelles go well beyond those relevant to protected areas. A recently approved Physical Planning Act (2012) has replaced the Town and Country Planning Act (1972); this Act comprehensively covers land planning, land use decisions and land management, and guides the development of District and Island Land Use Plans. The *Environment Protection Act (1994)* is currently being revised; this act provides for the protection, preservation and improvement of the environment, and its subsidiary regulations are used to establish protection for ecologically sensitive areas. The act is an important tool for determining which activities are illegal in line with environmental objective, and is the main legal framework for the environmental impact assessment process, the establishment of sensitive areas, coastal zone management, waste management standards and the prevention, control and abatement of environmental pollution. Under the EPA, the *Environment Impact Assessment (EIA) Regulation (1996)* requires that, for certain categories of projects or activities, an EIA must be prepared and an environmental authorization issued. This Regulation aims to ensure that new infrastructure developments do not cause land degradation. The Fisheries Act (noted above) is also being revised, and a new Biosecurity Act is being drafted; among other changes, the new

Biosecurity Act will allow for the control of visitor landings on islands that have completed eradication of species such as rats and cats, even if such islands are not official protected areas.

THREATS, ROOT CAUSES AND IMPACTS

59. The key drivers of change in the health and sustainability of the ecosystems of the Outer Islands and the goods and services they supply are summarized below:

<i>Driver/ Ecosystem</i>	<i>Habitat change</i>	<i>Climate change</i>	<i>Invasive species</i>	<i>Over Exploitation</i>	<i>Pollution/ Mining, etc.</i>
Terrestrial Ecosystems	Historically significant; currently limited	Unknown	Serious, not increasing	Limited	Limited
Marine Ecosystems (inshore seagrass beds, mangroves, coral reefs)	Locally important	Serious, but status uncertain	Unknown, but likely limited	Locally sensitive (inshore fish stocks)	Limited

Habitat Degradation & Physical and Resource Development

60. Most of the native terrestrial habitats of the Outer Islands were transformed into coconut plantations for copra production and/or casuarina plantations for wood production in the 19th and early 20th centuries. With the demise of the copra export industry and of casuarina production in the past 30-40 years, some native habitats have started to re-establish, but even today most of the Outer Islands remain predominantly covered by remnant coconut plantations and areas dominated by casuarina trees. The primary source of terrestrial habitat transformation and related impacts on ecosystem functioning today is tourism development, although at present this is limited to a small number of islands. Tourism development is concentrated along the coasts, and as a result it has contributed to coastal erosion processes (e.g. Alphonse island). For the most part, tourism development has been situated primarily in areas of already transformed habitat, with no significant impact on relict native forests. This is critically important, as the small areas of native forest are not only critical for the remaining native species, they also represent the building blocks on which to restore native species (esp. birds) to many of the Outer Islands. In this regard, the protection of all native forest areas is of high importance: although many native species in the Outer Islands have probably always had small populations, they were typically spread over several islands and thus had reduced vulnerability to extinction events. Tourism development and population growth may also be impacting the water tables on some islands (although no data yet exists to determine this).

61. In the marine environment, physical damage to marine habitats has resulted from certain fishing practices such as bottom trawling (illegal in the Seychelles) and in appropriate anchoring that causes considerable damage to coral reefs. Charter fishing and tourism vessels also have been known to anchor on reefs; in addition, clients occasionally trample the reef flats and cause considerable damage. As noted above, tourism facilities are mostly situated on the environmentally sensitive coastline, and impacts associated with construction as well as on-going tourism operations include increased runoff and disruption of natural hydrological flows, which can increase sedimentation and turbidity in vulnerable shallow coastal waters protected by reefs. For the broader marine environment of the Outer Islands, a potential future threat exists in the form of oil and gas development. During the exploration state, the use of seismic surveys poses a possible threat to marine mammals (although staff from the Marine Conservation Society Seychelles have received training in species identification, visual observation

techniques and hydro-acoustic methods and then participated in seismic surveys). If and when production does begin, it will pose a threat in terms of ecosystem degradation associated with required infrastructure (this may include designating one of the Outer Islands as a logistics base for the oil drilling platforms), as well as the threat of oil spills.

Pollution

62. As noted above, oil and gas development pose the potential future threat of oil spills in the Outer Islands. In addition, the marine environment of the Outer Islands is subject to the threat of pollution associated with shipping; the shipping lanes along the East African coast are among the busiest in the world, carrying over 30 percent of the world's crude oil supplies. Over 5,000 tanker voyages per year take place in the sensitive coastal waters of Comoros and Madagascar and along the coast of East Africa, passing in close proximity to some of the Seychelles' Outer Islands, notably the Aldabra Atoll. High winds and high seas are common in the region, raising the risk that ships will accidentally spill oil, chemicals, and other hazardous substances. Whether from new oil and gas developments or from shipping, a large oil spill could severely harm the economy and ecological functioning of the Outer Islands by damaging fishing diving grounds, and polluting beaches important for turtle nesting and tourism. On a smaller scale, but locally important, tourism and fishing vessels that operate in the Outer Islands have been known to pump out sewage, discard garbage, and leak oil and fuel in areas of critical marine habitat. Previously, the dumping of ballast water and washing out of holds was also a notable threat in Seychelles' waters, but this has declined greatly in the past 2-3 years due to stricter regulations and better enforcement. Finally, any maritime development that may take place in the Outer Islands will pose a pollution threat to marine ecosystems.

Illegal and Unsustainable Resource Exploitation

63. The Government of Seychelles does not limit the number of commercial fishermen or recreational operators in the Outer Islands, nor is there any licensing procedure for recreational fishing. At present, the number of commercial and recreational fishing vessels in the Outer Islands is lower than in years past, due to the piracy threat, but the industrial purse-seine fleet for tuna, some charter boat operators, and some commercial fishermen (particularly for sharks, sea cucumbers, groupers, etc.) have continued to operate in the region. The negative impacts of fishing activities in the Outer Islands take several forms. Illegal, unregulated and unreported (IUU) fishing is an important problem for species such as turtles and sea cucumbers; in addition, many sea cucumber boats are believed to engage in turtle poaching and shark finning (the latter practice is still legal in the country). The isolated location of Farquhar and its proximity to Madagascar has made that island particularly vulnerable; Madagascan fishing boats have been seized near to Farquhar several times with large hauls of illegally obtained reef fish and sea cucumbers on board. Overfishing is an ongoing threat to various shark species and groupers and other large reef fish, particularly for spawning aggregations that are often known by local fishermen. In 2006, the Seychelles prohibited the Live Reef Food Fish (LRFF) trade in part to protect spawning aggregations. For sport fishing, even though most recreational fishermen practice catch and release, there is still some mortality associated with these fishing activities. By-catch, particularly from the purse seine fleet, is a significant threat to numerous species (sharks, turtles, dolphins, whales, etc.). Vessel strikes are another threat to marine fauna; the Seychelles has the world's highest level of scarring of whale sharks from boat collisions, and recreational fishing vessels frequently enter shallow, turbid waters where turtles are vulnerable to propeller strikes. The use of Fish Aggregating Devices (FADs) has become widespread in the Outer Islands and results in both significant bycatch as well as reef destruction as many FADs break loose from their moorings. The Indian Ocean Tuna Commission (IOTC) released a report in 2010 which estimated that supply vessels for the Purse Seine fleet in the Indian Ocean deployed 7,600 FADs in the Indian Ocean each year. In the terrestrial environment, harvesting of natural resources is not as

significant as is in the marine environment. Some forestry operations continue (e.g. Desroches island), but these focus primarily on harvesting existing stands of non-native casuarina trees. Probably the most significant threat involves illegal harvesting of seabirds and seabird eggs; on Farquhar there is still frequent poaching of Sooty Tern eggs, while on St. Joseph the colony of 40,000 wedge-tailed shearwaters is subject to poaching of fledglings that are killed for their meat. There is also legal harvesting of Sooty Tern eggs on Desnoefs islands, and some uncertainty about whether current harvest levels are sustainable.

Invasive Alien Species

64. Seychelles is typical of remote islands in the susceptibility of its terrestrial biodiversity to invasive alien species (IAS). IAS out-compete and replace indigenous fauna and flora through predation, elimination of natural regeneration, introduction of diseases, and competition for habitat niches. Seychelles has been successful in eradicating some IAS (including rats and cats) from some of its smaller islands, including D'Arros in the Outer Islands. But biodiversity on most of the Outer Islands continues to be impacted by IAS such as rats and feral cats, which have devastated seabird colonies on many of the Outer Islands, and prey upon native lizards, caecilians and invertebrates. Alien birds, reptiles, invertebrates and plants have also had negative impacts on island ecosystems throughout Seychelles. On Farquhar, the presence of rats has prevented re-colonization by ground-nesting terns, shearwaters and other species, and plans for tourism development on Farquhar's North Island present the potential threat of introduction of alien plant species which may spread from North Island to the southern islands. On Desroches and Alphonse, rat control practices have reduced the population of ship rats, which has allowed native forest regeneration to increase. However, the Norway or Brown Rat (*Rattus norvegicus*) is present on Mahe and the other main islands of the Seychelles, which are the main source of supplies and materials to the Outer Islands. If the larger, burrow-dwelling Norway Rats are introduced to these or other Outer Islands, it would add a further pressure to many island species, particularly seabirds such as the Wedge-tailed Shearwater. The importation of building and other materials also increases the possibility of introductions of species such as Crazy Ants (*Anaplolepis longipes*), house geckos, slugs, spiders, Yellow Wasps (*Polistes olivaceus*) and snails such as (*Achatina spp.*); the last two species are already numerous on Desroches, which is often an earlier stop on the route of the IDC supply boat that visits various islands). Marine ecosystems in the Outer Islands are also vulnerable to IAS, including those released illegally in ballast water (e.g. various algae species). The spread of marine species into the Outer Islands region is of increasing concern due to the increase in commercial shipping and recreational boating in this area. In addition, if mariculture developments proceed in the Outer Islands, these would pose a potential threat in terms of escaped animals.

Environmental variation associated with climate change

65. As a Small Island Developing State, the Seychelles is threatened by the impacts of climate change, including an increase in the frequency of tropical storms; increased sea and air temperatures, and sea level rise. Details on the impacts of climate change on terrestrial and marine ecosystems have yet to be adequately assessed in Seychelles; although various studies have included generic scenarios of sea-level rise, increased events of coral bleaching, and changes in rainfall patterns, more detailed estimates and assessment of the impacts of these trends on biodiversity remain incomplete. The Report "Seychelles Climate Change Scenarios for Vulnerability and Adaptation Assessment" (Seychelles Second National Communication under the UNFCCC; 2007) did establish some climate change scenarios for the Seychelles, including an estimate that regional sea level in the southwest Indian Ocean will rise between 40 to 60 cm. In addition, although tropical cyclone scenarios remain a major challenge, the report cites recent modelling studies suggesting that peak winds may increase by 5-10% and peak rainfall rates may rise by 20-30 %. The report also states that data on sea surface temperatures have suggested a gradual cooling in Seychelles waters since 2000, although no firm conclusions can be drawn from the limited data

set, and asserts that air temperature trends based on maximum and minimum temperature show warming between +0.33 and +0.82°C respectively, which is significantly warmer than previously assessed in the Initial National Communication.

66. It is believed that both the biodiversity of the Outer Islands and the functionality of certain ecosystems are vulnerable to environmental variations associated with changes in sea level, increased sea temperature and other factors that can be traced to the increase of atmospheric CO₂. In 1998, more than 90% of shallow corals were killed on most Indian Ocean reefs, the worst mass coral bleaching event in the Indo-Pacific region to date. The bleaching event was caused by a mass of warm water spreading over the entire Indian Ocean, acting directly or by interacting with other factors (high seawater temperatures over long periods of time are known to be one of the key stressors that can cause coral bleaching and can lead to coral mortality). Mean sea surface temperatures in the Indian Ocean have been forecast to rise above the 1998 values in a few decades¹⁵, and there were other, smaller bleaching events in the Seychelles related to increased sea surface temperatures in 2002, 2003 and 2010. Coral reefs are vitally important habitat for numerous marine species in the Outer Islands, and reefs may not be able to re-establish in many places if bleaching events continue on a regular basis (with much local variation depending on localized water temperatures, rates of larval settlement/recruitment, and the occurrence of temperature resistant coral types). Changes in rainfall patterns have not been modelled for the Outer Islands, but it is well understood that terrestrial ecosystems on the islands are vulnerable to any significant changes, particularly in the length of periods of drought. Sea level rise poses a very significant threat to coastal ecosystems such as mangroves and seagrass beds, and increased coastal flooding on these low-lying islands could raise the salinity levels of the soil and damage the water tables, with major impacts on terrestrial flora and fauna. Certain species (e.g. Abbott's day gecko (*Phelsuma abbotti*), endemic to northern Madagascar/southern Seychelles) only occur in habitats of less than 2 meters above sea level. With the loss of the habitat due to sea level rise, the survival of these species will be threatened. Although the Outer Islands are largely outside the "normal" path of cyclones in the western Indian Ocean, residual impacts from these storms can affect the islands; in December 2006, wave fields associated with the passage of Cyclone Bondo resulted in the transport of large blocks of reef framework onto the reef-flats, in the loss of post-bleaching coral recruits, and in increased macro algal cover on the fore-reef slope. Overall, increased sea surface temperature, sea level rise, and a greater incidence and severity of storm events may combine to reduce the ability of seaward reefs to absorb wave energy, with the result that islands will suffer attritional coastal erosion. Already on Alphonse and Desroches, coastal erosion is severe in some locations, and coastal defences have been broken up (these coastal defences also reduce the visual appeal of the islands for tourism).

LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING THE SOLUTION

67. The establishment and effective management of a representative system of protected areas, and the integration of biodiversity conservation and ecological function priorities into a spatial development and investment planning framework, is an integral part of Seychelles' overall strategy to address the threats and root causes of biodiversity loss and land degradation in the Outer Islands. The long-term solution sought by the Government of Seychelles will require: (i) the establishment of new official protected areas encompassing terrestrial and marine ecosystems in the Outer Islands to ensure that important ecosystems, habitats and species are effectively conserved; (ii) the development of functional, working partnerships between the government and environmental NGOs (and other partners) in the establishment and effective management of protected areas in the Outer Islands; (iii) the implementation of management strategies that harmonize conservation goals with the interests of various stakeholders in tourism and sustainable resource use (e.g. fisheries); (iv) the rehabilitation of terrestrial ecosystems to

¹⁵ Sheppard, C.R.C., 2003: Predicted recurrences of mass coral mortality in the Indian Ocean. *Nature* 425, 294-297

restore ecological functioning and diversity and support PA management objectives; and (v) adequate capacity in public PA institutions, NGOs and other prospective partners to enable knowledge sharing, development of effective interventions (e.g. ecosystem / species assessments, monitoring and conservation) and processes (e.g. creation of PA management and business plans).

68. There are two fundamental barriers to achieving this long-term solution:

Protected Area managers in the Outer Islands face a number of operational, financial and capacity constraints to effective management of PAs

69. The majority of protected areas in Seychelles are the responsibility of the government, mainly under the management of the Seychelles National Parks Authority. However, due to a lack of funds, human resources and infrastructure, the government has not extended the mandate of the SNPA to cover any protected areas in the Outer Islands. The only actively managed PA unit in the Outer Islands is the Aldabra Special Reserve, which is managed by the parastatal Seychelles Islands Foundation. Conservation activities are carried out by other NGO and private organizations in the Outer Islands, but thus far not within official protected areas. The Island Conservation Society (ICS) has an agreement with the Islands Development Company (IDC), which manages almost all of the Outer Islands under a lease from the Government, to implement conservation activities on IDC islands. On the privately owned D'Arros and St. Joseph island group, the Save Our Seas Foundation funds the conservation activities of the D'Arros Research Centre. However, because none of these islands have been designated as official protected areas, these organizations only have the authority to restrict development activities in terrestrial ecosystems, and have no authority to restrict or control any activities in the marine environment around each island. The absence of official PA status for specific sites and delegated management authority greatly restricts the ability of these partners to implement protection measures for critical ecosystems and species, to develop or implement any long-term planning processes for the sites, or to develop collaborations and raise funds from national and international partners. The lack of official PA status also acts as a constraint to tourism development at some sites and thus to the development of new tourism-based revenues for conservation. Several potential tourism developments in the Outer Islands in the past several years have been cancelled due to uncertainty between IDC and the tourism developers over the control, scope and operations of the planned developments; official government recognition of some islands as official protected areas, with approved management and land use plans, would remove this barrier to sustainable development.

70. As noted above, enforcement authority in the marine environment is entirely dependent on official PA designation, and the fact that there is only one functional PA site in the Outer Islands means that the remaining islands cannot be effectively protected. For example, the managers of D'Arros Island can only watch as shark finning takes place within the lagoon, and even if they see illegal activities (such as turtle poaching), the most they can do is report it to the government. Another barrier to effective protection is the limited resources and presence of government and other personnel in the Outer Islands. Although the Seychelles Fishing Authority has deployed a Vessel Monitoring System (VMS) to detect illegal fishing activities within the Seychelles EEZ, the government has extremely limited capacity to inspect vessels in the Outer Islands. Similarly, fishermen and other visitors to the Outer Islands are required to request permission in advance before going ashore. But the lack of on-the-ground personnel on most islands leaves those islands vulnerable to unauthorized visits, which frequently results in poaching of sea turtles and seabird eggs. Monitoring and enforcement to conserve the marine environment is also constrained by the lack of any requirement in the Seychelles for the licensing of recreational fishing, including the many commercial charter boats that bring clients to the Outer Islands for fly fishing (permit and bone fish), and blue water game fishing (marlin, sailfish, tuna). At present, these companies must be licensed as businesses, but they do not need any special fishing license, there are no catch limits, and they are not required to report on fish catches. Other existing policy and legal issues, such as the lack of PA

categories in the Seychelles for sustainable use (similar to IUCN Category VI “managed resource PAs”), remain a barrier to developing different models of Protected Areas to suit the different ecological conditions and economic development plans of various Outer Islands. However, these barriers are currently being addressed by the UNDP-GEF NGO PA Modalities project.

71. Another barrier to the creation and effective management of protected areas in the Outer Islands is a lack of ecological and economic data and inadequate systems to ensure that the data that does exist is available for key stakeholders. While certain species (seabirds, sea turtles, some fish) have been well studied in the Outer Islands, many others have not, and most ecosystems and ecosystem functions are poorly studied and understood. For example, there are no reliable estimates of the area of coral reefs, mangroves or seagrass beds for most of the Outer Islands; similarly, fish biodiversity, habitat areas, etc. is poorly understood. This lack of data is compounded by a history of poor information sharing by researchers working in the Outer Islands, including many foreign researchers who have never made their data available to the Government of Seychelles or any local partners. In some cases, the absence of any secure, central depository for environmental and other data and information has probably contributed to the reluctance to share information, as it has also restricted the ability of all stakeholders to find information even when it is available for sharing.

72. Inadequate technical and human capacities and resources are another barrier to effective PA management in the Outer Islands. While NGOs such as SIF and ICS have a good track record in managing island protected areas, they are perennially short of personnel, equipment and other resources to manage activities in the Outer Islands, which have far higher costs than working in the main, Inner Islands. In addition, they have limited experience and capacity in developing PA management plans and business plans, and in boundary setting and zoning of protected areas. None of the NGOs or private partners who will be managing official PA units in the Outer Islands currently has any experience or expertise in official enforcement activities for a Protected Area; this is a critical issue as enforcement procedures will require careful consideration and application in this remote region. Capacity to manage conservation activities at the site level is also constrained by the high mobility of qualified personnel, many of whom leave the Outer Islands after only a few years, due to such causes as the isolation of the postings, lack of authority and resources to carry out conservation work, and lack of opportunities for personal advancement. There is also a low level of collaboration between existing NGOs operating in the Outer Islands; although there is communication between technical and scientific staff at these organizations, there is limited collaboration at a more strategic level.

73. Effective management of protected areas in the Outer Islands is also constrained by a lack of financial resources. To date, the lack of viable financing models for conservation in the Outer Islands has resulted in a situation where only one island (Aldabra) is actively managed as an official PA, and this is through a unique cross-subsidization financing scheme with the other World Heritage Site (the Vallee du Mai) operated by SIF. Apart from Aldabra, and now the private island of D’Arros, which is well funded by the SOSF, other of the Outer Islands have depended almost entirely on tourism based revenues to fund conservation activities. This approach to funding conservation of the Outer Islands based on tourism is feasible for a certain number of islands, but it also requires development activities that may increase the level of disturbance and variety of threats to the Outer Islands, and therefore is not an appropriate model for all islands. Furthermore, thus far tourism-based revenues have had to be supplemented by operational / logistical support from IDC and hotel operators just to employ minimal staff and establish basic infrastructure; this revenue model alone does not appear sufficient to support well-managed PAs, nor to carry out conservation activities beyond basic PA management, such as ecological research or the rehabilitation of degraded landscapes and seascape.

Lack of an overarching framework and systemic capacities to develop and implement conservation and sustainable development in the Outer Islands

74. The Seychelles does not have any overall, long-term strategy in place for the development and conservation of the Outer Islands, nor a process for generating bringing together relevant stakeholders to generate such a strategy. While the Outer Islands are considered a national treasure by most Seychellois, since the 1970s when economic activity slowed considerably in the Outer Islands, they have become a bit of an afterthought when it comes to setting national priorities and allocating national resources. IDC was created in 1980 to manage the Outer Islands, and while it has achieved considerable success in developing various economic activities and improving infrastructure on some of the islands, it has never developed a comprehensive vision for the region (nor is this part of its mandate). This lack of a vision and strategy for the Outer Islands prevents consolidated planning and decision-making about priority areas for conservation, and priority areas for various kinds of development (tourism; oil and gas; mariculture; etc.). Furthermore, the lack of tools and a framework within which to undertake integrated natural resource management at the systemic level for the Outer Islands results in piecemeal planning and implementation of conservation and SLM measures, and frequently does not consider the ecological sensitivity of certain habitats or their interconnectedness, or the need to link strategic policies and actions for ecosystem resilience, climate change and conservation of biodiversity. The need for a large-scale planning and strategic process and tools is mirrored by a need for improved capacity to develop and implement overall planning processes. One of the negative effects of the public sector reform that was initiated in 2008 has been the further weakening of key government institutions; since the reform process began, the Department of Environment has seen an over 50% reduction in its staff, including technical experts who previously worked on data management and planning systems. Furthermore, cuts to government budgets have been exacerbated by the high mobility of qualified personnel and by brain drain.

75. Inadequate systems, rules and capacities for planning and decision-making are also evident at the individual island level. Currently, only one of the Outer Islands (Coetivy) has an official land use plan. For all of the other islands, development decisions are made in a piecemeal and non-transparent manner. Environmental Impact Assessments are supposed to be carried out for all development projects in the Outer Islands, but in practice these frequently do not take place. Further, there is no requirement for Strategic Environmental Assessments or other mechanisms beyond EIAs that could go beyond project-specific analyses and assess and guide overall development processes. The absence of effective island level planning processes and development restrictions has meant that there are few measures taken for avoiding, minimizing, mitigating and, if needed, compensating for land degradation and biodiversity loss.

76. Despite these constraints, various conservation and sustainable resource management activities are implemented in the Outer Islands. However, these on-the-ground activities face a number of significant barriers to ensuring ecosystem health and functioning. NGOs and private partners carrying out conservation programs in the Outer Islands tend to be more focused on and capacitated for species conservation programs, rather than the management of ecosystem functions. While positive steps have been made in recent years in restoring native vegetation, both technical and financial capacity constraints have limited the scope and success of these efforts so far. Similarly, the NGOs working in the Outer Islands have limited knowledge and capacities for implementing biosecurity programs and protocols; the same is true for IDC, which is a critical partner for biosecurity in its role as the operator of the planes and boats that supply most of the islands. Each of the key conservation partners in the Outer Islands has experience in the eradication of invasive alien species, however as with ecosystem restoration, the lack of funding to cover the high costs of such activities is a major barrier to their implementation.

STAKEHOLDER ANALYSIS

77. The project will be executed by the Ministry of Environment and Energy on behalf of the Government of Seychelles. Other government institutions that will be involved in the project are Seychelles National Parks Authority, the Seychelles Fishing Authority, and the Ministry of Land Use and Housing. The Island Conservation Society (ICS) will play a leading role in implementing on the ground activities at 4 PA sites in the Outer Islands; activities at the 5th PA site will be managed by the D'Arros Conservation Centre (DRC). The Seychelles Islands Foundation will collaborate with both ICS and DRC on various activities, and will implement certain activities at the existing Aldabra Special Reserve. The Islands Development Company, which manages most of the Outer Islands and provides most of the air and shipping services to the region, will play a critical role in providing logistical support to the project. Existing hotel management companies at Desroches and Alphonse islands also will provide support for conservation activities. Other interested ENGOs will be invited to participate in the implementation of certain activities under the two components.

78. During the project preparation stage, a stakeholder analysis was undertaken in order to identify key stakeholders and assess their roles and responsibilities in the context of the proposed project. The table below describes the major categories of stakeholders identified, the individual stakeholder institutions/organisations within each of these categories, and a brief summary of their specific roles and responsibilities in supporting or facilitating the implementation of project activities.

Table 9: Stakeholder Participation in Project Implementation

Stakeholders	Anticipated Roles and Responsibilities in Project Implementation
National Government	
Ministry of Environment and Energy (MEE)	The MEE will take a leading role in the process to legally establish the 5 new PA units and in the decisions regarding institutional frameworks / oversight for the newly established PA units, including coordination and reporting (management plans and annual reports) by each Island Foundation to MEE. MEE also will take the leading role in the development of a Decision Support System and the Ecosystem Wide Zoning and Master Strategy for the Outer Islands. MEE also will participate in education and awareness campaigns and in the process to establish Land Use Plans for 4 of the new PA units. MEE staff will receive capacity building to enable them to develop, maintain and update the Decision Support System and the Ecosystem Wide Zoning and Master Strategy for the Outer Islands. MEE plays in key role in policy development, in particular in ensuring steady progress in the finalisation and approval of key legislation such as the PA Policy and the PA Law.
Seychelles National Parks Authority (SNPA)	SNPA's mandate does not include the management of protected areas in the Outer Islands. However, SNPA will provide training to NGO staff at the PA units in enforcement activities so as to establish harmonized and consistent enforcement capacities and practices at all NGO-managed protected areas. SNPA also will provide guidance on boundary setting and zoning, and the development of PA Management Plans for each new PA. SNPA will be a key player in the establishment of the Ecosystem Wide Zoning and Master Strategy for the Outer Islands.
Seychelles Fishing Authority (SFA)	SFA will support the objectives of the project by its activities to monitor fish stocks in the Outer Islands (in conjunction with the Pangaea Project), its participation in decision-making on new marine conservation zones for each new PA, and its participation in the development of Ecosystem Wide Zoning and Master Strategy for the Outer Islands.
Ministry of Land Use and Housing (MLUH)	MLUH will participate in the project by taking lead responsibility for the creation of Land Use Plans for 4 islands with new PA sites; by contributing technical analysis for the zoning of new PA units, and by providing data and technical inputs to the Decision-Support System and the Ecosystem Wide Zoning and Master Strategy for the Outer Islands.
Islands Development Company (IDC)	IDC will participate in the project by providing significant support in terms of PA infrastructure and transport of persons, equipment and materials for the project; participating in the development / fine-tuning of the Outer Island PA Management Structures (Island Foundations); participating in the review and approval process for the Land Use Plans for 4 islands with new PA sites; providing

Stakeholders	Anticipated Roles and Responsibilities in Project Implementation
	staff and other support for ecosystem restoration (re-vegetation) activities on 2 islands; and playing a key role in the biosecurity program for the Outer Islands.
Seychelles Coast Guard	The Seychelles Coast Guard will contribute to project goals through its on-going activities to control illegal fishing in the Outer Islands.
Maritime Safety Administration	The Maritime Safety Administration will contribute to project goals through its on-going oversight of fishing activities in the Outer Islands
Seychelles Ports Authority	The Seychelles Ports Authority will contribute to project goals through its on-going oversight of fishing activities in the Outer Islands
Funders & NGOs	
Island Conservation Society (ICS)	ICS will play a leading role in the implementation of project activities at 4 new PA sites in the Outer islands. Among other activities, ICS will carry out: assessments, monitoring and conservation of marine and terrestrial ecosystems (incl. sea turtles, coral reefs, seabirds, sharks, etc.); establishment of infrastructure, equipment and trained staff for Protected Areas; legal establishment of 4 Protected Areas, and related zoning and demarcation of these areas; development of protected area management structures and financing / business planning; creation of Protected Area management plans; ecosystem restoration and biosecurity systems; and monitoring & management of ecosystem functions. ICS also will be a participant in education and awareness campaigns on the Outer Islands; the Ecosystem Wide Zoning and Master Strategy for the Outer Islands, and the development of Land Use Plans for 4 islands with new PA sites. Additional details on the role of ICS are provided in Annex 4.
Seychelles Islands Foundation (SIF)	SIF will participate in the project by implementing marine monitoring activities (water temperature; benthic; species) on Aldabra in order to develop best practices for the management of Outer Islands PA; provide lessons learned on coral reef monitoring and participate in the harmonization of coral reef monitoring methods (with ICS and DRC); provide lessons learned on the technical and legal/policy aspects of expanding the marine protected zone around Aldabra (based on activities undertaken as part of the UNDP-GEF NGO PA Modalities project); and participate in the Ecosystem-Wide Planning process, including technical inputs to establish a marine conservation corridor between Aldabra and other islands
Save Our Seas / D'Arros Research Centre	One of the key partners for project implementation and financing is the Save Our Seas Foundation (SOSF), which has been financing research and conservation projects through the D'Arros Research Centre (DRC) on D'Arros and St. Joseph islands since July 2012. SOSF and DRC were consulted frequently during the project preparation phase, and D'Arros and St. Joseph and the marine area around them will constitute one of the 5 official protected areas established through the proposed project. DRC will not receive any GEF funds; rather, they will be an implementing partner bring their own funding to all activities. However, they will likely participate in some of the capacity building for PA management activities, such as training for staff to act as PA rangers / enforcement officers and to carry out other official PA functions (e.g. writing PA management plan and annual workplans), as well as participating in and receiving training on island biosecurity measures and coastal erosion control. DRC will carry out the same activities as ICS with regard to establishing official protected areas, including gazetting, boundary setting and zoning, management planning and reporting, etc., in collaboration with MEE, SNPA and SFA and as required under national policies and regulations. DRC will also participate as a stakeholder in the development of the Ecosystem-Wide Zoning and Master Strategy for the Outer Islands, and will continue its education projects for both primary and secondary level schools regarding the Outer Islands. In addition, DRC has expressed its interest and intention to collaborate and share best practices on selected ecological assessment, monitoring and conservation activities, primarily programs related to sharks and rays; abandoned coconut forest rehabilitation; mangrove forest rehabilitation; and the monitoring of climate change and general climatic variables (atmospheric climate; sea temperature; sea level; beach profiles). The full scope of field activities that the DRC intends to implement at the D'Arros and St. Joseph site during the period of the proposed UNDP-GEF project consists of:

Stakeholders	Anticipated Roles and Responsibilities in Project Implementation
	<ul style="list-style-type: none"> • Targeted research needs in the marine environment (ecology of sharks, nesting sea turtles, resident foraging sea turtles, manta rays, stingrays in the St Joseph lagoon, corals, reef hydrodynamics, and ocean acidification) • Targeted research needs in the terrestrial environment (phenology and breeding biology of roseate terns and black naped terns; large scale movements of wedge tailed shearwaters; characterization of vegetation types; abandoned coconut forest rehabilitation; mangrove forest rehabilitation; ecology of reptiles; ecology of invertebrates) • Long term monitoring programs (climate change and general climatic variables, such as atmospheric climate; sea temperature; sea level; beach profile; population numbers of key species, such as nesting sea turtles; cetaceans; reef fish; coral reef associated benthic invertebrates; subsistence fishing; important ecosystem processes, such as benthic species composition; coral bleaching - broad scale and fine scale surveys; coral recruitment; lagoon coral patches) • Ecosystem restoration (abandoned coconut forest rehabilitation; mangrove forest rehabilitation; reintroduction of coconut crabs; conservation introduction of land birds endemic to Seychelles)
South African Institute of Aquatic Biodiversity (SAIAB) / Pangaea	<p>The Pangaea Project will be another key partner for the project, in particular for the assessment and monitoring of marine ecosystems / species for the proposed GEF project. The Pangaea Project is a 5-year, US\$4.5 million project to study “Fish connectivity in the South Western Indian Ocean and its implications for conservation and resource management”, funded by the Teach Green Charitable Foundation and with the South African Institute of Aquatic Biodiversity (SAIAB) as the lead implementing agency, in partnership with the Seychelles Fishing Authority (SFA) and a number of other institutions. The project will carry out two 2-month cruises each year (starting in late 2013) in the Outer Islands of the Seychelles; the primary focus of the cruises will be the southern islands of Aldabra, Astove, Cosmoledo and Assumption, but the vessel also will visit other parts of the Outer Islands and is expected to conduct at least one research visit to each of the islands targeted by this project as the sites for new protected areas. In addition, the information collected by the Pangaea Project will be of critical importance for the development of the Ecosystem-wide Zoning and Master Strategy for the Outer Islands (see Output 2.3), as well as the possible creation of official protected areas and/or conservation zones (including marine migratory areas and temporal protected areas) during and after the GEF project. The Pangaea research vessel has committed to providing space on its research cruises for researchers from ICS, SIF, MCSS and SFA, which will provide the opportunity to collect baseline data and carry out monitoring at key sites in the Outer Islands, as well as strengthening partnerships and data sharing among the key partners for conservation in the Outer Islands.</p> <p>The primary activities of the Pangaea project are described below; the final selection of activities and sites will be determined during the first research cruise in Oct.-Nov. 2013.</p> <ul style="list-style-type: none"> • Biodiversity Surveys: A fish biodiversity survey at Aldabra and one other site (either Cosmoledo or Astove) using a multi-method protocol involving UVC, baited stereo BRUVs, standardized fishing and traditional fish traps. The surveys will allow for “within site” comparisons of different habitats, “between site” differences and comparisons at different temporal scales (e.g. tidal, lunar, seasonal and inter-annual cycles). A thorough evaluation of the multi- method approach will allow for the development of an appropriate protocol for long-term monitoring at these and other sites. • Resource Monitoring: Species composition, size composition and relative abundance of key fishery species will be assessed at several sites. Standardized research protocols will be developed to allow for comparisons between locations for subsequent long-term monitoring of fishery resources. • Movement Patterns and Management of Important Fishery Species: Various fish tagging methods (conventional dart tags, acoustic transmitters and pop-up satellite tags) will be deployed to understand the movement behaviour and spatial requires of selected species. The findings have direct relevance to the planning and establishment of no-take protected areas. • Connectivity and Gene Flow: Fin clips (DNA) will be taken from a representative sample of different species at different sites throughout the SWIO to determine the genetic relationships

Stakeholders	Anticipated Roles and Responsibilities in Project Implementation
	<p>between fish populations. The findings of these studies will assist with the planning and establishment of a protected area network.</p> <ul style="list-style-type: none"> • Conservation Needs of Threatened Species: A number of large sharks are threatened by over-exploitation. A better understanding of their conservation needs will be determined from detailed studies on their behavioural and trophic ecology at selected sites. • Education and Training: It is envisaged that at least 1 Postdoc, 2 PhD and 4 MSc students will benefit from the Pangaea Project. Post-graduate student training through dedicated research projects will be provided to at least 2 Seychellois people. • Oceanographic Monitoring: Temperature loggers will be deployed at all key monitoring/research sites. The data will be made available for integrating and archiving with similar data collected by the UNDP-GEF project. • Citizen Science / Responsible Angling: The Pangaea Project will produce material that promotes responsible recreational angling. Printed and video material showing best handling practices etc. will be produced. The use of ‘protected areas’ as a fisheries management tool will also be promoted.
Other NGO Partners	<p>Several other environmental NGOs based in the Seychelles may participate in various activities of the project. The Marine Conservation Society of Seychelles (MCSS) may participate public education about the environmental values of the Outer Islands (focused on sea turtles and other marine conservation issues), and in the development of the Ecosystem-Wide Zoning and Master Strategy for the Outer Islands (MCSS has valuable experience in assessing marine areas for temporal conservation zones). The Wildlife Clubs of Seychelles is a likely partner for public education on the ecological and socio-economic values of the Outer Islands, as well as the problems associated with poaching and other illegal activities. The Plant Conservation Action group may provide technical expertise on revegetation with native species. Finally, the Shark Research Foundation, Seychelles (SRFS) may participate in shark assessments, monitoring and conservation planning.</p>
Local Stakeholders / User Groups	
Collins Properties Ltd.	<p>Collins Properties is the manager of the Desroches Island Lodge (DIL), and is in negotiations to purchase the Alphonse Island Lodge. Through the DIL, Collins already provides support to ICS on Desroches island, through providing meals for ICS staff, participating in beach clean up activities, and providing some use access to the dive and fishing boats of the hotel, which allows ICS staff to carry out coral reef monitoring, sea turtle counts, and other activities. Collins will participate in the project by continuing these activities, and also participating in the development / fine-tuning of the PA Management Structures (Island Foundations). Hotel staff will benefit from capacity building in areas such as marine monitoring and beach profiling.</p>
Commercial and Recreational Fishermen	<p>Both the Fishing Boat Owner’s Association (FBOA) and the Charter Boat Operator’s Association have expressed their interest in facilitating stakeholder consultations about new marine conservation zones and in awareness campaigns about poaching.</p>

BASELINE ANALYSIS

79. Under the ‘**business-as-usual**’ scenario, only one actively managed protected area (Aldabra Special Reserve) will be functioning in the entire area of the Outer Islands of the Seychelles. Other islands, such as Desroches, Alphonse and D’Arros, will have conservation staff but these will be operating without the ability to enforce restrictions on resource use, and in most cases, with extremely limited funds, staff and equipment. Furthermore, because the vast majority of conservation resources and activities in the country are focused on the Inner Islands of Seychelles, where the bulk of the human

population is concentrated¹⁶, government programs for conservation and sustainable development in the Outer Islands will remain almost non-existent. Funding support from government and donors for other sites will largely consist of irregular *ad hoc* investments in a few, select islands. In this scenario, most resource and activities will remain focused on the management of the Aldabra Special Reserve. The majority of remaining terrestrial and marine ecosystems and species in the Outer Islands will remain vulnerable, and increasingly threatened as tourism, fisheries and oil and gas development all move forward in the region. **The total baseline finance associated with the project represents \$20.9 million for the 5 years that the project is expected to last.** These are investment in various conservation and sustainable land management programs and activities are being implemented in the Outer Islands, and which are described below:

Component 1) With respect to the management effectiveness of the Outer Island's CMPAs

1a) Expansion of the protected area system

80. The Government of Seychelles continues to focus on the establishment or expansion of protected areas in the Inner Islands, including new PA units at Silhouette Island, Recife Island and Fregate Island, as well as extension of the La Veuve Reserve on La Digue and the enlargement of both Morne Seychellois and Praslin National Parks. However, as Government funding for its existing protected areas (approximately US\$1.4 million per year) is insufficient to effectively manage its share of the system, the establishment/expansion of new areas and effective management of even these areas remain in doubt. As for the Outer Islands, in 2011 the Government of Seychelles announced its intention to proclaim nine new terrestrial protected areas, eight of which are in the Outer Islands¹⁷. However, this statement of intent was not accompanied by any program or funding source, and to date no action has been taken to legally establish or operationalize any of these sites (furthermore, none of the designated include any marine areas). The Government has instead looked towards NGOs and private partners to take responsibility for the establishment and management of protected areas in the Outer Islands. The value of PA management that counts against the financial baseline is estimated at \$7.0 million for the duration of the project.

1b) Status of PA management at the site level in the Outer Islands

81. Conservation activities in the Outer Islands are primarily led by three NGOs: the Seychelles Islands Foundation (SIF), the Save Our Seas Foundation / D'Arros Research Center (SOSF-DRC), and the Island Conservation Society (ICS). SIF will continue to manage the Aldabra Special Reserve, with a general operating budget of approximately US\$1.0 million year. SIF will also implement various project-related activities in the Outer Islands, including expanding the offshore boundary of Aldabra SR and strengthening its management through the project Strengthening Seychelles' protected area system through NGO management modalities (US\$330,000), as well as invasive species management at the Aldabra Special Reserve and other islands in the Aldabra group through the EU-funded project "Mainstreaming the Management of Invasive Species in Seychelles' World Heritage Sites" (US\$1,000,000). At the D'Arros – St. Joseph Atoll, SOSF-DRC will continue to allocate US\$400,000/year to conservation management, including establishing ecological baselines, conducting research and monitoring of corals, reef fish, deep sea benthos, seabird and turtles, and implementing revegetation projects. ICS will continue to manage small conservation programs on Desroches and Alphonse islands, including coral reef monitoring, sea turtle and bird counts, and a small revegetation

¹⁶ The bulk of the population, economic activities and other forms of development are concentrated mostly on the narrow coastal plains of the three main granitic islands of Mahé, Praslin, and La Digue.

¹⁷ (i) South Island Farquhar National Park; (ii) Goëlettes Island (Farquhar) and Banc de Sable Special Reserves; (iii) Grand and Petite Polyte Cosmoledo Special Reserve; (iv) Grand Ile (Cosmoledo) Area of Outstanding Natural Beauty; (v) Saint Françoise and Bijoutier National Park; (vi) Assumption Island National Park; (vii) Desnoufs Island Area of Outstanding Natural Beauty; and (viii) South Island (Poivre) National Park.

program, with a combined budget of approx. US\$96,000/year, with additional support from the Islands Development Company (US\$32,000/year in facilities, transport, and other logistical support) and the hotel operators on the two islands (US\$51,000/year in providing meals to ICS conservation staff). Apart from SIF's activities on Aldabra, all other conservation activities in the Outer Islands will remain outside the umbrella of official protected area status, thereby limiting the ability of NGOs to enforce restrictions on resource uses and constraining their capacity to develop formal partnerships and seek funding support. The baseline finance associated with site level management in the Outer Islands is estimated at \$3.7 million for the duration of the project.

1c) Fisheries and marine protected areas

82. The Seychelles Fisheries Authority (SFA) carries out monitoring and enforcement of fishing throughout the Seychelles EEZ. SFA recently established a Vessel Monitoring System (VMS) which has installed transponders on over 500 boats (with plans to install 100 more – total investment estimated at \$1.0 million). SFA also runs an incentive scheme whereby fishing vessels are given reward of approx. US\$800 if they report illegal fishing and it results in an enforcement action. For boats fishing in the Outer Islands, SFA typically waits until the boats return to port in order to conduct a search. SFA, in collaboration with various partners, will maintain an active research program for fisheries and other elements of the marine ecosystem (an investment of approximately \$300K per year). One project is a study of behavioural ecology to spatial management for the conservation of sharks in the Seychelles (SEYSHA), designed to improve knowledge on the behavioural ecology of some coastal shark species in the Seychelles and to integrate that information into spatial management measures. SFA is also carrying out research of grouper spawning aggregations at Farquhar, as well as opportunistic sampling at other outer islands such as Alphonse and Desroches; a joint shark tagging project with the Shark Research Foundation, Seychelles (SRFS); and has deployed sea temperature loggers at Alphonse, Bijoutier, Desroches, and Farquhar in the Outer Islands. The Seychelles also continues to participate in several regional programmes for fisheries, including the African Monitoring of Environment for Sustainable Development (AMESD), which provides satellite environmental data (Sea Surface Temperature, Ocean Colour, Altimetry) for coastal and marine management; and the Ocean Data and Information Network for AFRICA (ODINAFRICA), which aims to promote the sustainable management of marine and coastal resources through information, data and product sharing. The baseline value of various programmes was estimated at \$2.0 million at the current stage. The baseline finance associated with fisheries' management in the Outer Islands, including related research, is estimated at \$4.5 million for the duration of the project.

1d) Funding of Sustainable Management in the Outer Islands

83. The vast majority of existing funding for conservation and sustainable management activities in the Outer Islands comes from unique sources focused on two specific sites. For the Aldabra Special Reserve, the majority of its funding will continue to come from income generated by the Vallée de Mai Nature Reserve on Praslin Island (also a World Heritage Site), under an arrangement between the Government and SIF (which manages both sites). For D'Arros / St. Joseph islands, the Save Our Seas Foundation (founded by the private owner of the islands) will continue to provide all funding for conservation and ecosystem restoration activities on those islands. Apart from these two sites, other funding for conservation and sustainable management will consist of ICS spending for activities at Desroches and Alphonse islands. Much of the source of ICS funding for these islands comes from the tourism operators / villa owners on the islands, who contribute monthly payments (a conservation levy) to the Island Foundations established for each island; the foundations in turn have entered into agreements with ICS to fund the work of ICS staff based on the islands. The baseline finance associated with sustainable management in the Outer Islands is estimated at \$2.0 million for the duration of the project.

The total baseline finance associated with Component 1 is estimated at \$17.2 million.

Component 2) With respect to the interagon of SLM in the management of terrestrial landscapes in the CMPAs

2a) Ecosystem services and site level planning for the Outer Islands

84. At present, there is no planning process in place for sustainable management and conservation of the landscape/seascape of the Outer Islands, nor are there information systems or mechanisms for prioritising and analysing trade-offs between competing interests and different mosaics of land and sea uses. The fragility of the ecosystems of the Outer Islands, the interconnectedness of different terrestrial and marine habitats, and their susceptibility to degradation at the wider landscape level are not understood or integrated into any information or planning systems. IDC, which manages most of the Outer Islands under lease from the Government, has completed various development plans for the Outer Islands, but these are focused primarily on economic development and lack substantial supporting information / data to enable strategic decisions on conservation. The Seychelles Ports Authority (SPA) led the development of a national oil spill plan and participated in creation of a regional oil spill plan, both of which include the Outer Islands, and the Seychelles Maritime Safety Authority (SMSA) has improved the planning and navigaitonal aids for shipping lanes. However, there remains a need to consolidate information and transform decision-making in order to influence investments in the Outer Islands before land conversion and resource utilisation processes are able to irreversibly compromise the natural endowments of this outstanding region of Seychelles. Similarly, at the PA site level, healthy ecosystems can act not just as centres of biodiversity, but can also help to sustain economic sectors (e.g. tourism, fisheries) that are based on biodiversity and ecosystem services. At present, there is a concerted effort at the national level to incorporate biodiversity concerns into land use planning processes, but this effort and land use planning in general, are focused almost entirely on the Granitic islands, but investments are limited. The baseline finance associated with ecosystem services' management in the Outer Islands is estimated at \$0.5 million for the duration of the project.

2b) Environmental data management systems and capacity

85. The Ministry of Environment and Energy (MEE) is the lead agency in the country for consolidating, updating and disseminating environmental data in the country. Through the UNDP-GEF project 'Mainstreaming Biodiversity Management into Production Sector Activities', MEE is synthesizing existing terrestrial and marine biodiversity data and developing a biodiversity meta-databases (US\$ 57,500). Similarly, MEE is being supported through the UNDP-GEF project 'Capacity development for improved national and international environmental management in Seychelles' to create and manage a national environmental database (US\$50,000). However, these databases will have significant gaps with regard to biodiversity and other environmental data for the Outer Islands; in addition, neither of these activities envisions the creation of decision support tools to enable the use of environmental data in planning processes. Furthermore, MEE has a very small Data Management Section (one manager and two technicians) responsible for carrying out all national environmental data consolidation and reporting, and has already confronted significant capacity constraints in terms of technical capacity, sufficient personnel, and equipment. Similarly, the NGOs active in the conservation in the Outer Islands carry out some activities in relation to database management, mapping, geographic information sytems, and systemic planning, but are constrained by lack of data and limited technical and financial capacities. Although important, most of these investments are either GEF financed or associated with GEF projects. Hence, they do not count against this project's financial baseline. The baseline finance that is not GEF-related was estimated at \$0.2 million for the duration of the project.

2c) Sustainable Land Management activities in the Outer Islands

86. SOSF-DRC continues to implement programs for re-vegetation of native forests and for mangrove rehabilitation at D’Arros / St. Joseph, while ICS has undertaken a smaller program on native forest re-vegetation on Desroches and Alphonse (with small nurseries of native broadleaf plants on each island and the replanting of approx. 600 plants on Desroches and a smaller number on Alphonse), although this program is limited in scope due to manpower constraints. These efforts are intended to restore leaf litter and habitat niches to support insect life and eventually the reintroduction of native birds and other species. Similarly, these NGOs are also implementing some control programs for invasive alien species (i.e. rats, white fly, young coconut trees, *Cassytha filiformis*, etc.), and a biosecurity program is operational at D’Arros / St. Joseph. SIF is coordinating an eradication program on Aldabra and Assumption for the Madagascar Fody. Beach profiling and monitoring of erosion is carried out on Desroches, Alphonse and D’Arros / St. Joseph, although actual erosion control and mitigation activities are very limited. The baseline finance associated with SLM in the Outer Islands is estimated at \$3.0 million for the duration of the project.

The total baseline finance associated with Component 2 is estimated at \$3.7 million.

Table 10: Baseline Finance Overview

Component / Topic	\$ million
1a) Expansion of the protected area system	7.0
1b) Status of PA management at the site level in the Outer Islands	3.7
1c) Fisheries and marine protected areas	4.5
1d) Funding of Sustainable Management in the Outer Islands	2.0
<i>Component 1</i>	<i>17.2</i>
2a) Ecosystem services and site level planning for the Outer Islands	0.5
2b) Environmental data management systems and capacity	0.2
2c) Sustainable Land Management activities in the Outer Islands	3.0
<i>Component 2</i>	<i>3.7</i>
TOTAL	20.9

PART II: Strategy

PROJECT RATIONALE AND POLICY CONFORMITY

Fit with the GEF Focal Area Strategy and Strategic Programme

87. The project is consistent with the goals of GEF Biodiversity Strategic Objective One (BD1), which is to improve sustainability of Protected Area systems and GEF Land Degradation Strategic Objective Three (LD3), which is to reduce pressures on natural resources from competing land uses in the wider landscape..

88. The project will contribute to the achievement of GEF’s outcome indicators under the strategic programming area as follows:

Table 11: GEF Focal Areas

GEF V Biodiversity Focal Area Objectives	Expected Focal Area Outcomes	Expected Focal Area Outputs	Project contribution to indicators
BD1: Improve Sustainability of Protected Area Systems	1.1: Improved management effectiveness of existing and new protected areas	<p>Increased coverage of threatened ecosystems and threatened species: The PA estate is expanded, with coverage of marine ecosystems increasing from 28,937 hectares to 105,197 hectares, and coverage of terrestrial ecosystems increasing from 15,261 hectares to 16,498 hectares</p> <p>Five new protected areas and 1,237 hectares of terrestrial ecosystems and 76,258 hectares of marine ecosystems – both currently unprotected</p>	<p>METT scores for 5 PA sites will improve from an average of 46% to an average of 77%</p> <p>5 new Protected Areas encompassing 76,258 hectares of marine ecosystems and 1,237 hectares of terrestrial ecosystems</p>
LD 3: Reduce pressures on natural resources from competing land uses in the wider landscape.	3.2 Good management practices in the wider landscape demonstrated and adopted by relevant economic sectors.	<p>Government agencies collaborating on SLM initiatives across sectors and at multiple scales</p> <p>Number and types of investment sources in SLM from successfully tested sustainable finance reflow schemes</p> <p>Information on SLM (wider landscape) technology and good practices disseminated</p>	<p>MEE, SFA, and NGO partners implementing activities within framework of Ecosystem-Wide Zoning and Master Strategy</p> <p>Cost effective practices and protocols for native forest re-vegetation and biosecurity shared among all PA management institutions in the Outer Islands</p>

Rationale and summary of GEF Alternative

89. This Project has been designed one among various GEF-financed interventions within a more comprehensive national protected area (PA) programme for the Seychelles. This project will focus on investments in the network of NGO and privately managed protected areas in the Outer Islands, in direct response to the existing and emerging threats to biodiversity and ecosystem functioning on and around those islands (the second GEF project will focus on sustainable financing of government-managed PAs in the Inner Granitic Islands). In addition to funding the operationalization of new protected areas at 5 island sites, the project also will support the implementation of planning processes and information systems to enable the development of a broad-scale conservation and sustainable development strategy for the entire Outer Islands region, and will develop and test cost-effective models for sustainable land management practices, including native forest revegetation and biosecurity.

90. The existing system of protected areas in the Outer Islands is inadequate in two respects. First, its scope is limited to 4 PA units, of which only one (Aldabra Special Reserve) is operationally functional. Increased representation of Outer Islands in the PA network is urgently needed to ensure adequately representing the terrestrial and marine ecosystems of the Outer Islands and the sustainability of planned and future tourism development on these islands. Second, existing PA management (as well as other

conservation programs in the Outer Islands) has limited management authority and effectiveness and is unable to mitigate threats to biodiversity or ecosystem functioning.

91. The project is designed to address both sets of weaknesses simultaneously. It will improve ecosystem representation in the PA system and it will establish / strengthen PA management operations at key sites, including biodiversity conservation and sustainable land management activities. This will be underpinned by investments at the systemic level to strengthen institutional planning, information, and financing frameworks for the long-term benefit of the selected sites. The project will focus GEF funding to achieve both biodiversity conservation outcomes (through the mechanism of strengthening / expanding the protected area system) and integrated natural resource management objectives (through systemic planning and information activities as well as on-the-ground management interventions), as follows:

92. To enhance biodiversity conservation, the GEF investment will enable the establishment and operationalization of five new protected areas encompassing both terrestrial and marine ecosystems. This will increase the number of operational protected areas in the Outer Islands from 1 to 6; add 76,258 hectares of seascape and 1,237 hectares of landscape to the national PA estate; and establish two new organizations as official PA management institutions in the Seychelles. These new PA units will also be invaluable demonstration sites for the replication of additional sites, using different PA classifications and allowing for different levels of development activities, over the long-term in the Outer Islands. The project will also foster the systematic development of PA management capacities, processes and tools, including the mobilization of financial resources to support and sustain the PA expansion effort. In terms of PA finance, the project will work over the next 5 years to gradually decrease the gap between financial needs and funds actually available for PA management, including the capacity of PA units to generate their own funding through tourism-based revenues.

93. To ensure a reduction in land degradation, the GEF investment will support various integrated natural resources management activities at both the systemic and site levels. The project will support the development of a spatially-based DSS (Decision Support System) that can be available for use in cross-sectoral land/seascape planning, management and policy development, across different sectors and different scales. Based on the DSS, the project will facilitate the creation of an ecosystem-wide zoning and master strategy for the Outer Islands, the goal of which will be to provide the first coherent strategic level strategy for the whole of the Outer Islands of the Seychelles, including both terrestrial and marine realms, that will balance development and conservation needs, including the maintenance of global environmental benefits. At the site level, additional planning tools will include the development of land use plans for four islands / island groups (Desroches; Alphonse; Poivre; and Farquhar). On the ground measures to address land degradation related issues will include native forest and mangrove re-vegetation at selected sites; erosion monitoring and control; and the establishment of biosecurity systems to prevent the entry of new invasive alien species, including those that impede re-vegetation efforts.

PROJECT GOAL, OBJECTIVE, OUTCOMES AND OUTPUTS/ACTIVITIES

94. **The project's goal is to** *conserve biodiversity in Seychelles Outer Islands through a protected area and sustainable development approach.*

95. **The project objective is to** *promote the conservation and sustainable use of coastal and marine biodiversity in the Seychelles' Outer Islands by integrating a National Subsystem of Coastal and Marine Protected Areas (CMPAs) into the broader land- and seascape while reducing the pressures on natural resources from competing land uses.*

96. In order to achieve the above objective, and based on a barrier analysis (see Section I, Part I), which identified: (i) the problem being addressed by the project; (ii) its root causes; and (iii) the barriers that need to overcome to actually address the problem, the project's intervention has been organised in two components, which are in line with the concept presented at PIF stage. The following 'outcomes' are expected from the project:

Outcome 1: *Management effectiveness of Outer Islands CMPAs is enhanced*

Outcome 2: *Sustainable Development and CMPA management integrated into broader land/seascape*

Outcome 1: Management effectiveness is enhanced within a sample of coastal and marine protected areas (IUCN Category I, II and VI) operating under innovative public-private-civil society partnership agreements.

Output 1.1 - Biodiversity & Ecosystem Assessment, Monitoring and Conservation Programs in place to strengthen PA Management

97. Marine and terrestrial habitat maps and long term ecological monitoring / conservation programmes are both fundamental for the effective management of protected areas. Maps provide critical information on the extent and diversity of habitat types found within an area that can be used as the basis for land-use and protected area planning, while a well-designed monitoring programme will provide information on the status of resources through time, the results of which enable managers to determine whether management interventions are working and how these may need to be adapted and to develop and implement targeted conservation plans. Three NGOs are involved currently in ecological monitoring and conservation in the Outer Islands: the Islands Conservation Society (ICS), D'Arros Research Centre (DRC) and the Seychelles Islands Foundation (SIF). ICS operates primarily on Desroches and Alphonse; on Desroches ICS monitors subsistence fishing (by IDC workers resident on the island), sea turtles, tortoises, beach erosion, birds, coral reefs and sea water temperature; on Alphonse, ICS carries out similar activities as well as monitoring sports fishing (in addition, ICS carries out sporadic monitoring on nearby Bijoutier and St. Francois for birds and sea turtles). DRC has established a coral reef monitoring programme with sites around D'Arros and St. Joseph Atoll, a manta ray programme, monitoring of seawater temperatures, and re-vegetation of native forests and mangroves. SIF has monitoring programmes around Aldabra for subsistence fishing (by staff at the Research Station), sea turtles, tortoises, vegetation, and various bird species (e.g. frigates and white-throated rail). In addition, SIF established a coral reef monitoring programme in 1999 at Aldabra, and later on Astove, Assumption and St Pierre, under the Aldabra Marine Program (AMP). Apart from a few seawater temperature loggers, there are no long-term monitoring or conservation programmes around Farquhar or Poivre (although SFA and ICS have carried out research on grouper spawning aggregations). Other organizations that have carried out research in the Outer Islands include the Marine Conservation Society of the Seychelles (MCSS), the Seychelles Shark Foundation (SSF), and National Geographic.

98. Outer Island NGOs have an existing suite of monitoring and conservation programmes that are effective for certain species and locales, and these will be supplemented by the Pangaea project. However, there will remain significant gaps due to a lack of resources, technical capacity, and information and maps regarding outer island ecosystems and species. Under Output 1.1, the project will undertake a variety of activities for mapping, assessment, monitoring and conservation of key ecosystems (and ecosystem functions) and species in the Outer Islands, with a primary emphasis on the 5 proposed Protected Area sites. In addition, habitat mapping and the development of marine monitoring programmes / protocols will also take place at Aldabra in partnership with SIF; important sites for habitat monitoring will be selected using physio-chemical data (e.g. temperature), benthic cover, and invertebrate

and fish surveys (while recognizing that some work will by necessity be carried out in areas outside of the PA sites, given the interactivity of ecosystem functions and species movements inside and outside of official protected areas). SIF will test multiple methods to evaluate their utility and cost effectiveness (particularly using new, less labour-intensive technologies / protocols), with the goal of establishing a suite of proven monitoring methods that can be used to carry out monitoring on other Outer Islands. This testing of different methods will be facilitated not only by SIF's capacities (as the only organization currently managing a protected area unit in the Outer Islands), but also by the extensive logistical and research capacity support it will receive from the Pangaea Project. The primary activities will consist of the following:

99. **Preparation of terrestrial and marine habitat maps:** Terrestrial and marine habitat maps will be prepared for the 5 targeted Protected Areas. Existing maps prepared using data acquired in 2005 will be validated through accuracy assessment surveys. For areas where there are no equivalent marine and terrestrial habitat maps (e.g. Farquhar Atoll and part of Desroches), new satellite imagery (e.g. QuickBird or WorldView-2) will be procured, and MEE and ICS staff will be provided with training necessary to pre-process the satellite imagery. Pending confirmation of the sites to be visited by the Pangaea boat, the project may also collect satellite imagery to allow for the definition of boundaries of possible protected areas that are currently gazetted and/or are areas of known high biodiversity value (i.e. Cosmoledo, Astove, Assumption, Providence/Cerf, Etoile, Boudeuse, African banks, Desnoeuufs, and Marie-Louise). MEE and ICS staff also will be trained in ground-truthing survey methods (with support from SIF) and in data analysis methods and statistical techniques. For the marine environment, they will carry out ground-truthing surveys (e.g. benthic video transects, photo-quadrats) and combine the data collected with the maps / imagery noted above to prepare a habitat classification scheme and a final consistent set of marine habitat maps for use in management. For the terrestrial component, they will carry out ground-truthing surveys and combine the data with newly acquired orthorectified aerial imagery to create terrestrial habitat maps. Further technical details are available in Annex 2. The outcome of this work will be to provide improved information of the extent, status and diversity and community composition of different habitat types, including the extent of 'blue carbon' habitats (seagrasses and mangroves) around the Outer Islands, and the identification of resilient reefs that survived (or have since recovered) from coral bleaching. The habitat maps will produce direct conservation benefits by enabling the creation of PA Management Plans (Output 1.6) and the design of the zoning strategy for the Outer Islands (Output 2.3), as well as the selection of long-term monitoring sites (Activities 1.1.2 to 1.1.5), and more generally, by helping the Government of Seychelles to establish a priority list of which species and habitats on targeted Outer Islands are most important for conservation.

100. **Assessment, Monitoring and Conservation of Critical Marine Ecosystems:** The project will undertake a series of activities to strengthen understanding and conservation of critical marine ecosystems at PA sites in the Outer Islands. Potential sites will be identified during the ground-truthing and accuracy assessment field surveys undertaken during the habitat mapping. The number and/or distribution of sites will be reviewed once PA management plans are finalized, to ensure that the sites include sufficient replication between habitat types, exposure regimes and management zones (where feasible), and to ensure that the sites maximize PA management effectiveness. More specifically, the project will focus on 3 types of marine habitat:

- **Coral Reefs:** The project will undertake a series of activities to strengthen understanding and conservation of coral reefs at the 4 new PA sites as well as the existing Aldabra PA site. Reef monitoring protocols currently being used by various Outer Island NGOs will be reviewed and tested by ICS, SIF and DRC, with logistical support at some sites from the Pangaea project, in order to develop a standardized protocol and a related monitoring manual, and to undertake joint training in the relevant techniques (SIF as part of its collaboration with SAIAB / Pangaea will be testing the applicability and suitability of a range of different survey protocols / methods for monitoring coral reefs around Aldabra, the results of which could provide the basis for

developing a new set of standard protocols for use by all the Outer Islands NGOs). The project will establish Coral Reef Monitoring Stations that will be used to monitor coral, fish and macro-invertebrates and thereby assess changes in the main components of coral reef biodiversity and health. One aspect of the monitoring will focus on the abundance, prevalence, incidence and progression of coral disease, and will create a baseline and standardized method for such monitoring in the Outer islands, with the long-term goal of building a national coral disease database for Seychelles. Another aspect of monitoring will focus on physical parameters such as nutrient levels and water characteristics (linked to the Sea Surface Temperature monitoring). Monitoring also will seek to identify coral reefs with high resilience to climate change impacts (building on reef resilience surveys that have been done already for Farquhar, Alphonse and Desroches). Depending on the protocol adopted, indicators recorded may include: live hard coral cover (%), dead hard coral cover (%), bleached corals (number or percent colonies bleached and severity of bleaching), abundance of coral recruits (per m²), abundance/biomass of fish / family / trophic levels (per m³), and density of macroinvertebrates (per m²). The DRC will carry out programs to monitor coral health, reef hydrodynamics, ocean acidification, and reef species at D'Arros and St. Joseph. Working with the University of Seychelles and SAIAB, the project will provide support for the creation of a national coral collection facility. Improved understanding of the status and diversity of coral reefs and associated resources (e.g. benthos, fish and macroinvertebrates) at the PA sites will lead to direct conservation benefits, including the design of a coral reef conservation plan for each island, the boundary setting and zoning of the protected areas, and the possible designation of specific high protection zones within the Outer Islands PA network. The information also will help to determine actual and potential climate change impacts (e.g. extent and degree of bleaching) and to identify coral reefs with high resilience to climate change impacts, which may be areas for additional protection measures. Finally, these activities will help to establish a national pool of trained coral reef surveyors (building on the small existing pool of persons at NGOs, SFA and SNPA).

- **Seagrass Beds:** At present, there is no monitoring of the seagrass beds in the Outer Islands. A simple standard protocol to monitor seagrass habitats will be identified and training will be provided to all Outer Island NGO staff to help ensure consistency in data collection and comparability of results. The assessment and monitoring will establish the baseline and improve understanding on the current status and diversity of the seagrass beds at the PA sites and the associated macroinvertebrate fauna before management interventions commence. Improved understanding of the status and diversity of seagrass beds at these sites will lead to direct conservation benefits, including the design of a seagrass bed conservation plan for each island, the boundary setting and zoning of the protected areas, and the possible designation of specific high protection zones within the Outer Islands PA network. Depending on the protocol used, the indicators recorded may include: seagrass cover (%), seagrass biomass (g m⁻²), average blade length (cm), abundance / biomass of fish (per m³), and density of macroinvertebrates (per m²).
- **Mangroves:** At present, the only monitoring of mangrove habitats is being implemented by the DRC on St. Joseph (in addition, DRC intends to rehabilitate an area of mangrove on St Joseph). The project will work with the DRC to fine-tune their protocol for monitoring mangrove habitats and to provide training to other Outer Island NGO staff to help ensure consistency in data collection and comparability of results. The assessment and monitoring will establish the baseline and improve understanding on the current status and diversity of the mangroves at the PA sites before management interventions commence. Improved understanding of the status and diversity of mangroves at these sites will lead to direct conservation benefits, including the design of a mangrove conservation plan for each island, the boundary setting and zoning of the protected areas, and the possible designation of specific high protection zones within the Outer Islands PA network. Depending on the protocol used the indicators recorded may include: average tree height (m), average tree girth (cm), number of saplings (per m²) etc.

101. **Assessment, Monitoring and Conservation of Key Marine and Terrestrial Species:** The project will undertake a series of activities to strengthen understanding and conservation of important marine and terrestrial species at PA sites in the Outer Islands, including:

- **Terrestrial Fauna:** The project will assess and manage feral tortoise populations on the 4 target islands (and possibly also islands visited by the Pangaea research vessel). Activities will include: 1) estimating the size and structure of feral tortoise populations at each island; 2) identifying important tortoise habitat currently in use; and 3) producing a written tortoise management plan. The tortoise management plan will address the following issues: i) ensure that the tortoise populations can be maintained on the island in the context of economic development (i.e. relative to gardens, rehabilitation of ecosystems, vehicles and roadways) that will ensure the safety of the tortoises, while minimising the impact of tortoises on human infrastructures, gardens, etc.; ii) integrate tortoise populations into the eco-tourism experience on the island; iii) long-term planning for managing burgeoning tortoise populations – i.e. plans to eventually move tortoises between islands etc.; and iv) assess carrying capacity of feral tortoise populations in the islands. In addition, the project will undertake a comprehensive survey of invertebrate biodiversity on Farquhar and develop a standardized protocol for on-going monitoring, and will determine the current abundance and distribution of the endemic cockroaches *Delosia ornata*, *Margatteoidea amoena* on Desroches Island. In addition, the DRC will carry out its own program to investigate and monitor reptiles and invertebrates on D’Arros and St. Joseph.
- **Sea Turtles:** Seychelles has well-established programmes for monitoring of sea turtles. At present, ICS, DRC and SIF all monitor nesting sea turtles and hatchlings around the Outer Islands. The project, in collaboration with these organizations and the SAIAB / Pangaea project, will train personnel (including a written handbook) to conduct rapid surveys for nesting & foraging populations at potential Outer Island PA sites. Following these rapid surveys, the project will coordinate with these partners in the standardizing and modernization of monitoring protocols (including use of the Cybertracker¹⁸ system, currently being tested by SIF on Aldabra), and staff from these organizations will initiate long-term data collection on critical nesting populations and foraging aggregations of sea turtles and their habitats. Improved understanding of the status and diversity of sea turtles at these sites (including identification of areas of critical nesting and habitat, areas of high poaching, areas where coastal erosion affects nesting, and population trends over the past three decades) will lead to direct conservation benefits, including the boundary setting and zoning of the protected areas, and the possible designation of specific high protection zones within the Outer Islands PA network. In addition, modernization of data collection and entry methods using the Cybertracker software will improve the efficiency of the programme and minimize staff costs associated with data collection and data entry.
- **Fish:** The project will investigate the occurrence of selected spawning aggregations at PA sites in the Outer Islands as reported in interviews with fishermen (one focus will be grouper spawning aggregations at Farquhar, which are likely of regional and/or global significance). Based on the findings of this investigation, the project will establish a monitoring programme to monitor temporal variations in spawning aggregation abundance. The project also will carry out fish biodiversity surveys at PA sites in coral reef, seagrass and seaweed areas using a combination of underwater visual census, fish trapping, experimental hook and line fishing, in order to establish a baseline-survey of fish diversity and abundance in different habitats, as well as a survey of fishing pressure to estimate the commercial fishing pressure around the Outer Islands, and a study of the impacts of fish aggregation devices (FADs) on marine fauna, especially their impacts on juvenile sea turtles. Where possible, fish surveys will be coordinated with the Pangaea Project (depending on its cruise schedule) so as to benefit from the platform and resources provided by that project. In addition, the DRC will carry out its own program to investigate and monitor the ecology of sharks, manta rays and stingrays on D’Arros and St. Joseph. Improved understanding of the status

¹⁸ <http://cybertracker.org/>

and diversity of sea fish at the PA sites (and of their migrations between sites) will lead to direct conservation benefits, including the boundary setting and zoning of the protected areas; the possible designation of specific high protection zones within the Outer Islands PA network, and strengthened capacity to monitor and enforce restrictions on fishing of important fish spawning aggregations and other populations/habitats and to reduce unsustainable practices; in addition, the results of this work will be provided to SFA to contribute to its efforts to develop a fisheries management strategy for the Outer Islands.

- **Seabirds:** Building on existing bird population censuses carried out by ICS and SIF, the project will produce precise population size estimates of seabird / waterbird concentrations and identify sites of international importance (IBAs) through a number of activities, including: 1) training personnel to conduct seabird & waterbird census (8-10 day course followed by field-training); 2) standardizing and modernizing long term intensive monitoring at 4 target PA sites, including an upgrade to use of the Cybertracker system and creation of a centralized database; 3) collection of data to estimate population size of main seabird concentrations (breeding colonies and roosts) and identification of geographical distribution; and 4) conducting a study on the movements and foraging areas of Outer Islands seabirds (Sooty terns; Boobies; White-tailed tropicbirds, Red-tailed tropicbirds, Shearwaters). In addition, the DRC will carry out its own program to investigate and monitor the phenology and breeding biology of roseate terns and black naped terns, and the large-scale movements of wedge tailed shearwaters, at D'Arros and St. Joseph. Improved understanding of the status and diversity of seabirds at these sites will lead to direct conservation benefits, including the design of a seabird conservation plan for each island, the boundary setting and zoning of the protected areas, and the possible designation of specific high protection zones within the Outer Islands PA network (in particular areas with stricter controls / enforcement of poaching).

102. **Establishment of 'citizen science' recreational diving and fisheries monitoring programmes for marine ecosystems:** Globally, there are an increasing number of citizen science programmes (including recreational diver programmes such as Reef Check, Eye on the Reef¹⁹ and Cousteau Divers²⁰) that engage tourism operators and the general public in data collection and thereby produce cost savings and increase awareness of and support for conservation among both groups. Dive operators and fishing guides regularly visit the same sites, and can therefore make more frequent observations than would be feasible for scientific researchers, which increases the power to detect both 'pulse' & 'pressure' events. The project will establish a cooperative and participatory marine monitoring program with the marine sports centres on Desroches and Alphonse. Building on existing cooperation between these organizations and ICS, this activity will develop an expanded participatory program to record observations, catches and other information collected during diving and snorkelling (e.g. collecting simple datasets of the presence of key indicator species such as fish, sharks, turtles, or records coral reef health such as bleaching, crown of thorns starfish) and fishing (through the use of a simple monitoring protocol that could be implemented by the fish guides when fishing with clients). Implementing a recreational diver observation programme will improve understanding of the spatial and temporal distribution of species, and help to identify and prevent nascent threats to marine biodiversity. These monitoring systems can also provide a mechanism to raise alerts, for coral bleaching impacts or outbreaks of Crown-of-Thorns starfish or coral diseases, which could then be followed up by more detailed scientific surveys. Improved knowledge and understanding on distribution and catches by recreational fishers will improve understanding of the fishery's long-term sustainability. Knowledge of the impacts of fly-fishing on sharks may lead to better fishery management and/or the establishment of special protected zones at St. Francois, Poivre and St. Joseph.

¹⁹ <http://www.gbrmpa.gov.au/about-the-reef/how-the-reefs-managed/our-monitoring-and-assessment-programs/eye-on-the-reef>

²⁰ <http://www.cousteaudivers.org/>

103. Current and potential climate change impacts on biodiversity and ecosystem functioning assessed and monitored: The project will establish a sea surface temperature network to collect long-term data on changes in sea surface temperature at 4 PA sites in the Outer Islands and to monitor the impacts of those changes on coral reefs and other critical ecosystems. The DRC will carry out its own program to monitor climate change and general climatic variables (atmospheric climate; sea temperature; sea level; beach profile) at D'Arros and St. Joseph. High seawater temperatures over long periods of time are known to be one of the key stressors that can cause coral bleaching and can lead to coral mortality, as happened over large areas of reef throughout the western Indian Ocean during the mass bleaching event in 1997/1998. Prior research has shown significant spatial variability in the severity of the 1997/1998, linked to local scale variability in seawater temperature conditions among other factors (e.g. light, exposure etc.), but additional monitoring of ambient environmental conditions is needed for an improved understanding of the resilience of coral reefs under future climate change scenarios. Both ICS and DRC have installed a network of seawater temperature loggers at the 5 target PAs of this project, which automatically record the integrated seawater temperature over a user-defined interval, but additional loggers (15-20) are required to complete the network. Monitoring ambient environmental conditions around the core PAs will improve understanding of coral reef resilience under future climate change scenarios, which will help to inform the PA design and provide the justification needed for designation of specific high protection zones within the Outer Islands PA network.

Output 1.2 - Institutional capacity to plan and implement protected area expansion is strengthened

104. As noted above, three NGOs currently have a mandate to implement conservation activities in the Outer Islands: the Islands Conservation Society (ICS), D'Arros Research Centre (DRC) and Seychelles Islands Foundation (SIF). Of these, both SIF and ICS have experience in managing officially designated Protected Areas. SIF manages the Aldabra Special Nature Reserve in the Outer Islands as well as the Vallee de Mai National Park in the Granitics. ICS manages one official Protected Area (Aride Special Nature Reserve) and implements the conservation management plan at another (Silhouette National Park) in the Granitic islands of the Seychelles, while in the Outer Islands it has on-going conservation programs on Desroches and Alphonse. DRC carries out numerous conservation activities on D'Arros and St. Joseph islands. While the staff of both ICS and DRC in the Outer Islands are experienced conservationists, they do not have direct experience with managing officially designated Protected Areas. One critical area of capacity building for ICS and DRC will be in the enforcement of PA regulations & boundaries. Discussions during the PPG phase with the Ministry of Environment, SNPA, IDC and ICS indicate that the staff of ICS (and possibly staff of the D'Arros Research Centre) will be delegated some level of PA enforcement authority for protected areas established under their management in the Outer Islands. In addition, text in the March 2013 draft of the "Seychelles' Protected Areas Policy" states the following with regard to enforcement at "Privately owned PAs": "Where PAs are declared on Private owned areas, the revised legislation will include negotiated arrangements for enforcement and surveillance, which will build on the existing arrangements in place. Provisions will recognize that private surveillance and enforcement mechanisms may be used where mutually agreed. The specific roles and responsibilities will be clearly established by agreement as part of the negotiation process. Should these PAs request external assistance from the relevant enforcement agencies; these agencies will have a duty to provide assistance promptly and efficiently. This could also include assistance with criminal proceedings" (similar language will be included for NGO-managed PAs on islands managed by IDC). Enforcement on the Outer Islands is complicated by the isolated location of the islands and the limited facilities and personnel in the area. Details on the exact enforcement authority granted to NGO staff on the Outer Islands, and how they will collaborate with the SFA, Coast Guard and other partners, will be finalized during year 1 of the project, after the new PA Policy and related PA Act are adopted and approved by government. The final decision on enforcement by NGO staff will depend on logistics, the safety of NGO staff in carrying out enforcement, the evolving nature and degree of threats and illegal activities, etc. Other options also will be considered, including the possibility of using the national

police's Special Service Unit for some enforcement actions, and the role of IDC Islands Managers (who are already Justices of the Peace). Once these issues are decided, project partners including SNPA, the Police and Attorney General's office, and possibly SIF will develop and implement a capacity building program in PA enforcement. Regardless of the final form it takes, enforcement will need to be complemented with education and awareness campaigns (see Output 1.7); without collaboration by local stakeholders there is little that enforcement can achieve.

105. PA Staffing: ICS will hire new staff to enable the PA sites to be managed effectively as official protected areas. On Desroches, the existing staff of 1 Conservation Officer, and 2 Rangers will be supplemented by 1 volunteer; while on Alphonse the existing staff of 1 Conservation Officer and 1 Ranger will be supplemented by 1 volunteer. On Farquhar and Poivre, 1 Conservation Officer, 1 Ranger and 1 Volunteer will be hired to undertake PA management activities on each island (GEF funds will be used to pay for PA staff on Farquhar and Poivre during years 1-4 of the project; starting in year 5, when PA financing has been increased, ICS will take over responsibility for paying PA staff on those islands). Where possible, preference will be given to hiring staff with a broad set of skills over specific technical expertise, in recognition of the diverse challenges of operating at remote island sites. At the same time, because working in a remote location such as the Outer Islands has frequently resulted in high levels of staff turnover, ICS and IDC will implement measures to improve retention rates, including improved accommodations, better communications (especially internet) capacity, and increased training and opportunities for professional certification.

106. Implementation of Capacity Building Strategy: The on-going UNDP-GEF NGO PA project is expected to complete a capacity needs assessment and capacity building strategy for all PA management institutions in the Seychelles in late 2013. Using this capacity building strategy, the proposed project will implement capacity building activities for ICS, IDC, SIF and DRC staff to strengthen their capacity in PA management. ICS staff will receive training in logistics such as equipment handling / maintenance (boats, engines, generators, compressors etc.); in education and communications such as photo/video production and website creation and maintenance; in tour-guiding (together with hotel staff on the Outer Islands); in stakeholder outreach and communications; in conflict resolution; and in developing and implementing sustainable financing mechanisms and business planning for Protected Areas. ICS and DRC staff will receive training in PA enforcement, once the exact nature of their legal enforcement capacity is decided in the new PA policy / law (the capacity building strategy of the NGO PA project will include an analysis of what kind of PA enforcement can / should be delegated to the staff of NGOs responsible for managing official protected areas; what kind of training would be required for these staff to carry out enforcement duties; and what (if any) changes are required to PA laws / regulations to allow for this). With regard to scientific assessment and monitoring, ICS, DRC and SIF staff will receive technical training in GIS; database creation and data management and statistical analysis; and training in recording and interpreting field data (possibly including web-based and remote training and assessment). Additional specific technical training will be provided in conjunction with activities implemented under Output 1.1, including ground-truthing and accuracy assessment field surveys for habitat mapping; protocols for monitoring coral reefs, seagrass habitat and mangrove habitat; monitoring of sea turtles, fish and seabirds; and training of personnel in climate change adaptation, including tools for measuring and responding to mass bleaching events, sea level rise, droughts, etc., such as early warning prediction, rapid assessment, communication and management interventions. SNPA will be a key partner in providing training in PA operations, social integration, and enforcement (SNPA would like to establish harmonized training for all rangers working for various PA management institutions in the Seychelles). SNPA and ICS are already developing an MOU for work on Silhouette Island where SNPA will help with technical expertise; this may be useful as a model for work in the Outer Island PAs. Staff training and skills development will emphasize in-service training but also will include workshops, short courses, focused study visits and short-term staff exchanges for key management staff. As part of the capacity building program, a series

of video based training modules will be developed for conservation field work, based on video recordings of workshops, field visits, and associated documents and support materials. These modules are expected to reduce the high costs (due to their remote location) of future training for field staff at the Outer Island PA sites, as well as at other sites (the modules will be made available to all relevant partners in Seychelles and throughout the region. Finally, the project will seek to coordinate with and build upon the activities of the FFEM project “*Contribution à la gestion durable et à la conservation du milieu marin dans la zone du sud-ouest de l’océan Indien: Appuis aux innovations locales et aux partenariats*”, which will include the Seychelles in its activities to promote knowledge sharing on conservation in the southwest Indian Ocean, including development of a regional electronic information sharing platform and databases; exchanges of experiences between conservation managers; and support for a regional coral reef monitoring network.

Output 1.3 - Infrastructure and Resources Enhanced to enable Protected Areas management

107. Project partners ICS and IDC will establish and strengthen Protected Area infrastructure and resources at 4 newly established PA sites. Presently, ICS has offices and staff accommodations on both Desroches and Alphonse islands, whereas on Farquhar and Poivre there are no operational offices or accommodations to support PA management. In terms of PA management resources, on Desroches and Alphonse, ICS staff have basic computer equipment and some ecological monitoring equipment, while at present there are no resources on Farquhar and Poivre. At present, ICS does not have boats on any of the islands (a critical constraining factor for monitoring and conservation on small islands), though they make opportunistic use on Desroches and Alphonse of the boats owned by IDC and the island hotels when possible.

108. Establish PA infrastructure on Farquhar and Poivre; strengthen PA infrastructure on Desroches and Alphonse: On Desroches and Alphonse, IDC will build more housing to accommodate additional PA staff and visiting environmental experts. On Farquhar and Poivre, IDC will build / convert housing to accommodate 3 staff (1 Conservation Officer, 1 Conservation Ranger, and 1 Volunteer) on each island, as well as an office and storage facility on each island. GEF funds will be used to equip these offices with all necessary furniture and materials.

109. Establish / strengthen transport and equipment resources for PA management on Desroches, Alphonse, Farquhar and Poivre: IDC will provide significant benefits to the project in the form on transport services, which are a highly significant cost in operating in the remote Outer Islands. IDC will provide free air travel to ICS staff going to/from Mahe to all 4 island PA sites; in addition, IDC will provide free shipping of materials to the 4 sites. IDC also will provide fuel for boats to be used for PA management (GEF funds will be used to purchase the boats). On Desroches and Alphonse, the hotels will continue their program of providing all meals for ICS / PA staff as well as the use of compressors. GEF funds will support the purchase and maintenance of key equipment for PA management activities, including basic research, monitoring and conservation equipment (depth finders, PDAs for Cyber tracking system, dive equipment, underwater cameras, species ID guides, etc.), and other equipment or materials as needed for activities such as PA demarcation and monitoring and enforcement activities.

Output 1.4 - Protected Areas Legally Established

110. The project will facilitate the expansion of the PA estate in the Outer Islands of the Seychelles through upgrading of protection and the gazetting of 5 new Protected Areas. All of the outer islands of Seychelles (except D’Arros and St Joseph Atoll) are owned by the Seychelles Government, and the majority are leased to Islands Development Company (IDC), a parastatal formed to establish and supervise economic activities in the Outer Islands. An exception is Aldabra, which is leased to the

Seychelles Islands Foundation (SIF). In 2004 IDC signed a MoU with ICS that appoints ICS as conservation advisors on all islands owned by IDC, and in 2007 this MoU was strengthened into an agreement endorsed by the Ministry of Environment. Due to the remoteness of the Outer Islands, scientific knowledge of them is quite limited. ICS has started coordinating research and conservation programs to fill in the gaps in knowledge of the Outer Islands and to increase protection for the globally important ecosystems and biodiversity that they harbour. The first ICS conservation centre was established in 2007 on Alphonse Island, responsible for the scientific monitoring and conservation management of the Alphonse, Bijoutier and St Francois Atolls, and a second ICS conservation centre was established on Desroches Island in 2009. These centres carry out monitoring, education and limited ecological restoration projects, but they are minimally staffed (2-3 persons per island), have very limited resources, and have no official management authority. As a result of these limitations, and of a consensus among the Ministry of Environment & Energy, IDC and ICS that tourism will increase pressures on the Outer Islands but also simultaneously provide a strategic opportunity to fund conservation efforts (see Output 1.5), the Government of Seychelles has decided to establish 4 Protected Areas on islands / island groups under the management of ICS. In addition, the new owners of D'Arros & St. Joseph islands have come to an agreement with the Go's to establish an official PA for those islands as well. The concurrent establishment and operationalization of these 5 PA units will be produce significant benefits in terms of the sharing of resources and expertise among the different sites; these benefits will be further extended through the proposed collaboration with SIF. Furthermore, the 4 sites managed by ICS through this GEF project are demonstration sites to show the viability of establishing tourism-funded PA units at other sites in the Outer Islands (the Ecosystem-Wide Strategy for the Outer Islands in Output 2.3 will be the mechanism for deciding where and how these demonstrations can be replicated at other sites in the future). Ultimately, it is envisaged that ICS and possibly other NGOS will operate a network of Protected Areas throughout the Outer Islands, each of which will employ full time conservation staff engaged in the protection of the marine and terrestrial biodiversity of the islands, the design and implementation of conservation management plans, the rehabilitation of islands, the provision of training and educational opportunities, and the monitoring of the environment in partnership with other NGOs and conservation bodies, the Seychelles Government, IDC and private investors.

111. The 5 proposed Protected Areas will encompass a total of 1,237 hectares of land area and approximately 76,258 hectares of marine area (covering the marine area extending 1 km. from the edge of the reef flat around each island). The final determination of the marine zones to be included in the 5 PA sites will take place during full project implementation, depending on the results of the biodiversity surveys and habitat mapping (Output 1.1), as well as the definitions for establishing the boundaries of different PA classification categories as stated in the pending Protected Area Policy). More specifically, the new Protected Areas will encompass:

- Farquhar Group: South Island Farquhar National Park (368 ha) (*IUCN II - National Park*); Goellettes Island Special Reserve (26 ha) (*IUCN Ib - Special Reserve*); Banc de Sable Special Reserve (8 ha) (*IUCN Ib - Special Reserve*), as well as 22,290 ha. of marine ecosystems (*IUCN VI*)
- Poivre: South Island (Poivre) (137 ha) (*classification TBD*); as well as 2,838 ha. of marine ecosystems (*IUCN VI*)
- Desroches: Desroches Island Resource Use Protected Area (369 ha) (*IUCN VI*), as well as 34,300 ha. of marine ecosystems (*IUCN VI*)
- Alphonse Group: Alphonse Island Resource Use Protected Area (161 ha) (*IUCN VI*); St. Francois Special Reserve (32 ha.) (*IUCN Ib*) and Bijoutier Special Reserve (1 ha.) (*IUCN Ib*), as well as 12,830 ha. of marine ecosystems (*IUCN VI*)
- D'Arros Group: St. Joseph Special Reserve (135 ha) (*IUCN Ib*), as well as 4,000 ha. of marine ecosystems (*IUCN VI*)

112. Participatory process for legal gazetting and boundary setting and zoning of new Protected Areas:

In order to complete the process for legal gazetting and boundary setting for new PA sites, the project will follow all legal and consultative requirements laid out in the new PA policy (expected by late 2013) and/or new PA law (expected by end of 2014). This process is likely to involve establishment of a technical working group, with representatives from relevant authorities and stakeholders (including tourism operators and fishermen), to determine the boundaries of protected areas, in particular the marine areas that are initially set to extend 1 kilometre from the high water mark on each island, and to establish zoning schemes for the 5 PA sites. Legal gazetting documents will be prepared and submitted to the appropriate authorities early in this process (given the long lead time required for action to be taken), with the option to adjust exact boundaries and zoning plans later in the process. To facilitate the initial steps in boundary setting and zoning, a planning workshop will be held to present the results of baseline BD surveys and land use and marine habitat mapping activities and resource use patterns, and to solicit opinions from a wide groups of stakeholders. Zoning for PA management purposes in the terrestrial parts of each PA will also fit within the overall scope of the Land Use Plans developed under Output 2.2 (which will identify in broad terms the areas for conservation and for development purposes in each island / island group). Marine areas of each PA also will be zoned, taking into account the lessons learned by SIF as part of the UNDP-GEF NGO Protected Areas project in expanding the marine protected zone around Aldabra and zoning and buffering within this area. Zoning of both terrestrial and marine areas also will be informed by the results of the BD assessments and habitat mapping under Output 1.1, and will take into consideration both current conditions and projected future conditions based on potential climate change impacts. Once the initial boundary setting and zoning is completed, a second workshop will be convened to present the results of the initial process and to solicit inputs and on-going participation from local experts and key stakeholder groups to refine the zoning plan and definition of boundaries. Based on these inputs, a final draft boundary setting and zoning plan will be released for public review (4 weeks) and a feedback mechanism will be used to capture opinions, after which final revisions will be made on the basis of the feedback received. Note: The process described here may be different for the D'Arros & St. Joseph PA, which is a privately owned island.

113. Boundary demarcation of newly established PAs: Demarcation of boundaries for PA units in the Seychelles typically consists of sign posting (for terrestrial PAs) and buoys (for marine PAs). For the PA units included in this project, sign posting will be carried out for the terrestrial parts of each PA, based on the zoning carried out under activity 1.4.1. For the marine areas, demarcation buoys will not be utilized, as the oceanic conditions, size of the marine areas, and limited resources for work in the Outer Islands would make it prohibitively expensive to maintain buoys. Instead, based on the habitat mapping and zoning of the PA units, detailed information on the extent of the marine protected areas will be provided to the relevant authorities so that it may be included on all charts and maps of the Outer Islands. In addition, the marine area boundaries will be provided to SFA to be inputted into the Vessel Monitoring System (VMS) already in operation throughout the Seychelles, and protocols to monitor and respond to illegal activities will be followed.

114. Identification and recognition of other conservation zones: The draft PA policy for the Seychelles envisions the possibility of establishing areas for conservation and protection that are not formally designated PA units. Such sites may include spawning, nursery and congregation areas of importance for marine and coastal organisms where fishing and other activities is prohibited or limited (in some cases on a seasonal basis, such as the grouper spawning aggregation sites at the north end of Farquhar and the west of Bijoutier); marine conservation corridors to restrict some activities along the migratory routes of key species (e.g. humpback whales), and the creation of new Important Bird Areas (IBAs, for example at St. Francois) or collection of additional data to strengthen protection at existing IBAs (the work on IBAs will build on the results generated by Nature Seychelles in investigating IBAs as part of the UNDP-GEF NGO PA project). Assessments of these possible conservation zones also will take into account potential climate change impacts and the need to enable ecosystem / species adaptation. The proposed project will work with ICS, DRC, SIF, SFA and the Pangea Project to identify possible conservation zones, and then

coordinate efforts to complete the administrative steps (as described in the final, approved PA policy) to give these zones official recognition.

Output 1.5 - Protected Area Management Structures in place and sufficiently financed

115. Each island subject to an MoU between IDC and ICS is overseen by an Island Foundation (i.e. Outer Island Conservation Trust) whose goal is to “*promote the conservation, rehabilitation and enhancement of [the given] island to be among the finest restored tropical atoll ecosystems in the world, in harmony with sustainable low impact human development and eco-tourism, and to raise funds in order to do so*”. IDC and ICS have agreed to establish Island Foundations for all Outer Islands where tourism development is expected in the short to medium term, with the idea that it is only those islands with active tourism operations that can financially sustain on-going conservation activities. Prior to any development on the ground, all developers on IDC islands are required to sign an agreement stating that they will create a trust fund that will finance conservation management of the island through the relevant Island Foundation. Furthermore, these agreements, together with the MoU between ICS and IDC, recognize ICS as having the authority to ensure that conservation activities are pre-eminent, that development proceeds in an environmentally sensitive manner, and that native species and globally significant ecosystems are protected. At present, both Desroches and Alphonse have established tourism operations (hotels / villas) and an Island Foundation has been created for each island. The other targeted ICS-managed PA sites will benefit from similar arrangements, as both Farquhar and Poivre are slated for tourism development in the near to medium term (these developments will be situated on the North Island of Farquhar and the North Island of Poivre, neither of which are included within the boundaries of the proposed PAs).

116. Management Structures for ICS-managed Protected Areas in the form of Island Foundations (i.e. Outer Island Conservation Trusts) established for Farquhar and Poivre. These new Island Foundations, along with those already established for Desroches and Alphonse, will meet twice per year to oversee all conservation programs and activities for each new Outer Island Protected Area, with technical inputs and guidance from the ICS staff on each island and the overall ICS Science Committee.²¹ All four Island Foundations will be strengthened as needed (including training for Foundation trustees IDC, ICS, MEE, hotels, villa owners associations) to have the operational capacity to manage IUCN category I, II and VI PAs in the Outer Islands and to meet the requirements of the Ministry of Environment and Energy (MEE) which oversees all protected areas in the Seychelles. In addition, the MEE will consult the Attorney General’s office to determine if any adjustments need to be made to the existing Island Foundations in order for them to manage officially recognized Protected Areas. These management structures will constitute a model of government-NGO-private (tourism industry) Protected Areas management and financing with potential replication across many of the Outer Islands of the Seychelles.

117. A 10-year Business Plan for ICS-managed PA units is developed to ensure the long-term financial sustainability of the newly established protected areas that will constitute the Outer Islands Subsystem of CMPAs. The plan will focus on 1) increasing existing financial resources; 2) identifying and implementing cost-saving activities through coordination and sharing of resources among the four PA sites and between ICS and other conservation partners; and 3) finding and securing new sources of PA financing (see activity below). With regard to existing PA funding sources, the decline in piracy is expected to increase both visitation levels and development of new tourism facilities at the four ICS island sites in the Outer Islands. On Desroches and Alphonse, which will be Sustainable Use Areas, the hotels and villas are likely to expand in the next few years, which will increase the contributions made by

²¹ Decisions on development activities on each island will not be under the purview of the Island Foundations; these decisions will be the responsibility of the Islands Development Company, which has long-term leases to manage the islands. Development decisions will be made based on the Land Use Plans established for each island and the Overall Spatial Strategy for the Outer Islands (see Component 2), as well as consultations with the Island Foundations and the ICS Science Committee.

hotel and villa owners (which are based on visitation rates) to the Island Foundations. In addition, ownership of the hotel on Alphonse is soon to be transferred to Collins Properties, which owns the Desroches Island Lodge as well and has a strong track record in paying contributions to the Desroches Island Foundation, and in providing in-kind logistical support to ICS island staff through the hotel marine centre (by providing use of boats and equipment), by providing food for ICS staff, and through staff participation in beach clean-up and beach profiling activities. On Farquhar and Poivre, tourism development is likely to begin within the next 5 years (but not within the specific islands that will become PAs), which will generate tourism-based revenue as well once operational. The number of boats visiting all 4 island sites is expected to increase as well, which will provide additional landing fees, of which 50% is allocated for PA management. With regard to cost reductions, the project will try to reduce costs for ICS and other Outer Island PA managers for critical activities such as marine assessment and monitoring. This will be done by establishing a pool of trained national personnel for activities such as coral reef monitoring / mapping, fish and turtle surveys, etc. through the various activities under Output 1.1, as well as by testing the feasibility of using more international volunteers / graduate students for work in the Outer Islands over the long-term (ICS intends to have at least 1 volunteer at each of the 4 PA sites during the project). In addition, by establishing the first partnerships among ICS, SIF, and DRC for work in the Outer Islands, the project will assist each of these organizations in adopting best practices and cost effective strategies from each other, and in sharing data that can help to reduce the costs of duplicated work (e.g. sharing spectral signatures from habitat mapping among sites). For ICS managed sites, the implementation of energy efficiency technologies (see Output 2.6) also will help to reduce costs (similar to programs already being implemented by SIF and DRC).

118. New Sources of PA Financing²² for newly established Protected Areas and for PA management and expansion over the long term. While existing sources of PA financing have the potential to increase, most of the existing mechanisms are dependent on tourism development, which 1) may limit the establishment of new PAs to areas where tourism development is viable, and 2) creates additional impacts on biodiversity and ecosystem functioning. For this reason, the project also will seek to develop and implement other sources of PA financing that do not depend on tourism development and can be applied across different PA sites. The Government of Seychelles has just approved a new Corporate Social Responsibility (CSR) tax, which stipulates that any company with revenues greater than SR1 million (approx. US\$80,000) must pay 0.50% of total revenues for companies that have been designated to be providing a social good for the country (ICS has been so designated). Of this 0.50%, half will go directly to the Government and the other half can be directed to a designated company by the taxpayer. ICS has already secured preliminary agreements from several large companies (construction, hotels, communications) to receive their contributions from the CSR tax, which will be used to increase ICS core funding and/or to help capitalize the new Island Foundations for Farquhar and Poivre. Other possible financing mechanisms that ICS hopes to develop include increased funding from private donors (they have recently established non-profit status in the U.S. and several European countries so as to enable fishermen from those countries who visit the islands to make tax-deductible donations); a sponsored credit card program where a % fee on payments is directed to ICS; and a membership program for visitors to the islands. In addition, two potentially large sources of financial support for PA management in the Outer Islands may develop in the coming few years. One of these is possible funding from Petro Seychelles to help mitigate/offset the impacts of oil and gas development in the Outer Islands; preliminary discussions with Petro Seychelles have indicated an interest on their part to support such funding. The other is a proposed Debt for Climate Change Adaptation Swap between the Government of Seychelles and the Paris Club group of creditors; the preliminary scoping of this deal calls for the Paris Club to forgive US\$78 million of Seychelles' debt in exchange for the establishment of a large-scale MPA covering 30% of the country's Exclusive Economic Zone or EEZ, with approx. 50% of the MPA being a fisheries no-take zone. As part of this deal, the Government of Seychelles would establish a

²² A new PIF has been recently approved for Seychelles and will look in depth into the issues of PA finance.

Seychelles Conservation & Climate Adaptation Trust (SCCAT) to manage the MPA, which is likely to include some or all of the PAs established under the proposed GEF project. Under the current deal structure, the SCCAT would have US\$1.9 million/year over the next 20 years to allocate for conservation activities within the MPA (as well as a capitalized fund of approx. US\$43 million by 2033), targeting activities such as: expanding and improving management of marine protected areas and replenishment no-take zones; developing and/or improving coastal zone management, fisheries, and marine policy and regulatory protection regimes; and coral and mangrove restoration projects.

Output 1.6 – Protected Area Management Plans Developed and Implemented

119. Operational Management Plans will be developed for each site by the end of year 1 to guide conservation and management activities during years 2-4 of the project. In the cases of Desroches, Alphonse, and D'Arros, these initial plans will draw heavily on the existing management plans for each of those islands, adapted as necessary based on the inputs of the baseline information and maps developed under Output 1.1, the boundary setting and zoning activities under Output 1.4, and the Land Use Plans developed under Output 2.3. In addition, these plans will be the first step in adapting existing management plans into the structure, formats, etc. that will be required in the official Protected Area Management Plans for these sites once they are legally established.

120. Official Protected Area Management Plans will be developed and implemented at all new Protected Areas. The official PA Management Plans will be created through a participatory, science-based approach and will be finalized and submitted to the Department of Environment no later than the end of year 4 of the project. Each PA Management Plan will include: 1) appropriate institutional arrangements for collaboration and conflict resolution and mechanisms for surveillance and enforcement; 2) clear biodiversity conservation objectives, targets, management strategies and monitoring programmes over differing time-frames; 3) business/financial planning strategies and mechanisms; 4) climate change mitigation and adaptation strategies (including ecosystem based adaptation approaches to reduce the vulnerability of islands to water scarcity, coastal flooding and, where possible, coral bleaching); and 5) energy conservation and renewable energy (e.g. solar, wind, biomass) plans. In addition to submitting the official PA Management Plans to MEE for review and approval, each PA site will be required to submit Annual Workplans to MEE.

Output 1.7 - Increased Education and Awareness levels support Protected Areas management in the Outer Islands

121. A small portion of GEF project funds will be used to carry out broad-based education and awareness campaigns in the Seychelles on the Outer Islands and the activities of the project and its partners. The activity will be co-supported by co-financiers, in particular ICS and UNDP (possibly also SOSF). The overall campaign will include a number of major thematic components. Perhaps the most important will be a campaign highlighting the ecological and economic values of the Outer Islands, their importance as the collective inheritance of all Seychellois, and the rights of all Seychellois to access and benefit from the resources of the Outer Islands, while also outlining their responsibilities to conserve this area for future generations. Another component will focus on raising awareness about the establishment of protected areas and an overall planning and zoning strategy for the Outer Islands, and the implications of these processes for resource conservation and use and economic development opportunities. In addition, the project will raise awareness of existing and potential threats to the biodiversity and ecosystem functions in the Outer Islands; one theme of which will be the current and potential impacts of invasive species on the Outer Islands, including the threat of new introductions of invasive species as economic activities and visitation levels increase to the islands, and of policies, practices and procedures to prevent such introductions. Another theme will be the threats to species and ecosystem functions

posed by illegal harvesting of globally endangered and vulnerable species (e.g. seabirds, turtles, sharks, etc.), and illegal (i.e. unlicensed) and unsustainable (i.e. shark finning; overfishing of commercially valuable species) fishing practices in the Outer Islands. This awareness raising will include both information sharing on new regulations and enforcement with regard to illegal activities, and awareness raising on the role that local demand plays in encouraging illegal and unsustainable harvesting of fish and other species in the Outer Islands. Because monitoring, control and surveillance of illegal fishing and harvesting activities around the Outer Islands is very difficult given their remote location and the small number of conservation centres and staff in the Outer Islands, efforts will be made to reduce demand and tolerance among Seychellois consumers for animals that are harvested illegally and unsustainably.

122. Public awareness and education campaigns: The project will work with the Department of Environment, IDC, ICS and several other environmental NGOs (Wildlife Clubs; Marine Conservation Society of Seychelles; Plant Conservation Action group) to develop and implement education and awareness campaigns on key issues regarding conservation and protected areas management in the Outer Islands. These campaigns will include, among other activities, a photo exhibition; short videos and infomercials to be aired on national television and radio; extensive outreach through schools; public banners, posters and awareness raising events; and educational activities targeted policy makers. The D'Arros Research Centre will continue its program of sponsoring annual visits by primary and secondary school children to D'Arros Island; it also hopes to initiate a program to train university students in conservation science, in collaboration with the University of Seychelles.

123. Internet-based outreach: Develop, deploy and manage a website/social media platform that centralizes all information (on-going research, monitoring and management activities) pertaining to PA management in the outer islands. This Internet platform also will be used to disseminate (to national and international publics of different ages) information pertaining to PA management and the status of outer island biodiversity.

Outcome 2: Sustainable Development and CMPA management integrated into broader land/seascape in the Outer Islands

124. The outputs necessary to achieve this outcome are described below.

Output 2.1 - Spatially-based decision support system in place to enable integrated natural resource management in the Outer Islands

125. The project will support the development of a spatially-based DSS (Decision Support System) that can be available for use in cross-sectoral land/seascape planning, management and policy development, across different sectors and different scales (e.g. Land-use planning, Strategic Environmental Assessments (SEA), Environmental Impact Assessments (EIAs), Marine Spatial Planning). The DSS will consist of a GIS platform (Geographical Information System), populated with a comprehensive set of marine and terrestrial geo-spatial data layers showing the distribution of the location of habitats (e.g. vegetation types, coral reefs, seagrass beds, mangroves, turtle nesting beaches, spawning aggregations sites), including 'blue carbon' habitats (seagrass beds and mangroves), the distribution of focal species (e.g. whales, dolphins, porpoises, sharks, rays, sea turtles, tortoises), commercially important species (e.g. grouper spawning aggregation sites), ecological processes (e.g. seawater temperatures, rainfall, light), resource use patterns / pressures (e.g. land-use, fishing activities, shipping, tourism etc.), potential climate-related threats (e.g. sea level rise, coastal erosion, storm surges) as well as proxy indicators for

ecosystem resilience.²³ The DSS will provide the basis for planning and policy development (see Output 2.3), and will enable planners and resource managers to determine the location of critical habitats, potential threats (e.g. sea level rise, coastal erosion), areas with protected status, and the spatial distribution of resource use patterns. The Ministry of Environment and Energy (MEE) will lead the development of the products to be contained and organised within the DSS and systematic conservation planning process. The project will provide technical support to help MEE staff build their internal capacity for data information management and decision support (which will benefit this project as well as other GEF projects in the country that have also designated MEE as the national coordinator / repository for various information management / database systems), as well as training for MEE and ICS staff in the use of GIS, information management and mapping, and Systematic Conservation Planning (SCP) (see Output 2.4).

126. Stakeholder outreach and planning team composition: Relevant stakeholders (including those who may be involved in or impacted by the Ecosystem-Wide planning process) will be identified and asked to participate in a planning team for creation of the DSS; this will likely include representatives from Government and parastatal authorities (including disaster risk planning, and security and enforcement), as well as relevant resource user groups (fishers, tour operators etc.) and technical experts including taxonomic / group specialists (e.g. turtle, marine mammals, seabirds, sharks and rays etc.)

127. Data compilation and gap analysis: Creation of the DSS will build upon and be closely aligned with the national environmental data management system being developed through the UNDP-GEF project "Capacity development for improved national and international environmental management in Seychelles (CB2)", as well as the data on aerial images of the terrestrial areas of the Outer Islands being compiled by MLUH. Various other existing geospatial datasets are held by various different national, regional and international organizations and could be integrated into this DSS, including COI-ISLANDS and WIOMER; in addition, SFA has been involved in the establishment of a national data information and management system through their involvement in ODINAFRICA (<http://www.odinafrica.org/>) and the ASCLME/SWIOFP programmes; and they have been involved in the EU-funded AMESD project. A list of data types needed for the planning exercise will be compiled, and requests for data sharing will be sent to the owners of these datasets by MEE, along with guidance on data sharing and copyright, and the geospatial format needed for the DSS. Once the existing geospatial datasets have been compiled, they will be reviewed and critical gaps, and the appropriate methods to address these gaps will be identified. Activities to address some of the known gaps in habitats coverage will be carried out through Activity 1.1.1; other gaps may require specific workshops with resource user groups or local experts.

128. Preparation of data layers: Various data layers will be prepared for the DSS, including: 1) Habitats - a habitat map for the entire Outer Islands region and adjacent EEZ will be prepared, integrating the terrestrial and marine habitat data produced through Activity 1.1.1; 2) Species - the distribution of terrestrial and marine species found throughout the Outer Islands will be mapped, focusing on species included on the IUCN Red List and nationally significant species (the most useful species data sets will be those that provide species distribution and data on key sites, such as feeding, nesting, and spawning

²³ In order to withstand some of the threats towards the conservation of biodiversity in the Outer Islands, especially the threat of Climate Change, increasing the resilience of ecosystems is hugely important. Resilience can be improved by conserving a mosaic of ecosystems (larger scale), which are interconnected. By conserving these mosaics of inter-connected ecosystems, areas that are degraded by threats (e.g. coral bleaching) slowly recover, while other functioning ecosystems provide services and structure to build on (Devisscher, T. 2010. *Ecosystem-based Adaptation in Africa: Rational, Pathways, and Cost Estimates. Sectoral Report for the AdaptCost Study, Stockholm Environment Institute*) Resilience of ecosystems therefore can be improved by harnessing positive interactions between ecosystems that stabilize community dynamics, ecosystem functions, and the structure of neighboring ecosystems. By broadening the scale of the intervention through the spatial arrangement of ecosystems these positive interactions can be optimized (Halpern, B.S., Silliman, B.R., Olden, J.D., Bruno, J.P. & Bertness, M.D. 2007. Incorporating Positive Interactions in Aquatic Restoration and Conservation. *Front. Ecol. Environ.* 2007:5(3):153-160.)

grounds; however as these are likely to be limited the project may also interpolate or extrapolate distribution patterns using expert knowledge or through bio-regionalisation); 3) Ecological Processes - important ecological processes upon which the persistence of biodiversity depends will be mapped, either directly or through proxies developed from remote sensing datasets, which can be used to identify potentially important ecological corridors, aggregation sites, areas of potential importance for climate change adaptation, and areas of high biodiversity heterogeneity; 4) Pressures - pressures will be mapped to illustrate the spatial and temporal distribution and density of important human activities (e.g. land uses and land cover types; fishing effort for different types of fishery; pollution; infrastructure development); terrestrial layers will be prepared through the Land Use Plans (Output 2.2); marine resource use layers will be prepared in collaboration with SFA; 5) Protected Areas – various existing and proposed protected areas and fishing zones, some of which have been defined but have yet to be gazetted (e.g. IBAs), others that are being proposed through the project for gazetting, will be mapped; and 6) Opportunities & Costs – mapping of population and development plans, climate change impacts (e.g. areas sensitive to sea level rise), infrastructure projects, commercial and recreational fishing; marine transportation; renewable and non-renewable energy production, etc. to identify and map the relative socio-economic values of different areas

129. Expert inputs and review of input datasets and to set conservation targets: A workshop will be organized to review and validate the data compiled in the DSS and to discuss and agree on initial quantitative conservation objectives for each spatial feature (e.g. number of species conserved, percentage of habitats protected) and, where necessary, qualitative objectives related to configuration (e.g. linkages between conservation areas), habitat restoration or other issues.

130. On-going maintenance and application of the DSS to conservation: MEE will be responsible for maintaining the DSS as a centralized depository. Guidelines will be established for data sharing and ownership and distribution rights for the datasets stored in this centralized system based on best international practice. MEE will also be responsible for ensuring that the DSS supports on-going implementation and fine-tuning of the Ecosystem-Wide Spatial Strategy developed under Output 2.3, while ICS, DRC and SIF will be responsible for providing updated information to the DSS and using the data contained therein to guide the developed of Protected Area management plans and related conservation activities at the protected areas under their management. The project will develop simple web-based user interfaces for protected area managers to access and make use of the DSS, and will support the installation of any networking infrastructure required for PA managers to remotely access the DSS. Training in the use of the DSS will be provided for relevant stakeholders (see Output 2.4).

Output 2.2 - Land Use Plans completed for targeted Islands

131. Land Use Plans will be developed for four islands / island groups (Desroches; Alphonse; Poivre; and Farquhar). For the islands of Desroches and Alphonse, the existing island management plans will provide a starting point for development of the LUPs on those islands, including areas identified as conservation zones. These two islands, which will be classified as Sustainable Use Areas, will limit any future land conversion to an area that is expected to be no greater than 50% of the total island landmass (and no development will be permitted at the St. Francois and Bijoutier Strict Nature Reserve). For the PA sites of Poivre and Farquhar, there will be no development or land conversion within the PA sites (South Island Strict nature Reserve at Poivre, and South Island National Park and Banc de Sables and Ile Goellettes Strict Nature Reserve at Farquhar); any development activities will be limited to the north island of Poivre and the north island of Farquhar. Similarly, development will be allowed on D'Arros Island (which will not have official PA classification), but not on the St. Joseph Strict Nature Reserve. The process and structure of the LUPs will be modeled on the Land Use Plan developed and endorsed by Cabinet in 2010 for Coetivy, another of the Seychelles' Outer Islands (funded through the UNDP-GEF Mainstreaming Biodiversity project). The Coetivy plan addressed such issues as tourism development,

villa development, agriculture and forestry development, aquaculture and fisheries development, nature conservation and environmental aspects (including flora, fauna, invasive alien species, solid waste management, and conservation areas), settlement areas, infrastructure, and energy supply, water and wastewater management. The final LUP for Coetivy specifies priorities and restrictions for each of the aforementioned categories, and also establishes a zoning system for the terrestrial part of the island with 16 land use zones. Each of the new Land Use Plans will provide the basis for approvals of any new or expanded investment projects on these 4 islands, and will establish the model for similar land use planning on all other Outer Islands prior to the approval of any investment projects (in addition, Seychelles Environmental Impact Assessment process applies equally to the Outer Islands and will also be used to assess any new investments). Once the Land Use Plans have been developed and all public consultations and inputs have been satisfied according to national regulations, the plans will be presented to the Planning Authority and IDC for their approval, and then to Cabinet for its endorsement, before going into effect. The process of developing the LUPS will be based on the process used in Coetivy, wherein an inter-agency team from the Ministry of Land Use and Housing (MLUH), the Planning Authority (PA), the Ministry of Environment (MoE), the Seychelles Fishing Authority (SFA), the Seychelles Agriculture Agency (SAA), and the Island Conservation Society (ICS) jointly visited the island, developed the plan, and revised the plan based on public input. The Coetivy process was led by an international expert, and such an expert will be used for these 4 LUPs as well in order to provide needed technical expertise and guidance in cross-sectoral coordination. However, once these 4 LUPs are completed, the staff from national institutions should have sufficient experience to carry out any additional LUPs for other Outer Islands in the future.

Output 2.3 - Ecosystem-wide Zoning & Master Strategy for the Outer Islands in place to guide conservation and development activities

132. An ecosystem-wide zoning and master strategy for the Outer Islands will be prepared, the goal of which will be to provide a coherent strategic level strategy for the whole of the Outer Islands of the Seychelles, including both terrestrial and marine realms, that will balance development and conservation needs, including the maintenance of global environmental benefits. The Strategy will become the basis for the future (post-project) establishment of official protected areas, for the creation of other conservation zones, as well as the template for the development of sustainable economic activities in the Outer Islands. With regard to official protected areas, the planning process used to prepare the ecosystem-wide zoning and master strategy will help to identify the sites where new protected areas should be established to complement those included in the GEF-funded project. For other types of conservation zones, the Strategy will seek to identify: i) new high priority marine and terrestrial conservation zones (refugia, biodiversity hotspots, resilient coral reefs, temporal protected zones for spawning aggregations, nesting sites, etc.); ii) conservation corridors (for migratory species and seabirds to maintain connectivity between islands); iii) hotspots potentially threatened by alien invasive species (including those associated with increased maritime traffic); iv) areas of high potential climate change impacts (e.g. coastal erosion and flooding); v) priority 'blue carbon' sequestration areas (seagrass beds and mangroves); vi) priority terrestrial areas to prevent / mitigate erosion impacts; and vii) priority terrestrial areas for rehabilitation of native vegetation and /or reintroduction of native species. For both official protected areas and other types of conservation zones, the Ecosystem-wide Strategy will utilize the results of the on-going UNDP-GEF NGO PA project, which includes “consolidating data on the marine extensions of IBAs and integrating it into an overall protected area gap analysis, in order to define targets and map priority areas for protected area expansion on the basis of an analysis of species, habitats and ecological processes”. The Strategy will build on this output and make it more robust for the Outer Islands, utilizing the habitat mapping and ecosystem/species data created under Output 1.1. The process may also identify the boundaries of the Marine Protected Area (which would not include terrestrial areas) that would be established by Seychelles if the proposed Debt for Climate Change Adaptation Swap moves forward (see Output 1.5).

133. In parallel with identifying conservation priorities, the Master Strategy also will develop alternative development scenarios for the optimal allocation of land and marine areas and resources in the Outer Islands, through priority-setting and an analysis of trade-offs (e.g. infrastructure and tourism on the islands; oil and gas development, fisheries, and mariculture in marine areas). The Strategy also will establish policies for the movements and activities of various fishing fleets (artisanal; semi-industrial; industrial) in established marine conservation areas, as well as the movement of sea-going vessels around the Outer Islands, including procedures for 'safe distance' approach within sight of land; and norms for communicating effectively with regional and international shipping companies (especially fuel tankers) for movements around the outer islands (building on the processes and capacities established by the WB-GEF Western Indian Ocean Marine Highway and Coastal Contamination Project). The project will work with the SFA and other authorities to implement a licensing / reporting system for recreational fishers in the Outer Islands. Finally, the project will assess options for integrating regional conservation initiatives (e.g. the Indian Ocean Whale Sanctuary) into the Ecosystem-wide Zoning and Master Strategy for the Outer Islands.

134. One goal of the project is to establish a national dialogue alongside the systematic planning process that engages all key stakeholder groups and the general public in a discussion about the future sustainable use and conservation management of the Seychelles Outer Islands. The Seychelles possesses an enormous EEZ encompassing a large number of islands that support an abundance of marine life and potentially valuable resources. The remote Outer Islands are an evocative topic. For the small percentage of the population that have had the opportunity to work or even just holiday on these islands, all have a story to share or an opinion about how best these islands could be utilized or conserved. The majority of Seychellois, however, have never had the opportunity to visit the Outer Islands and many probably never will, and for this segment of the population the Outer Islands are shrouded in mystery but are considered to be a national treasure and the patrimony of all Seychellois. Thus, there is a need for information and transparency about the Outer Islands in order to engage the whole population in designing a sustainable future for the area.

135. Development of the Ecosystem-Wide Zoning & Master Strategy will be based in large part on data collected through assessment and monitoring under Output 1.1, on the information collected and organized in the Decision Support System under Output 2.1, and for selected islands, on the results of the Land Use Plans developed under Output 2.2. The Strategy will also integrate the data already established by key partners (ICS, SIF, DRC, etc.) for specific sites in the Outer Islands, as well as data and priorities established in previous plans and studies (e.g. the Seychelles Integrated Marine Protected Area System Plan, and others). In areas where information is deficient, the process will draw upon the expert knowledge of ecologists, species specialists, land use planners, and GIS managers in a workshop environment to input 'expert knowledge' data and review results, which will promote a high level of participation and ownership in the process. A variety of planning processes may be suitable for this effort. One of the most appropriate processes might be the use of Marine Spatial Planning (MSP)²⁴; which aims to provide guidance to single-sector decision-makers so that the sum of all decisions is oriented toward integrated, ecosystem-based management (despite the use of 'Marine' in the name, MSP provides a suitable framework within which to embed both terrestrial and marine planning to achieve ecosystem-wide zoning and master for the Outer Islands). Development of the Strategy is likely to also rely on some specific decision-support tools (e.g. Marxan with Zones, InVEST, Atlantis, Multi-scale Integrated Models of Ecosystem Services), which can provide effective methods to help practitioners and stakeholders to understand, operationalize, and implement spatial planning approaches and mitigate

²⁴ MSP has been defined by IOC-UNESCO as "*a public process of analysing and allocating the spatial and temporal distribution of human activities in (marine) areas to achieve ecological, economic, and social objectives that usually have been specified through a political process*".

resource allocation problems. The MEE will lead the development of the Strategy, with technical input provided by technical experts to support GIS and spatial planning processes, and to help facilitate discussions among key stakeholders (MEE, ICS, IDC, SFA, FBOA, SIF, DRC, MLUH, SNPA, etc.). The capacity of MEE to undertake spatial planning will be strengthened through providing on-the-job training for MEE staff in spatial planning (see Output 2.4). The project will ensure that the Master Strategy for the Outer Islands is endorsed by Cabinet (in the same way the Land Management Plan for the Inner Islands was also approved by Cabinet).

136. Initial problem identification: Develop an initial list of priority problems that need to be solved through spatial planning processes, related to economic developments (e.g. new offshore oil and gas facilities; mariculture facilities) or to environmental conservation (high priority ecosystems)

137. Establish authority to prepare and implement the Strategy: Establish the necessary authority to both prepare and implement the Strategy (e.g. through new legislation or modification of existing legislation); determine whether implementation should be consolidated or left to existing management authorities responsible for a single sector, concern, or activity.

138. Pre-planning activities with stakeholder participation: The planning process will include: i) identification of a planning team; ii) preparation of a work plan, with boundaries and time-frame for planning; iii) agreed upon principles and goals; iv) preparation of clearly defined and measurable objectives; and v) a risk assessment of what might go wrong during the planning process and possible contingencies. Key stakeholders will be involved throughout this and all stages of the strategy development; the scope and extent of stakeholder involvement will be defined through the preparation of a stakeholder involvement plan.

139. National Dialogue on the future of the Outer Islands: As noted above, engaging all Seychellois in a discussion about the future of the Outer Islands and how best to sustainably use and manage the resources could be achieved through establishing a national dialogue in parallel with the systematic conservation planning activities. Such a process will enhance activities under Output 1.7 to engage and educate all key stakeholders and the general public about the global importance and status of biodiversity hosted by these islands and ecosystem services that they provide. Furthermore, a dialogue process combined with stakeholder participation in the Ecosystem-wide planning process will provide the opportunity for a diverse range of stakeholders to engage in discussions about the broader practicalities of sustainably managing these resources.

140. Defining and analysing existing conditions: The products contained in the DSS (Output 2.1) will be used to provide the basis for the analysis of existing conditions and the identification of important biological and ecological areas and threats / pressures. Specific Decision Support Tools will be selected to prepare products and output for review on the basis of the goals and objectives of the planning process.

141. Defining and analysing future conditions: Different development scenarios will be prepared in consultation with stakeholders to illustrate what might happen with and without a range of alternative management interventions. The results will be reviewed and a preferred scenario selected that will provide the basis for identifying and selecting management measures in the spatial strategy.

142. Preparing and approving the spatial management strategy and public consultation: The preferred scenario will be used to prepare the final version of the strategy. The Strategy will be submitted to Cabinet by the Ministry of Environment and Energy for Cabinet Approval. Copies of the approved strategy will be published in local newspapers and otherwise made available to the public.

Output 2.4 - Institutional Capacity strengthened for the implementation of Integrated Natural Resource Management

143. Institutional capacity building in INRM for organizations with responsibilities for the development and conservation of the Outer Islands: The project will provide capacity building for government institutions, relevant environmental NGOs, and engaged private sector partners, to participate in and coordinate action at the wider landscape level on Integrated Natural Resource Management (INRM). The proposed target beneficiaries for capacity building activities are: Ministry of Environment and Energy, Seychelles National Parks Authority, Islands Development Company, Island Conservation Society, D'Arros Research Center, Seychelles Islands Foundation, Seychelles Fishing Authority, and tourism enterprises operating in the Outer Islands. Among other priorities, the project will strengthen capacity of these stakeholders in participating in the development, updating and use of Decision Support Systems (Output 2.1), including technical training for selected staff on data handling, data management, data maintenance, metadata, GIS, GPS technologies and web-based applications. Stakeholders will receive training in how to apply the DSS to the development and implementation of Land Use Plans (Output 2.2) and the Ecosystem-Wide Strategy (Output 2.3), as well as other ongoing development plans and activities of various sectors (oil and gas; tourism; mariculture; fishing) with significant potential impacts in the Outer Islands. MEE will be a particular focus of capacity building for INRM and ecosystem wide planning processes; the MEE office for GIS and data management will receive training in data information management, decision support systems, and spatial planning processes. ICS and other interested Outer Islands conservation organizations will receive training in the use of Geographic Information Systems (GIS) and information management, and ICS will develop and implement a data management system (linked to the DSS) to improve information sharing and to include a communication network for rapid dissemination of information between different PA sites about coral bleaching and other events (coral disease; marine IAS; etc. At the site level, the project will strengthen the capacities of institutions involved in island-level natural resource management (ICS, DRC, IDC, hotels) such as re-vegetation, beach profiling, coastal erosion control, rainwater harvesting, etc. This capacity building also will include training of IDC, ICS and SIF staff on protocols and procedures of inspections for invasive species at ports and airport (embarkation and disembarkation) for the Outer Islands, as well as training of island staff on surveillance methodology with regards to biosecurity. Where possible, the project will seek to base capacity building on existing models in the Outer Islands, and work with the implementers of those programs to design and implement training programs (e.g. the D'Arros Research Centre for re-vegetation; the UNDP-GEF Biosecurity project for implementation of biosecurity measures at Outer Island sites).

Output 2.5 - Ecosystem Restoration & Invasive Species Management support Protected Area management objectives

144. Ecosystem Restoration: The project will support the implementation of ecosystem restoration activities on Desroches and Alphonse Islands to counteract on-going and past land degradation (e.g. from coconut plantations, fire, unsustainable forest / wood harvesting). The project will focus on the removal of alien invasive plant species and the replanting of degraded areas with native vegetation (the project may also include mangrove reforestation on D'Arros island and the replication of that work on the north island of Poivre). This is the first part of a long-term strategy for these islands of restoring native vegetation, eradicating invasive alien mammals (rats and cats), and then restoring native birds species (e.g. Seychelles Turtle Dove, Seychelles Warbler, Magpie Robin, Aldabra Rail, Seychelles Fody) on selected islands; in order to achieve this long-term goal, each island will need to have sufficiently large areas of native forest to support native bird populations. On Desroches, re-vegetation will focus on the eastern half of the island (other parts of the island will remain areas for coconut harvesting, plantation forestry for wood production, and developed zones -- hotel, villas, airstrip, IDC village). ICS already has a program for re-vegetation on Desroches that has removed non-native Casuarina trees (in approx. 2.5

hectares), established a small nursery, and planted approximately 1,000 native plants since 2009. ICS will seek to determine optimal approaches (i.e. seed spreading with mulch vs. planting seedlings; physical removal of non-native plants vs. use of herbicides; etc.), with the goal of adopting a holistic ecosystem approach to ensure that natural pollinators and dispersers are present in the system and that a mixture of suitable plant species is used (since information on natural succession of species on these islands is extremely limited). In order to determine the best approaches and techniques, ICS will seek technical partners to scale-up its efforts on both Desroches and Alphonse, possibly including the D'Arros Research Centre (which has implemented re-vegetation of native forests and mangroves on D'Arros island) and / or the Plant Conservation Action Group (PCA), which provided advice for IAS removal and re-vegetation of approximately 40 hectares on North Island during the ICS-FFEM project (2005-09). In order to carry out this work, each island will utilize 3 full-time field staff (IDC), overseen by the IDC island Managers. This team will be supported by a part-time technical expert, probably based on Mahe but visiting each island 1-2 times per year. In addition to the direct benefits of re-vegetation on Desroches and Alphonse, another outcome will be a determination of the cost coefficients for ecosystem restoration in the terrestrial zones of the Outer Islands, which will provide highly useful information for the planning of similar activities on other islands (for example Poivre), as well as an analysis of which other Outer Islands are most appropriate for scaling up the re-vegetation activities after the GEF project ends. In addition, the DRC will carry out its own program to rehabilitate abandoned coconut forests and mangrove forests at D'Arros and St. Joseph.

145. Invasive Species Management: The project will undertake a suite of activities to support the establishment of prevention and control measures to limit future impacts of IAS in the Outer Islands. The primary focus of project activities will be biosecurity measures (prevention, containment, early warning and rapid response systems), including: risk analysis; improved communication on inter-island movements of IAS through the development and implementation of specific protocols for the Outer Islands; improved collaboration and greater synergy between governmental and non-governmental organizations dealing with biosecurity; and training and awareness raising on the new Seychelles Biosecurity Manual (a resource kit on inter-island biosecurity, developed by the Pacific Invasive Initiative for inter-island biosecurity in the Seychelles) for stakeholders responsible for management of the Outer Islands. The project will adapt the existing manual for each new PA unit managed by ICS (as well as for Aldabra), adding new specific biosecurity protocols for the Outer Islands, which may include: 1) specific protocols for IDC boats and planes, which are by far the most frequent arrivals on these islands, to strengthen inspections and control procedures at both points of embarkation for IDC and at arrival points on the islands; 2) new protocols for the transport of plants and manure; 3) guidelines for use of non-native organisms in mari-culture; and 4) protocols for the movement of pleasure craft, fishing boats and other sea going vessels among the outer islands. Finalization of new protocols may have to wait until the new Seychelles Protected Areas Act is enacted, so that regulations have the force of law and can be developed for each specific PA classification. The project also will produce leaflets and declaration cards (pointing out the legal requirements for biosecurity controls) relevant to biosecurity for the Outer Islands to be placed on all planes and boats travelling to those sites. The project's work on invasive species management will build on existing work that ICS and IDC are already undertaking in conjunction with the GEF Biosecurity project. The new biosecurity measures, as well as a more general and prioritize IAS management strategy, will be integrated into the new PA management plans for each of the 4 ICS PA units as well as Aldabra, which will provide a valuable model for the other Outer Islands of the Seychelles. In addition to biosecurity activities, the project also will carry out control programs (trap setting) of rats on Desroches and Alphonse islands in order to minimize the impact of these invasives on native birds, reptiles and amphibians, as well as their impact on efforts to restore native vegetation. Finally, project partners also will continue to engage in IAS policy and regulatory development at the national level (being led by the UNDP-GEF project "Mainstreaming prevention and control measures for invasive alien species into trade, transport and travel across the production landscape"), in particular by ensuring that national IAS legislation and policies, such as Part VIII of the draft Animal and Plant

Biosecurity Bill (2012) that covers internal biosecurity controls, include appropriate measures for the Outer Islands. Finally, the project will raise awareness of the threats posed by IAS to the ecological and economic values of the Outer Islands (see Output 2.7).

Output 2.6 - Monitoring & Management of Ecosystem Functions reduce land and resource degradation at Protected Area sites

146. The project will undertake activities to monitor and conserve critical terrestrial ecosystem functions on the targeted Outer Islands. These activities will include:

147. Coastal Erosion Control and Beach Profiling will be expanded in order to prevent / reduce coastal erosion, including that caused by development activities (e.g. hotel development on Alphonse), and as an adaptation to potential climate change impacts (possible increases in storm surges or extreme rainfall events). ICS currently has a beach monitoring program on Desroches and Alphonse (as does SIF on Aldabra), which is typically carried out in parallel with the sea turtle monitoring. There is however the need for an expanded program to determine shoreline vulnerability and monitor coastal erosion and to establish a sufficient number and distribution of monitoring sites to include replication between exposure regimes and management zones. The project will review and revise the existing beach profiling protocol and build capacity within ICS to properly manage and interpret data so as to be able to advise decision makers with regards to coastal erosion issues. Final selection of the monitoring sites (possibly including new sites) on the 4 ICS islands will be reviewed after finalization of the island LUPs. In addition, standardized beach monitoring protocols will be established (one option being the “Sandwatch” protocol, which has been tested elsewhere in the Seychelles, is relatively simple, and could be carried out through a “citizen science” programme on the islands where there are tourism developments), and training will be provided to all Outer Island NGO staff to help ensure data consistency. The beach profiling program will produce direct conservation outcomes by providing a baseline estimate of the extent of beaches and areas of shoreline change (deposition and erosion) on the targeted islands, as well as on-going data from monitoring that will help in assessing climate change impacts and coastal vulnerability over time and thereby guide management and development decisions for the islands.

148. Rainwater Harvesting Systems will be installed for the first time on the 4 targeted ICS islands in order to conserve water resources and reduce the pressure on the small freshwater aquifers underlying each island.

149. Energy and carbon footprint reduction (low-impact island lifestyle) strategy: The project will replace and update existing equipment with energy efficient and non-polluting alternatives for ICS offices on Desroches, Alphonse, Farquhar and Poivre in order to reduce costs and environmental impacts, and to showcase environmentally friendly and low impact technologies (photo-voltaic systems, solar-water heaters, LED lighting, ultra-efficient appliances, thermal insulation, FSC certified paper products, etc.).

INDICATORS AND RISKS

150. The project indicators are detailed in the Strategic Results Framework, which is attached in Section II of this Project Document.

151. Project risks and risk mitigation measures are described below.

Table 12: Risk Matrix

IDENTIFIED RISKS AND CATEGORY	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
<p><u>STRATEGIC</u> Opposition to restrictions on fishing / access to PA sites from local fishermen (semi-industrial fishers, especially sea cucumber and shark fishermen, as well as sport fishermen), tourism operators, and others who may wish to visit the islands, particularly as security gets better and local stocks get worse on Mahe plateau.</p>	Medium	Moderately Likely	Medium	<p>During project preparation, meetings were held with representatives of semi-industrial and sport fishermen (artisanal fishermen have not traditionally engaged in fishing in the Outer Islands; although this could change in the future with better on-board refrigeration capacity). In general, these groups welcome increased protection and the presence of conservation personnel in the Outer Islands; in their view one of the main threats to the fish stocks in the Outer Islands comes from illegal fishing by foreign vessels, as well as legal activities (e.g. the use of FADs by the foreign tuna fishing fleet) that negatively impact fish stocks and habitat. Sport fishing operators also see the marketing value for their operations of increased conservation status for selected Outer Islands, particularly those that carry out catch and release fishing operations (primarily fly fishing). Nevertheless, there are likely to be some areas / issues of conflict as the boundaries of the marine zones of the Protected Areas are established and/or restrictions are placed on fishing practices, gear, seasons, etc. To address these issues and reduce the potential for conflict, the project will continue to consult with and include fishermen in the processes to establish the Protected Areas and to create the Ecosystem-Wide Zoning and Master Strategy for the Outer Islands. The “national dialogue” process that will be implemented as part of the development of the Ecosystem-Wide Strategy (see Output 2.3) will be a critical tool for incorporating stakeholder concerns. In addition, the project will undertake activities to educate fishermen and tour operators on issues of fisheries sustainability and ecosystem impacts of fishing practices, so as to make clear the economic benefits and the benefits to fish stocks and ecosystem functions that can be produced by sustainable fishing activities. In this regard, the project will seek to use lessons learned and best practices developed by the Agulhas and Somali Current Large Marine Ecosystem (ASCLME) Project.</p>
<p><u>POLITICAL</u> Increasing incidents of piracy limits implementation of at-sea project activities.</p>	Medium	Moderately Likely	Medium	<p>Piracy incidents have declined in the western Indian Ocean, and specifically within the Seychelles EEZ, during the past 2-3 years. Nevertheless, the threat of piracy remains and has continued to reduce the all forms of marine travel in the Outer Islands, including fishing as well as research and monitoring activities. Existing activities to reduce the piracy threat including spending of approximately US\$3.0 million per year on anti-piracy patrols and surveillance by the Seychelles Coast Guard; this figure is supplemented by considerable technical and financial support from the international community, including patrolling of the western Indian Ocean by naval vessels from more than a dozen countries. The project cannot do anything to reduce the activities of pirates; however, part of the site selection criteria for the establishment of new Protected Areas was the selection of islands that can be accessed by air (all 5 islands / island groups that will become PAs have an airstrip). This, combined with the fact that most of the marine monitoring and conservation activities will be focused within the boundaries of the official PAs (which will extend 1 km. beyond the edge of the reef flat), means that piracy is unlikely to have a direct impact of the activities or results of the project. The one exception to this is the activities of the Pangaea research vessel, which will be traveling throughout the Outer Islands. However, the Pangaea Project has already come to an agreement with the Government of Seychelles to have six armed guards on the vessel at</p>

IDENTIFIED RISKS AND CATEGORY	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
				all times; based on this, both the Pangaea Project sponsors and the Government of Seychelles have approved the commencement of the first cruise starting in October 2013, based on the current level of threat from piracy.
<p><u>POLITICAL</u> Recommendations of the Ecosystem-wide Zoning & Master Strategy and provisions of the Land Use Plans are not implemented – in other words, these products are developed, but not used.</p>	Medium	Unlikely	Low	The Government of Seychelles fully backs the proposals contained in the PIF and the CEO Endorsement Request. More specifically, it acknowledges the need to strengthen the planning, assessment and consultation processes that precede the allocation of land to development projects in the Outer Islands, especially those with potential negative impacts on the environment. The Ecosystem-wide Zoning & Master Strategy for the Outer Islands and the Land Use Plans will be essential tools in this regard. With regard to the former, the project has been designed so development of the Ecosystem-Wide Strategy is highly transparent and inclusive (see Output 2.3). During project preparation, the critical institutions for management of the Outer Islands, especially the Islands Development Company but also the Ministry of Environment & Energy, the Ministry of Land Use and Housing, the Seychelles Fisheries Agency, and Petro Seychelles, were all consulted about the creation of an Ecosystem-Wide Strategy, and all of these parties expressed their support for this process. In addition, the Ecosystem-Wide Strategy will be submitted for Cabinet approval. Regarding the Land Use Plans for 4 islands, these will be developed based on a proven process that was used for the creation of Land Use Plans for Coetivy (the only Outer Island that currently has a Land Use Plan) as well as the main inner islands. In addition, the creation of these Land Use Plans was an explicit request of the Islands Development Company, which holds the long-term lease to each of the 4 islands and has authority for development and land use decisions on the islands (IDC wants to replicate the Land Use Planning process on other Outer Islands in the future, as a pre-condition for any development activities on any island). As with existing Land Use Plans, the plans for the 4 islands will be submitted to Cabinet for approval.
<p><u>ENVIRONMENTAL</u> Marine and terrestrial ecosystems are not sufficiently resilient and their biological and physical integrity is incrementally compromised by the effects of global and regional climate change</p>	Low	Moderately Likely	Low	The design of a more representative, comprehensive and adequate system of Coastal and Marine Protected Areas (CMPAs) in the Outer Islands, as well as a sustainable development and planning process for the wider seascape, will seek to integrate the CMPA subsystem into the country's evolving climate change adaptation strategy. The removal of threats, pressures and stresses that impact on the biodiversity of this region will ensure that ecosystems are more resilient to the impacts of climate change and therefore less vulnerable to its effects. (e.g. healthy coral that is not subject to other stresses like sedimentation and pollution is more resilient to climate-induced bleaching). The work of designing the CMPAs will take ecosystem resilience and emerging threats to biodiversity into consideration, including the threat of climate change impacts. The project will establish sea/landscape scale buffer areas (e.g. no fishing zones) and where possible, marine corridors connecting PAs, which can act as a safeguard for PAs against the undesired effects of climate change by allowing biodiversity to alter distribution patterns in response to increased climate variability effects.
<p><u>ECONOMIC</u> Oil and gas development,</p>	Medium	Moderately Likely	Low	Petro Seychelles is currently exploring potential oil and gas resources within the Seychelles EEZ. To date, most of the exploration has focused on the Mahe Plateau because that is continental land, whereas

IDENTIFIED RISKS AND CATEGORY	IMPACT	LIKELIHOOD	RISK ASSESSMENT	MITIGATION MEASURES
including: 1) exploration (i.e. seismic surveys, which pose a threat to various marine species); 2) operations, likely to begin in the next 5 years; 3) spills and pollution – national and regional oil spill contingency resources unable to respond to oil spills in Outer Islands; and 4) shipping hazards / collisions				the Outer Islands are volcanic and therefore less likely to have significant deposits of oil and gas. Several mechanisms already are in place to reduce the risk of oil and gas development. The use of seismic surveys by exploration companies requires the presence of MEE scientists on board the vessels to use monitoring equipment to check for the presence of marine mammals prior to surveying (ICS also has participated in this process). All applications for permits to drill must be reviewed by relevant government agencies including the Ministry of Environment and Energy (MEE) and the Islands Development Company (IDC) and will be subject to Environmental Impact Assessments overseen by MEE; any drilling operations proposed for inshore areas near to one of the Outer Islands will require further review by the Ministry of Environment and Energy. Drilling companies will be required to have a strong oil spill contingency plan and resources, approved by government. Finally, Petro Seychelles will be required to work with the Seychelles Coast Guard and the Seychelles Maritime Safety Administration to develop and implement shipping coordination processes to prevent collisions, spills, etc. In addition to these existing / planned mechanisms, the project will contribute to risk mitigation by developing the Ecosystem-wide Zoning & Master Strategy for the Outer Islands (Output 2.3), which will identify areas of critical habitat and/or ecosystem functioning where oil and gas development and/or shipping should be restricted. Petro Seychelles was consulted during the project preparation phase and has confirmed their interest and willingness to participate in the development of the Ecosystem-wide Strategy.

Table 13: Risk Assessment Guiding Matrix

Impact						
	CRITICAL	HIGH	MEDIUM	LOW	NEGLECTIBLE	
CERTAIN / IMMINENT	Critical	Critical	High	Medium	Low	Low
VERY LIKELY	Critical	High	High	Medium	Low	Low
LIKELY	High	High	Medium	Low	Low	Negligible
MODERATELY LIKELY	Medium	Medium	Low	Low	Low	Negligible
UNLIKELY	Low	Low	Negligible	Negligible	Negligible	Considered to pose no determinable risk

COST-EFFECTIVENESS

152. The project will seek to achieve a catalytic investment, through the development of key partnerships and cost sharing approaches and by taking advantage of ongoing development trends, to expand the protected areas estate in the Outer Islands of the Seychelles and ensure that new PA sites are effectively managed for biodiversity conservation and the preservation of ecosystem functions. The timing for expansion of the PA estate in the Outer Islands is highly advantageous for several reasons. Expected oil and gas development in the region not only makes this an opportune time to establish more protection for Outer Island ecosystems, but it also presents a potential significant funding source for PA management. Similarly, tourism development in the region is expected to increase in the next few years, and the project will expand and fine-tune the current model for conservation management based on tourism revenues. The potential debt for climate adaptation swap between the Government of Seychelles and the Paris Club of Creditors, expected to be finalized in 2014, will provide another US\$1.9 million/year over 20 years for marine protected area management in the country, much of which is likely to complement the goals and objectives of this project in the Outer Islands. The proposed project can also build off of current programs and policies in the Seychelles that have laid the groundwork for NGO and privately managed protected areas. These programs include the development of a new national PA policy (expected in late 2013) and a new PA law (expected in 2014), which will clarify the roles and responsibilities of NGOs and private partners as PA managers, and allow them to more efficiently implement PA management planning and carry out enforcement activities. Finally, the cost effectiveness of this project is enhanced by its partnership with the Pangaea Project, which will be expending significant funds to establish baseline biodiversity data for many critical habitats / species in the Outer Islands; this data will greatly enhance the ability of PA managers to prioritize management interventions and will support the siting and establishment of new official PA units as well as other types of conservation zones (such as IBAs and temporal protected zones).

153. Thus, the costs incurred in the implementation of the proposed project will relate only to those additional actions required to provide key incremental assistance to the government, NGOs and private partners in undertaking critical interventions to improve the representivity, governance, planning and operations of protected areas in the Outer Islands. The project will seek to complement and build upon the extensive baseline activities already underway by the three NGOs (ICS, SIF and DRC) operating existing or future PA sites in the Outer Islands. At the same time, the project will seek to utilize the existing resources and capacities of these NGOs as well as their private sector partners in the Outer Islands (IDC and hotel operators), and of key government institutions (MEE for planning and information management; SFA for fisheries monitoring and enforcement; etc.) to implement project activities. Increased co-financing commitments will continue to be targeted by the project during the implementation phase (e.g. securing funds for PA management from the new Corporate Social Responsibility tax; increasing tourism-based revenues for PA management).

154. The project seeks to catalyse the expansion of the national system of protected areas at five new sites in the Outer Islands, and improve management at new PA sites for biodiversity conservation and ecosystem functioning. The project will complement and build on existing baseline conservation and ecosystem rehabilitation efforts already underway at three of the proposed sites (Desroches, Alphonse and D'Arros).

155. The project is considered cost-effective for the following primary reasons:

- The estimated initial capital expenditure and operating costs (during the first 5 years) to establish effective PA management at each of the 4 ICS-managed PA sites is US\$311,000 / year (the 5th site, managed by the D'Arros Research Centre, is independently funded and will not receive any GEF project funding). Once basic infrastructure, equipment, processes and capacity building is in

place however, the on-going capital and operational costs of maintain effective PA management are significantly reduced to an estimated level of US\$164,000 / year. Thus, a catalytic investment by the GEF in the initial start-up costs of establishing these 4 PA units will reduce the recurrent costs of managing them over the long term by almost 50%.

- A modest expenditure in PA business planning and development of financial sustainability mechanisms will contribute to stabilizing the financial flows to protected areas. As a result of project investments, it is anticipated that by the end of the project revenues for the 4 ISC-managed PA units will increase from a baseline of approx. US\$189,000 / year to approx. US\$513,000 / year, with significant new income from additional tourism-based revenues and from the Corporate Social Responsibility tax. This estimate is conservative in that it does not include any funding from payments from the oil and gas industry to offset development in the Outer Islands, or payments from the Debt for Climate Change Adaptation Swap, although both of these sources could add substantially to the amount of funds available for PA management in the Outer Islands. Similarly, it does not include any estimate of increased donor funding, although the formal declaration of these islands as protected areas, as well as the increased baseline information that will allow for a better understanding of the global importance of these sites, will enable the PA managers to approach prospective donors with a stronger argument for support.
- Project support for the improvement of the proficiency and skills of protected area management staff will ensure that the productivity and effectiveness of the human resources available to support each PA site is enhanced and optimally organized. The initiation of collaborative efforts among ICS, DRC and SIF, as well as new partnerships with international researchers (primarily through the Pangaea Project), will further improve staff capacities. In addition, the project will help to develop a program whereby ICS and others can work with international volunteer organizations and/or national and international academic programs to fill some of the PA Unit staff positions with volunteers and /or graduate students.
- By improving the quality of baseline information on ecological conditions, and establishing a decision support system, the project will help PA managers to improve the quality and cost effectiveness of their management decisions. Similarly, the project will establish partnerships between PA managers and the SFA and Coast Guard to coordinate on enforcement and compliance, building on the existing Vessel Monitoring System (VMS) managed by SFA. The project also will support cost effectiveness through the best practices in marine habitat mapping and monitoring that will be developed by SIF and shared with other project partners, and by the testing and sharing of different methodologies and approaches to re-vegetation that will be developed jointly by ICS and DRC. Overall, the concurrent establishment and operationalization of these five PA units will produce significant benefits in terms of the sharing of resources and expertise among the different sites, and these benefits will be further extended through the proposed collaborations with SIF.
- Finally, the PA units established through the proposed project are designed to be demonstration sites to show the viability of establishing tourism-funded PA units at other sites in the Outer Islands, and ultimately it is envisaged that ICS and possibly other NGOs will operate a network of Protected Areas throughout the Outer Islands with significant revenues from tourism operations. The lessons learned from establishing the trained staff, infrastructure, equipment and PA management processes at these sites will be used to maximize the cost-effectiveness of establishing new PA units in the Outer Islands.

156. Alternate project approaches were considered, and are briefly discussed here. The alternatives include:

- *Expanding the PA system in the Outer Islands through government managed PAs:* This option would require financing investment for PA expansion, infrastructure development and procurement of equipment through loans from multilateral development agencies such as the

African Development Bank or World Bank. This scenario would presumably also achieve a similarly lasting effect in terms of the integrity of the protected area system. However, this option would put a burden on the Government to repay loans at a time when it is still going through structural reforms.

- *Establishment of a larger network of protected areas in the Outer Islands, including for example the southern islands of Cosmoledo, Astove and Assumption:* Many of the Outer Islands support globally significant biodiversity. However, despite their ecological values, there are a number of reasons why they were not included in the proposed project, primarily related to costs and feasibility. One of the key factors to ensure sustainability of any new PA unit in the Outer Islands is potential revenues from tourism developments; at present most islands do not have any pending developments, and for many their remote location may preclude any development for many years (while also making management of the island that much more costly). Other relevant issues include to logistics, infrastructure and personnel: each of the selected islands has a functioning airstrip and most or all of the required infrastructure in place, and 3 of the 5 islands already have conservation staff on site. Given the costs and challenges of establishing protected areas in the remote Outer Islands of the Seychelles, the proposed approach is believed to be the most likely way to sustainably protect important ecosystems while avoiding the creation of “paper parks”.

COUNTRY OWNERSHIP: COUNTRY ELIGIBILITY AND COUNTRY DRIVENNESS

157. The Government of Seychelles ratified the United Nations Convention on Biological Diversity (CBD) on 22nd September 1992 and the United Nations Convention to Combat Desertification (UNCCD) on the 26th June 1997. The project will assist the Seychelles in the implementation of the CBD Programme of Work on Protected Areas (PoWPA), which emphasizes that protected areas should not be seen as isolated entities but as part of a broader conservation spectrum including both a protected areas system and a wider ecosystem approach to conservation implemented across the entire landscape and seascape. Project activities will support the country’s efforts in contributing to achieving the global targets for the following goals: Goal 1.1 (national system of protected areas); Goal 1.4 (effective management of PAs using participatory and science-based planning processes); Goal 3.3 (development, validation, and transfer of appropriate technologies and innovative approaches for the effective management of protected areas); Goal 4.1 (standards, criteria, and best practices for planning, selecting, establishing, managing and governance of national systems of protected areas are developed and adopted); and Goal 4.4 (Scientific knowledge relevant to protected areas is further developed as a contribution to their establishment, effectiveness, and management).

158. Activities and programs in support of the CBD Aichi Targets are being formulated at the national level in connection with the NBSAP revision process. The proposed project will assist the Seychelles in making its contribution to the fulfilment of Aichi Targets at the national level in several ways, as follows:

Aichi Targets	Activities of proposed Outer Islands project
Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	The project will establish an Ecosystem-wide Zoning and Master Strategy for the Outer Islands that will establish goals, identify geographic areas and prescribe allowed activities, with regard to both conservation areas and oil and gas development, mariculture, fishing, tourism development, and other productive sector activities in the Outer Islands
Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to	The project has set targets for no net loss of the area (in hectares) of coral reefs, mangroves and seagrass beds at the 5 proposed protected area sites. In addition, the project will

Aichi Targets	Activities of proposed Outer Islands project
zero, and degradation and fragmentation is significantly reduced.	contribute to reducing habitat fragmentation by restoring native vegetation on 60 ha. at 2 proposed protected area sites.
Target 6: By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	The project will significantly increase the area (76,258 ha.) of marine ecosystems in the Outer Islands where fishing / harvesting activities are prohibited or restricted and where effective monitoring and enforcement is in place. It will also establish baseline information on numerous marine species, including commercial fish species, which is needed in order for the Seychelles Fishing Authority to create and implement a fisheries strategy for the Outer Islands.
Target 7: By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	As noted under Target 4, the Ecosystem-wide Zoning and Master Strategy for the Outer Islands will establish goals, identify geographic areas and prescribe allowed activities, with regard to mariculture in the Outer Islands. In addition, Land Use Plans developed for 4 of the protected area sites will include restrictions to limit any future expansion of agriculture and forestry activities at these sites.
Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	The project will implement the first ever biosecurity program for the Outer Islands of the Seychelles, targeting the 5 new protected areas as well as the existing Aldabra Special Reserve, which will include activities at these sites as well as at points of departure (airports, ports) on the main islands of the Seychelles. The project also will undertake control of invasive alien species (rats) at two PA sites.
Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	Coral reefs in the Outer Islands appear to have been impacted by climate change, including a major coral bleaching event that took place throughout the Outer Islands in 1998 (as well as subsequent smaller coral bleaching events). By establishing the boundaries of the new Protected Areas as extending for 1 km. beyond the edge of the reef flat at each site, significant areas of coral reefs will be protected from pressures associated with fishing and indiscriminate anchoring. In addition, the Ecosystem-wide Zoning and Master Strategy will designate marine shipping channels so as to reduce the potential for pollution from marine shipping activities to impact coral reefs, mangroves and seagrass beds
Target 11: By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	The project will expand the area of terrestrial ecosystems under protection by 1,237 ha. and the area of coastal / marine ecosystems by 76,258 ha. Seychelles has already designated approx. 50% of its terrestrial landscape as official protected areas; the area of coastal and marine ecosystems under protection is much smaller (in part because the EEZ of the country is so large); however, the Government of Seychelles is currently in the process of structuring a Debt for Climate Change Adaptation Swap that will designate 30% of the country's EEZ as a marine protected area.
Target 12: By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and	The project will strengthen the capacities of existing and new PA sites in the Outer Islands, thereby contributing to the conservation of endemic species such as the Seychelles clown fish (<i>Amphiprion fuscocaudatus</i>), the Aldabra Giant Tortoise

Aichi Targets	Activities of proposed Outer Islands project
sustained.	(Aldabrachelys gigantea), the Seychelles bamboo shark (Hemiscyllium cf. ocellatum); the Aldabra Rail (Dryolimnas cuvieri aldabrensis), Abbott's Sunbird (Cinnyris sovimanga, as well as other globally significant and endangered species including the Green sea turtle (Chelonia mydas) and Dugong (Dugong dugong), numerous coral species, and also spawning aggregations of species such as the "Endangered" Napoleon wrasse Cheilinus undulatus, "Vulnerable" Black-saddled Coral Grouper, Plectropomus laevis, and the "Near-threatened" Brown-marbled Grouper Epinephelus fuscoguttatus).
Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	As noted under Target 5, the project will restore native vegetation (forest) on 60 ha. at two protected area sites (these areas are currently grassland with a few coconut palms), thereby increasing carbon sequestration. In addition, the protection of seagrass beds and mangroves at 5 protected areas will provide carbon sequestration benefits.

PROJECT CONSISTENCY WITH NATIONAL PRIORITIES/PLANS:

159. The Government of Seychelles undertook a National Dialogue Initiative in November 2011 in order to secure stakeholder input to determine the allocation of GEF STAR funding²⁵ to priority projects. During this and subsequent follow-up meetings, part of the Biodiversity allocation, as well as the entire Land Degradation allocation, were allocated to the proposed project focusing on biodiversity conservation and SLM in the Outer Islands (the remaining Biodiversity allocation has been earmarked for a project addressing the sustainable financing of the Protected Area system). The proposed project was selected as a response to the urgent need to conserve Seychelles' Outer Islands' significant biodiversity, given the fact that only one significant protected area (Aldabra) is present in this region and that ecosystem connectivity and functionality is likely to be lost if not addressed before tourism, fisheries and oil and gas developments take place in the region.

160. The project will contribute to the objectives of the Seychelles Sustainable Development Strategy 2012-2020 (SSDS). Under the Biodiversity, Forests and Agriculture Thematic Area, the project will support Objective 1.1 to control invasive exotic species; Objective 1.3 to develop management systems for outer islands; Objective 2.1 to initiate assessment and taxonomic survey of key biodiversity; and Objective 2.2 to establish monitoring and data management systems. Under the Land Use, Coastal Zones and Urbanization Thematic Area, the project will support Objective 1.2 to develop tools for better land use and coastal zone management and Objective 1.3 to develop human resources, partnerships and to promote and facilitate on-going community involvement in coastal zone management issues through education and activities.

161. The project will assist the government in achieving a number of the "specific objectives" in the draft *Seychelles' Protected Areas Policy*, namely: 1) create conditions to effectively conserve 50% of national terrestrial areas and effectively conserve and manage 20% of marine area within the EEZ; 2) establish and implement effective mechanisms for private sector, NGOs and community involvement and engagement in the planning and management of protected areas; 3) develop and implement effective capacity development programme to strengthen the management of PAs; 4) provide for the restoration of

²⁵ System of Transparent Allocation of Resources.

degraded habitats and ecosystems of historical important biodiversity areas and put into place measures to prevent further degradation; 5) maintain and enhance terrestrial and marine ecosystems to guarantee long term ecosystem services; and 6) minimise and mitigate the impacts of climate change by maintaining the integrity and functions of ecosystems.

162. The project will contribute to two policy objectives in the *National Biodiversity Strategy and Action Plan* (NBSAP) that relate specifically to PAs: (i) ‘Consolidating the existing system of PAs, improve knowledge of appropriate classification, configuration and design, and develop, where necessary, legislation, guidelines, systems plans and management plans’; and (ii) ‘Ensuring wider participation in planning and management of PAs, with opportunities for the involvement of NGOs, district-based organisations and the private sector as well as international organisations’.

163. The project is aligned with the *Seychelles Sustainable Land Management Action Plan (2011 – 2020)*, in particular to 4 of the 6 goals outlined in the Plan: 1) Land use planning and management is supportive of sustainable land management; 2) Forested land and watersheds are sustainably managed; 3) Physical infrastructure developments and coastal zone developments are supportive of sustainable land management; and 4) Climate change adaptation measures are adequate to combat land degradation.

164. The project is consistent with the *National Strategy for Plant Conservation, 2005-2010*, which establishes 5 strategic objectives and 14 targets, of which sub-target 4b (*in situ* conservation) envisages ‘viable representation of 95% of threatened flowering plant taxa within protected areas’.

165. Finally, the project is aligned with the 2006 Government White Paper entitled the ‘*Outer Islands Development Plan*’ which set out guidelines for development on the outer islands, outlined proposed future developments of the outer islands and highlighted the role of the Island Development Company (IDC) in the proposed future development potentials of the outer islands, as well as the *2013 IDC Development Plan*, which identified objectives that include “promoting low impact and eco-friendly tourism development on the islands” and “participating as an active partner in and promoting environmental conservation, protection and climate change mitigation on the outer islands”.

SUSTAINABILITY AND REPLICABILITY

166. The project has been carefully designed to maximize the potential for the long-term sustainability of the interventions in biodiversity conservation and sustainable land management in the following areas:

167. Environmental sustainability will be promoted through the project by developing and implementing a coordinated, multi-stakeholder approach to expanding and strengthening the system of protected areas in the Outer Islands, set within a broader and comprehensive strategy process for the entire Outer Islands region. By establishing on-the-ground, officially sanctioned PA management staff at 5 island / island group sites, with adequate resources and facilities and sustainable financing mechanisms to support their work over the long term, but project will greatly increase the ability of the Seychelles to protect critical marine and terrestrial habitats and preserve ecosystem functioning in areas of the Outer Islands that currently have no formal protection. Furthermore, by carrying out extensive assessments and monitoring of key habitats and species, and implementing conservation and protection programs based on that work, the project will allow PA managers to greatly increase their ability to focus resources on the most important habitats and species and to respond to the most urgent threats. By implementing functional biosecurity programs at each island PA site, the project will put into place a relatively low cost system that will reduce the likelihood of future entry of invasive alien species and thereby reduce the threat of future environmental degradation. In addition, project activities to restore native forests will begin to

reverse the extensive terrestrial habitat degradation that impacted most of the islands over the past 150 years, setting the stage for the eventual recolonization of these islands by native flora and fauna through both management interventions and natural processes.

168. Institutional sustainability will be achieved by strengthening the MEE's institutional and individual capacities in data information management, decision support systems, and spatial planning processes, in order to develop, update and maintain Decision Support Systems (DSS), and to apply the DSS to the development and maintenance of the Ecosystem-Wide Zoning and Master Strategy for the Outer Islands. ICS and other Outer Islands conservation organizations will receive complementary training in the use of GIS and information management systems, and ICS will develop and implement a data management system (linked to the DSS) to improve information sharing between different PA sites and management agencies. With regard to PA management, the ongoing UNDP-GEF NGO PA project is expected to complete a capacity needs assessment and capacity building strategy for all PA management institutions in the Seychelles in late 2013. Using this strategy, the proposed project will implement capacity building activities for ICS, IDC, SIF and DRC staff to strengthen their capacity in PA management, including areas such as education, stakeholder outreach and communications; developing and implementing sustainable financing mechanisms and business planning; enforcement; recording and interpreting field data and other field-level work (habitat mapping; protocols for monitoring coral reefs, seagrass habitat and mangrove habitat; monitoring of sea turtles, fish and seabirds; and training of personnel in climate change adaptation). As part of the capacity building program, a series of video based training modules will be developed for conservation field work, based on video recordings of workshops, field visits, and associated documents and support materials. These modules are expected to reduce the high costs (due to their remote location) of future training for field staff at the Outer Island PA sites, as well as at other sites (the modules will be made available to all relevant partners in Seychelles and throughout the region).

169. Social sustainability will primarily be enhanced in the project through the processes to plan for and implement both conservation and sustainable development initiatives in the Outer Islands. By creating the first-ever planning strategy for the Outer Islands region, including a robust national dialogue process during the development of the strategy, the project will give national stakeholders more say in the decision-making about the priorities and uses of the Outer Islands than ever before. Decisions about the siting of official protected areas and other conservation zones, about oil and gas development, mariculture operations, and new tourism facilities, will involve more stakeholders and be based on more technical inputs and transparent processes than in the past. Similarly, specific stakeholder groups such as commercial and sport fishermen will be able to participate in decisions about PA boundary setting and zoning and the regulations adopted for conservation and sustainable use of the marine environment. Protected Area management will itself enhance social participation and sustainability, as the project will enable the participation of new NGO and private sectors partners as official PA managers. The project also will support PA managers in working with fishermen, tourism operators, and other interested parties (including private citizens who may want to visit the islands) in collaboratively seeking solutions that balance the needs of these groups and the biodiversity conservation and ecosystem functioning objectives of the designated PA sites. The involvement of stakeholders in the ecosystem wide processes and in operational protected area planning will be guided by stakeholder engagement plans, which will include provisions for conflict management with different user groups.

Replication

170. The Protected Area sites selected for this project are considered by the Government and the key Outer Island stakeholders (e.g. ICS, IDC, SIF) as demonstration sites that will allow national stakeholders to test different PA management strategies and classifications at sites with varying levels of resource use and development. By selecting sites with varied conditions and potential uses, the project will develop PA management models that can be replicated at almost all of the other Outer Island sites. In addition,

the Ecosystem-Wide Zoning and Master Strategy will identify other sites in the Outer Islands that are priority areas for future establishment of other protected areas. The long-term vision shared by the Ministry of Environment and Energy and the Islands Development Company is of a system of protected areas throughout Seychelles' Outer Islands. Each protected area would employ full time conservation staff engaged in the protection of the marine and terrestrial biodiversity of the islands, the design and implementation of conservation management plans, the rehabilitation of islands, the provision of training and educational opportunities and the monitoring of the environment in partnership with the Seychelles Government, IDC, NGOs, and private investors. Management of specific PA units would be determined by the needs of individual sites and the corresponding capacities of potential managers, but in general the vision is for NGOs to continue to take the leading role in PA management in the Outer Islands, with significant logistical support from both IDC and tourism developers / operators. The existing model of government-NGO-private cooperation, wherein each island with a protected area will have an Island Foundation that acts as a management structure and financing body, can be replicated at all of the sites that have yet to become protected areas.

171. More generally, each project output will include the documentation of lessons learnt from implementation of activities under the output, and the results, tools and guidance materials developed during implementation will be consolidated by the Project Manager. The Project Manager will ensure that this information will then be made accessible to different stakeholder groups in order to support better protected areas management and implementation of sustainable land management practices. Among the key technical elements that will be highly valuable for replication will be lessons learned on PA boundary setting and zoning; marine habitat mapping and monitoring; implantation of biosecurity systems; and cost-effective approaches for re-vegetation.

PART III: Management Arrangements

PROJECT IMPLEMENTATION ARRANGEMENT

172. The project will be implemented over a period of five years. UNDP will be responsible for the implementation of the project. The project will be nationally implemented (NIM) by the Ministry of Environment and Energy (MEE), in line with the Standard Basic Assistance Agreement (SBAA, 1977) between the UNDP and the Government of Seychelles.

173. The UNDP will monitor the project's implementation and achievement of the project outputs, and ensure the proper use of UNDP-GEF funds. Day-to-day operational oversight will be ensured by the UNDP Country Office (CO) for Mauritius and the Seychelles, and strategic oversight by the UNDP/EEG Regional Technical Advisor (RTA) responsible for the project. The UNDP CO will be responsible for: (i) providing financial and audit services to the project; (ii) recruitment and contracting of project staff; (iii) overseeing financial expenditures against project budgets; (iv) appointment of independent financial auditors and evaluators; and (v) ensuring that all activities, including procurement and financial services, are carried out in strict compliance with UNDP-GEF procedures.

174. A centralised Programme Coordination Unit (PCU) has been established by UNDP and the MEE to oversee, support, administer and coordinate the implementation of all UNDP-GEF environmental projects in Seychelles. The PCU currently comprises an international Programme Coordinator / Chief Technical Advisor (PC-CTA), Project Managers for the other UNDP-GEF projects under implementation, and financial and administrative support staff.

175. Day-to-day management of the project will be undertaken by a national Project Manager (PM). The PM will be located in the PCU, and the PCU will provide administrative and financial management support to the PM. The PM will report directly to the PC-CTA. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The Project Manager will liaise and work closely with all partner institutions to link the project with complementary regional and national programs and initiatives. The Project Manager will be recruited using standard UNDP recruitment procedures. The terms of reference for the PM are detailed in Section IV, Part IV.

176. The MEE will have the overall responsibility for achieving the project goal and objectives. MEE will designate a high level official to act as the National Project Director (NPD). The NPD will provide the strategic oversight and guidance to project implementation. The NPD will not be paid from the project funds, but will represent a Government in kind contribution to the Project. The NPD will sign and approve the project financial reports, the financial requests for advances under any contracts issued under NIM, and the MOU between the Government and the Island Conservation Society (ICS).

177. ICS, as the key implementing partner for 4 of the 5 sites where new Outer Islands Protected Areas will be established, will be a designated implementing partner for specific project outputs. During the project preparation phase, it was agreed that ICS will execute the following project outputs: all of Outputs 1.1 (apart from some activities on Aldabra Island), 1.3, 2.5 and 2.6, as well as parts of Outputs 1.2, 1.7, and 2.4 (details on the activities to be implemented by ICS are provided in Annex 4). ICS will hire a Project Coordinator (PC) specifically to manage the implementation of its activities under the project, including frequent visits to the Outer Island PA sites to manage ICS activities on the ground. The PC will report to the ICS CEO, and will liaise closely with and provide required inputs to the overall Project Manager. MEE will enter into a Memorandum of Understanding (MOU) with ICS to clarify all reporting relationships between ICS and the MEE, PCU and PSC, as well as the financial and reporting arrangements and procedures for the project (draft MOU is provided in Annex 5).

178. A Project Steering Committee (PSC) will be constituted to serve as the project's coordination and decision-making body. The PSC will ensure that the project remains on course to deliver the desired outcomes of the required quality. The PSC will be chaired by the NPD (the 'executive'²⁶), and will include representation from: ICS and the PCU ('senior supplier'²⁷), the 'senior beneficiary'²⁸ (to be determined), UNDP ('project assurance'²⁹), SNPA, IDC, and SFA. Representatives of other stakeholder groups may also be included in the PSC, as considered appropriate and necessary. Prospective membership of the PSC will be reviewed, and recommended for approval, during the Project Inception meeting. The PSC will meet at least twice per annum to review project progress, approve project work plans and approve major project deliverables. The final structure and functioning of the PSC will be reviewed, and recommended for approval, during the Project Inception meeting.

179. The Project Manager will prepare the Annual Work Plan (AWP) and Annual Budget Plan (ABP) each year for the project; the ICS Project Coordinator will prepare inputs as required for this process. The AWP and ABP will be approved by the PSC at the beginning of each year. These plans will provide the basis for allocating resources to planned activities. Once the PSC approves the AWP this will be sent to the UNDP Country Office and the UNDP Regional Technical Advisor for Biodiversity at the GEF Regional Coordinating Unit in Pretoria (South Africa) for clearance. Once the AWP and ABP is cleared

²⁶ The role of the 'executive' is to ensure that the project is focused on achieving its outputs and that the project adopts a cost-conscious approach.

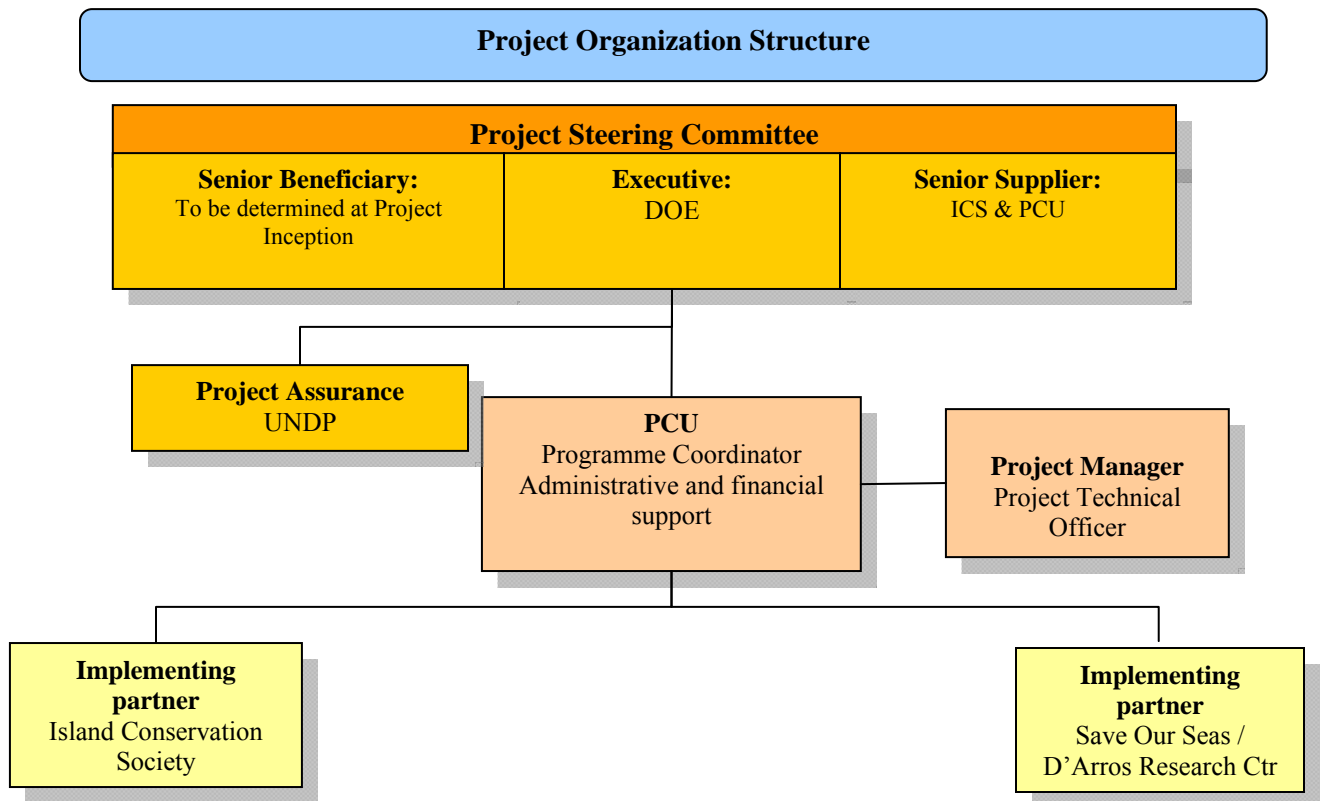
²⁷ The 'senior supplier' is accountable for the quality of the outputs delivered by the supplier(s)

²⁸ The 'senior beneficiary' commits user resources and monitors project outputs against agreed requirements

²⁹ The 'project assurance' will independently verify the quality of the products' or outputs'

by the Regional Coordinating Unit it will be sent to the UNDP/GEF Unit in New York for final approval and release of the funding, which will be channelled through the UNDP Country Office. The PM will, with the inputs of ICS, further produce quarterly operational reports and Annual Progress Reports (APR³⁰) for review by the PSC, or any other reports at the request of the PSC. These reports will summarize the progress made by the project versus the expected results, explain any significant variances, detail the necessary adjustments and be the main reporting mechanism for monitoring project activities. A calendar for the clearance and approval of work plans, requests for financial advances, financial reporting and technical reporting will be developed and agreed at the Local Project Appraisal Committee (LPAC).

180. An overview of the project organisation structure is shown below.



FINANCIAL AND OTHER PROCEDURES

181. The financial arrangements and procedures for the project are governed by the UNDP rules and regulations for National Implementation Modality (NIM). Financial transactions will be based on direct requests for advances – based on the quarterly work plans and financial reports - submitted by the MEE to UNDP. The arrangements for the financial reporting, request for transfer of funds, and the advance and disbursement of funds to the implementing partners will, in turn, be detailed in the MOU between MEE and the implementing partners. All procurement and financial transactions will be governed by national rules and regulations, and must be compatible with the UNDP rules and regulations as specified in the

³⁰ This will be combined with the PIR

Aide Memoire signed between UNDP and Department of Environment on the modus operandi of the PCU.

AUDIT CLAUSE

182. Audit will be conducted according to UNDP Financial Regulations and Rules and applicable Audit policies..

PART IV: Monitoring Framework and Evaluation

MONITORING AND REPORTING

183. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Project logframe (Project Results Framework) in Part III provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*. These will form the basis on which the project's Monitoring and Evaluation (M&E) system will be built. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

184. The project will be monitored through the following M&E activities. The M&E budget is provided in the table below.

Project start-up

185. A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.

- e) Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Steering Committee meeting should be held within the first 12 months following the inception workshop.

186. An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly

187. Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical). Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot. Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually

188. Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

189. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits

190. UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle

191. The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (insert date). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions;

and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the [UNDP Evaluation Office Evaluation Resource Centre \(ERC\)](#). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project

192. An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

193. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the [UNDP Evaluation Office Evaluation Resource Centre \(ERC\)](#). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

194. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing

195. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and visibility requirements

196. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at <http://intra.undp.org/coa/branding.shtml>, and specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects need to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.

197. Full compliance is also required with the GEF’s Communication and Visibility Guidelines (the “GEF Guidelines”). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

198. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

M&E workplan and budget

Table 14: M&E Activities, Responsibilities, Budget and Time Frame

Type of M&E activity	Responsible Parties	Budget US\$ Excluding project team staff time	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO, UNDP GEF 	Indicative cost: 2,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	None	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 20,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 30,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ Local consultant 	0	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project manager and team 	Indicative cost: 6,000	Yearly

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO, UNDP GEF 	Indicative cost: printing costs only, if any.	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	None	Quarterly
TOTAL indicative COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$58,000	

*Note: Costs included in this table are part and parcel of the UNDP Total Budget and Workplan (TBW) in the PRODOC, and not additional to it.

PART V: Legal Context

1. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA [or other appropriate governing agreement] and all Country Programme provisions apply to this document.

199. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

200. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

201. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

SECTION II: Strategic Results Framework (SRF) and GEF Increment

PART I: Strategic Results Framework Analysis

PROGRAMMATIC LINKS

Link to UNDP Strategic Plan (reference to the new plan – 2014-2017): [Link]
Output 2.3. Solutions at local level for sustainable management of natural resources, ecosystems and environmental services, for expanded jobs and livelihoods Output 3.5. Transparent and non-discriminatory legal and regulatory frameworks and policies enabled for sustainable management of natural resources, biodiversity and ecosystems (in line with international conventions and national legislation)
Link to UNDP’s Biodiversity and Ecosystems Global Framework (2012-2020): [Link]
Signature Programme #2: Unlocking the potential of protected areas (PAs), including indigenous and community conserved areas, to conserve biodiversity while contributing to sustainable development.
Contribution to UNDAF Outcomes: n/a
Expected CP Outcome(s) (2012-2016): Outcome 2: By 2016, the governance systems, use of technologies and practices and financing mechanisms that promote environmental, energy and climate-change adaptation have been mainstreamed into national development plans.
Applicable GEF Strategic Objective and Program: BD1: Improve Sustainability of Protected Area System LD3: Reduce pressures on natural resources from competing land uses in the wider landscape.
Applicable GEF Expected Outcomes: 1.1: Improved management effectiveness of existing and new protected areas 3.2 Good management practices in the wider landscape demonstrated and adopted by relevant economic sectors.

INDICATOR FRAMEWORK AS PART OF THE SRF

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP: Outcome 2: By 2016, the governance systems, use of technologies and practices and financing mechanisms that promote environmental, energy and climate-change adaptation have been mainstreamed into national development plans.
Country Programme Outcome Indicators: Area of terrestrial and marine ecosystems under improved management or heightened conservation status increased by 50 per cent by end of 2016.
Primary applicable Key Environment and Sustainable Development Key Result Area: Environment and Sustainable Development
Applicable GEF Strategic Objective and Program: BD1 <i>Improve the sustainability of Protected Area Systems</i> and LD3 <i>Reduce pressures on natural resources from competing land uses in the wider landscape.</i>
Applicable GEF Expected Outcomes: 1.1 <i>Improved management of existing and new protected areas</i> ; and 3.2 <i>Good management practices in the wider landscape demonstrated and adopted by relevant economic sectors.</i>
Applicable GEF Outcome Indicators: <ul style="list-style-type: none"> - METT scores for 5 PA sites will improve from an average of 46% to an average of 77% - 5 new Protected Areas encompassing 76,258 hectares of marine ecosystems and 1,237 hectares of terrestrial ecosystems - MEE, SFA, and NGO partners implementing activities within framework of Ecosystem-Wide Zoning and Master Strategy - Cost effective practices and protocols for native forest re-vegetation and biosecurity shared among all PA management institutions in the Outer Islands

	Indicator	Baseline	Targets (End of Project)	Source of verification	Risks and Assumptions
Project Objective To promote the conservation and sustainable use of coastal and marine biodiversity in the Seychelles' Outer Islands by integrating a National Subsystem of Coastal and Marine Protected Areas (CMPAs) into the broader land- and seascape while reducing the pressures on natural resources from competing land uses.	1. Capacity development indicator score for protected area system: <ul style="list-style-type: none"> • Systemic • Institutional • Individual 	60% 67% 48%	73% 73% 62%	Review of Capacity Development Indicator Scorecard	Assumptions: <ul style="list-style-type: none"> • The government, private sector and NGOs commit to constructively engage in protected area partnerships • Adequately qualified consultants / contractors can be sourced to provide technical support to project activities • The appointment of consultants / contractors is not unduly delayed by bureaucratic processes Risks: <ul style="list-style-type: none"> • Poor resilience of marine and terrestrial ecosystems to the effects of climate change • Oil and gas development, including: exploration, operations, spills and pollution, and shipping hazards / collisions
	2. METT scores: <ul style="list-style-type: none"> • Desroches • Alphonse • Poivre • Farquhar • D'Arros 	59% 58% 29% 29% 57%	80% 80% 74% 74% 76%	METT applied at Mid-Term and Final Evaluation	
	3. Coverage (ha) of official PAs in the Outer Islands (Aldabra; African Banks; Etoile; Boudeuse) <ul style="list-style-type: none"> - Marine - Terrestrial 	<ul style="list-style-type: none"> • 28,939 ha. • 15,261 ha. 	<ul style="list-style-type: none"> • 105,197 ha. (76,258 ha. added at 5 new PA sites) • 16,498 ha. (1,237 ha. added at 5 new PA sites) 	Legal gazettement of 5 new PAs	

	Indicator	Baseline	Targets (End of Project)	Source of verification	Risks and Assumptions
Outcome 1: Management effectiveness is enhanced within a sample of coastal and marine protected areas (IUCN Category I, II and VI) operating under innovative public-private-civil society partnership agreements.	Outputs 1.1 - Biodiversity & Ecosystem Assessment, Monitoring and Conservation Programs to strengthen PA Management 1.2 - Institutional capacity to plan and implement protected area expansion is strengthened 1.3 - Infrastructure and Resources Enhanced to enable Protected Areas management 1.4 - Protected Areas Legally Established 1.5 - Protected Area Management Structures in place and sufficiently financed 1.6 - Protected Area Management Plans Developed and Implemented 1.7 - Increased Education and Awareness levels support Protected Areas management in the Outer Islands				
	4. Detailed habitat maps of terrestrial and marine ecosystems of the Outer Islands	4 out-dated / rough-scale and incomplete maps of PA sites (Desroches, Alphonse, Poivre, and D'Arros)	5 updated, finer-scale and complete habitat maps of PA sites	Maps	Assumptions <ul style="list-style-type: none"> • Legal gazettement of new Protected Areas is not held up by bottlenecks in the executive or legislative branches of the Government • Enforcement authority is granted to NGO PA staff • Tourism development proceeds on Farquhar and Poivre, generating new income streams for PA management at those sites • Climate impacts (cyclones, storm surges, coral bleaching) do not reduce coral, mangrove and seagrass bed cover / functioning above background levels Risks: <ul style="list-style-type: none"> • Poor resilience of marine and terrestrial ecosystems to the effects of climate change • Oil and gas development, including: exploration, operations, spills and pollution, and shipping hazards / collisions
	5. Number of NGO PA staff with specialised training and/or skills development in: - Enforcement - Marine research and monitoring - Communications / Public Outreach	0 10 5	20 35 20	Project training reports Annual reports of implementing partners (ICS, SIF, DRC)	
	6. # of Protected Areas legally established and demarcated in Outer Islands	4 PA sites (Aldabra, African Banks, Boudeuse, Etoile)	9 new PAs at 5 sites legally gazetted by middle of year 3, and demarcated by end of year 4	Legal documents PA annual reports	
	7. # of conservation zones (fish protection zones; temporal zones; marine conservation corridors; Important Bird Areas) officially recognized in the Outer Islands	0	At least 3 zones with official recognition	Notification processes as determined in final, approved PA policy	
	8. Coral reef health, as measured by: • Percent live hard coral cover • Percent dead hard coral cover • Number of coral recruits (per m2)	TBD during Year 1 TBD during Year 1 TBD during Year 1	No decrease by project end No increase by project end No decrease by project end	Monitoring survey reports / Annual reports	
	9. Mangrove health, as measured by: • Average height and/or DBH • # of hectares	TBD during Year 1 TBD during Year 1	No decrease by project end No decrease by project end	Monitoring survey reports / Annual reports	
	10. Seagrass bed health, as measured by # of hectares	TBD during Year 1	No decrease by project end	Monitoring survey reports / Annual reports	

	Indicator	Baseline	Targets (End of Project)	Source of verification	Risks and Assumptions
	11. Health of selected reef fish stocks, as measured by: <ul style="list-style-type: none"> • Abundance per m³ • Species diversity • Biomass in kg per m⁻³ 	TBD during Year 1 TBD during Year 1 TBD during Year 1	No decrease by project end No decrease by project end No decrease by project end	Monitoring survey reports / Annual reports	
	12. Increase in funding support to 4 Outer Islands Protected Areas managed by ICS (US\$/annum): <ul style="list-style-type: none"> • Funding generated by ICS / Island Foundations • Contributions of Outer Island businesses (IDC & Hotels) • Corporate Social Responsibility Tax 	106,661 82,769 0	274,729 138,000 100,000	PA annual reports	
Outcome 2: Sustainable Development and CMPA management integrated into broader land/seascape in the Outer Islands	Outputs 2.1 - Spatially-based decision support system in place to enable integrated natural resource management in the Outer Islands 2.2 - Land Use Plans completed for targeted Islands 2.3 - Ecosystem-wide Zoning & Master Strategy for the Outer Islands in place to guide conservation and development activities 2.4 - Institutional Capacity strengthened for the implementation of Integrated Natural Resource Management 2.5 - Ecosystem Restoration & Invasive Species Management support Protected Area management objectives 2.6 - Monitoring & Management of Ecosystem Functions reduce land and resource degradation at Protected Area sites				
	13. Land Conversion at PA sites - Land conversion in new IUCN Category I (Seychelles Strict Nature Reserves) and IUCN Category II (Seychelles National Parks) PAs - Land conversion in new Category VI (Seychelles Sustainable Use Areas) PAs	- No existing restrictions on land conversion - On-going land conversion (e.g. tourism; forestry operations)	- 0% land conversion - <10% land conversion	National Gazette for areas under new protection regime	Assumptions • Climate impacts (cyclones, storm surges, coral bleaching) do not increase coastal erosion above background levels • The government allocates adequate resources (staff and budget) to fulfil its

	Indicator	Baseline	Targets (End of Project)	Source of verification	Risks and Assumptions
	14. Pressures from competing natural resources uses in the Outer Islands land- and seascape are reduced through an integrated natural resource management (INRM) framework, including: <ul style="list-style-type: none"> • Overall Planning Framework • Land Use Plans 	<ul style="list-style-type: none"> • No existing planning framework for the Outer Islands • 1 Land Use Plan (Coetivy Island) for the Outer Islands 	<ul style="list-style-type: none"> • Ecosystem-Wide Zoning and Master Strategy approved by Cabinet • 4 Land Use Plans for island with new PA units approved by Cabinet 	Cabinet Memorandum Cabinet Memorandum	<p>leading role in ecosystem level planning and information management systems</p> <p>Risks:</p> <ul style="list-style-type: none"> • Recommendations of the Ecosystem-wide Zoning & Master Strategy and provisions of the Land Use Plans are not implemented – in other words, these products are developed, but not used. • Poor resilience of marine and terrestrial ecosystems to the effects of climate change • Oil and gas development, including: exploration, operations, spills and pollution, and shipping hazards / collisions
	15. Extent (# of hectares) of Desroches and Alphonse Islands with restored native habitats <ul style="list-style-type: none"> • Desroches • Alphonse 	2.5 ha. 0 ha.	30 ha. 30 ha.	Annual reports of ICS	
	16. # of Outer Islands with functioning biosecurity processes (protocols under implementation)	1 island (D'Arros)	5 additional islands (Aldabra; Desroches; Alphonse; Poivre; Farquhar) by end of year 2	Annual reports of ICS, SIF and DRC	
	17. Number of Govt. and NGO PA staff with specialised training and/or skills development in: <ul style="list-style-type: none"> - Database management, decision support tools, and systematic conservation planning - Re-vegetation - Coastal Erosion Control - Biosecurity procedures 	5 5 0 0	12 15 10 20	Project training reports Annual reports of implementing partners (ICS, SIF, DRC, MEE, SNPA)	

Specific sub-indicators of Indicators 1 and 2 for tracking progress in management planning, education and awareness (in response to LPAC recommendation)

From METT – Baseline (2013) <i>Sub-indicator of Indicator 2</i>	Alphonse	Poivre	Facquar	D'Arros
METT Question 7. Management plan	1	0	0	3
METT Question 7a. Planning process - participation	1	1	0	1
METT Question 7b. Planning process - review	1	1	0	1
METT Question 7c. Planning process – monitoring	1	0	0	1
METT Question 20. Education and awareness	2	1	1	3

Capacity Development Scorecard highlighted questions: <i>Sub-indicator of Indicator 1</i>	Baseline (2013) out of max 3 points
Question 2.1. There are adequate skills for protected area planning and management	1.7
Question 2.5. Protected areas have regularly updated, participatorially prepared, comprehensive management plans	2.0
Question 2.7. Management plans are implemented in a timely manner effectively achieving their objectives	1.3
Question 4.1. Protected area institutions have the information they need to develop and monitor strategies and action plans for the management of the protected area system	1.7
Question 5.1. Protected area policy is continually reviewed and updated	1.0
Question 5.2. Society monitors the state of protected areas	2.0

PART II: Incremental Reasoning and Cost Analysis

EXPECTED GLOBAL, NATIONAL AND LOCAL BENEFITS

202. The GEF funding will secure protection to critically important biodiversity in the Outer Islands' region of Seychelles. It will deliver global benefits through the expansion of the PA network, the restoration/rehabilitation, and the improved conservation of the habitat of endemic species such as the Seychelles clown fish (*Amphiprion fuscocaudatus*), the Seychelles bamboo shark (*Hemiscyllium cf. ocellatum*), the Aldabra Rail (*Dryolimnas cuvieri aldabrensis*), Abbott's sunbird (*Cinnyris sovimanga*); as well as endangered species such as the whale shark (*Rhincodon typus*), Hawksbill turtle (*Eretmochelys imbricate*), leatherback turtle (*Dermochelys coriaca*), green turtle (*Chelonia mydas*), loggerhead turtle (*Caretta caretta*) and the dugong (*Dugong dugong*). In particular, extensive mangrove forests, seagrass beds, coral reefs, and lowland broadleaved forests will be conserved and, where possible, rehabilitated. With the proclamation of 5 new Protected Areas, the percentage of land in Seychelles under protected areas status will be above 50%, the highest percentage worldwide, and important marine ecosystems will be protected at each new PA site. The designation of these areas will also include three Important Bird Areas. The improved land/seascape management over a large geographical area will safeguard soil and water resources on the islands, increase carbon stocks, reduce GHG emissions, and protect biodiversity.

203. All citizens of Seychelles will indirectly benefit in economic terms from the implementation of the project. Fishing and tourism are by far the two most important economic sectors in the country, and the promotion of sustainable development in the Outer Islands region through these sectors will generate employment opportunities and income for many Seychellois and will help to ensure that these sectors are managed sustainably and continue to provide benefits over the long-term. For fisheries, the project will prevent the decline of fish stocks important for both local fishermen and tourism revenues. For the tourism sector, by limiting development and preventing environmental degradation, the project will ensure that tourism visitation will continue to the Outer Islands (tourists come to the Seychelles to enjoy the exceptional beauty of the country, and in the Outer Islands in particular, they come to engage in nature-related activities such as fishing and diving). The project also will establish an overall vision and strategy for the Outer Islands that will help to guide the development of other economic activities in the region (e.g. oil and gas development, mariculture) while also ensuring that such activities minimize their impact on natural ecosystem functioning and avoid critical habitat areas. In these ways, the project will engender a paradigm shift from unsustainable to well planned and collaborative sustainable use of natural resources in the Outer Island region. In the absence of measures to develop the region sustainably, as proposed herein, these essential sectors will not be able to harness their full economic potential or maintain socio-economic benefits over the long-term. With respect to gender, a recent study (2011), undertaken by Plan International and the Royal Commonwealth Society, ranked Seychelles high on gender equality (fifth highest among the 54 Commonwealth member countries). Based on this ranking, Seychelles is well positioned to ensure that both men and women will benefit from the socioeconomic benefits to be derived in the long-term as a result of a viable, growing 'green' economy in the Outer Islands region of Seychelles.

Incremental Cost Matrix

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
BENEFITS			
Global benefits	<p>Under the ‘business-as-usual’ scenario, only one actively managed protected area (Aldabra Special Reserve) will be functioning in the entire area of the Outer Islands of the Seychelles. Other islands, such as Desroches, Alphonse and D’Arros, will have conservation staff but these will be operating without the ability to enforce restrictions on resource use, and in most cases, with extremely limited funds, staff and equipment. Furthermore, because the vast majority of conservation resources and activities in the country are focused on the Inner Islands of Seychelles, where the bulk of the human population is concentrated, government programs for conservation and sustainable development in the Outer Islands will remain almost non-existent. Funding support from government and donors for other sites will largely consist of irregular <i>ad hoc</i> investments in a few, select islands. In this scenario, most resource and activities will remain limited to the management of the Aldabra Special Reserve. The majority of remaining terrestrial and marine ecosystems and species in the Outer Islands will remain vulnerable, and increasingly threatened as tourism, fisheries and oil and gas development all move forward in the region.</p>	<p>The project, which counts on financing from GEF, SOSF, SAIAB, ICS, SIF, IDC, the Government of Seychelles and UNDP, will remove key barriers for the operationalization of new protected areas; the implementation of planning processes and information systems to enable the development of a broad-scale conservation and sustainable development strategy for the entire Outer Islands region; and the implementation of cost-effective models for sustainable land management practices, including native forest revegetation and biosecurity. The GEF investment will enable the establishment and operationalization of five new protected areas encompassing both terrestrial and marine ecosystems; this will increase the number of operational PA units in the Outer Islands from 1 to 6; add 76,258 hectares of seascape and 1,237 hectares of landscape to the national PA estate; and establish two new organizations as official PA management institutions in the Seychelles. These new PA units will also be invaluable demonstration sites for the replication of additional sites, using different PA classifications and allowing for different levels of development activities, over the long-term in the Outer Islands. The project will also foster the systematic development of PA management capacities, processes and tools, including the mobilization of financial resources to support and sustain the PA expansion effort, including decreasing the financing gap for PA management. To ensure a reduction in land degradation, the project will develop a spatially-based DSS (Decision Support System) that can be available for use in cross-sectoral land/seascape planning, management and policy development. Based on the DSS, the project will facilitate the creation of an ecosystem-wide zoning and master strategy for the Outer Islands, the goal of which will be to provide the first coherent strategic level strategy for the whole of the Outer Islands of the Seychelles, including both terrestrial and marine realms, that will balance development and conservation needs, including the maintenance of global environmental benefits. At the site level, additional planning tools will include the development of land use plans for four islands / island groups. On the ground measures to address land degradation related issues will include native forest and mangrove re-vegetation at selected sites; erosion monitoring and control; and the establishment of biosecurity systems to prevent the entry of new invasive alien species, including those that impede re-vegetation efforts.</p>	<p>The GEF increment will strengthen protection for critically important biodiversity in the Outer Islands’ region of Seychelles. It will deliver global benefits through the expansion of the PA network, the restoration/rehabilitation, and the improved conservation of the habitat of endemic species such as the Seychelles clown fish (<i>Amphiprion fuscocaudatus</i>), the Seychelles bamboo shark (<i>Hemiscyllium cf. ocellatum</i>), the Aldabra Rail (<i>Dryolimnas cuvieri aldabrensis</i>), Abbott’s sunbird (<i>Cinnyris sovimanga</i>); as well as endangered species such as the whale shark (<i>Rhincodon typus</i>), Hawksbill turtle (<i>Eretmochelys imbricate</i>), leatherback turtle (<i>Dermochelys coriaca</i>), green turtle (<i>Chelonia mydas</i>), loggerhead turtle (<i>Caretta caretta</i>) and the dugong (<i>Dugong dugong</i>). In particular, extensive mangrove forests, seagrass beds, coral reefs, and lowland broadleaved forests will be conserved and, where possible, rehabilitated. With the proclamation of 5 new Protected Areas, the percentage of land in Seychelles under protected areas status will increase by 1,237 hectares, so that the overall total will be above 50%, the highest percentage worldwide. Important marine ecosystems also will be protected at each new PA site, adding 76,258 hectares to the PA system. The designation of these 5 sites will also include three Important Bird Areas. The improved land/seascape management over a large geographical area will safeguard soil and water resources on the islands, increase carbon stocks, reduce GHG emissions, and protect biodiversity. The project will strengthen the national contribution to the global Aichi Targets, specifically Target 4 on sustainable production, Target 5 on habitat protection, Target 6 on marine species, Target 7 on agriculture, aquaculture and forestry, Target 9 on invasive alien species, Target 10 on marine ecosystems, Target 11 on protected areas, Target 12 on species conservation, and Target 15 on climate resilience.</p>
National and local benefits	<p>Under the ‘business-as-usual’ scenario, efforts to guide development trends (tourism, fishing, oil and gas development) in the Outer Islands of the Seychelles will</p>	<p>The project will engage a variety of stakeholders in processes to plan for and implement both conservation and sustainable development initiatives in the Outer Islands. By creating the first-ever planning strategy for the Outer Islands region, including a robust national dialogue process during the development of the strategy,</p>	<p>The project is expected to yield national and local benefits through by supporting the long-term sustainability of the two most important economic sectors in the Seychelles: tourism and fishing. For fisheries, the project will prevent the</p>

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
	<p>be stymied by the lack of data, planning processes, or a participatory and widely supported mechanism for determining the future of the region. As a result, development will proceed without weighing the costs and benefits of various activities, or directing them towards areas where they are most suited; in this scenario, economic development will frequently be unsustainable and incur significant opportunity costs for the Seychelles by damaging / destroying natural ecosystem functions and values (e.g. healthy fish stocks; tourism friendly land and seascapes). Ecosystems in areas that are not legally protected as PAs will become increasingly degraded and will cease to render essential services. Over time, this will represent a loss to both the national economy and to local stakeholders.</p>	<p>the project will give national stakeholders more say in the decision-making about the priorities and uses of the Outer Islands than ever before. Decisions about the siting of official protected areas and other conservation zones, about oil and gas development, mariculture operations, and new tourism facilities, will involve more stakeholders and be based on more technical inputs and transparent processes than in the past. Similarly, specific stakeholder groups such as commercial and sport fishermen will be able to participate in decisions about PA boundary setting and zoning and the regulations adopted for conservation and sustainable use of the marine environment. Protected Area management will itself enhance social participation and sustainability, as the project will enable the participation of new NGO and private sectors partners as official PA managers. The project also will support PA managers in working with fishermen, tourism operators, and other interested parties (including private citizens who may want to visit the islands) in collaboratively seeking solutions that balance the needs of these groups and the biodiversity conservation and ecosystem functioning objectives of the designated PA sites. The involvement of stakeholders in the ecosystem wide processes and in operational protected area planning will be guided by stakeholder engagement plans, which will include provisions for conflict management with different user groups.</p>	<p>decline of fish stocks and the destruction of important habitat for fish species, to the benefit of local commercial fishermen, consumers, and the recreational and sport fishing sectors. For the tourism sector, by limiting development and preventing environmental degradation, the project will ensure that tourism visitation will continue to the Outer Islands (tourists come to the Seychelles to enjoy the exceptional beauty of the country, and in the Outer Islands in particular, they come to engage in nature-related activities such as fishing and diving). The project also will establish an overall vision and strategy for the Outer Islands that will help to guide the development of other economic activities in the region (e.g. oil and gas development, mariculture) while also ensuring that such activities minimize their impact on natural ecosystem functioning and avoid critical habitat areas. In these ways, the project will engender a paradigm shift from unsustainable to well-planned and collaborative sustainable use of natural resources in the Outer Island region.</p>

Budget and Workplan

0075876 / 00087541
 PIMS 4529: FSP Seychelles Outer Islands
 80371

Project Title:	Expansion and Strengthening of the Protected Area Subsystem of the Outer Islands of Seychelles and its Integration into the broader Land and Seascape
Implementing Partner (NIM agency)	Ministry of Environment and Energy (MEE)

id	Donor Name	ATLAS Budget Code	Atlas Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	TOTAL	Notes
0	GEF	71200	International Consultants	10,328	24,328	5,328	5,328	5,328	50,640	1
0	GEF	71300	Local Consultants	0	0	10,500	0	0	10,500	2
0	GEF	71400	Contractual Services - Individ	6,277	6,277	6,277	6,277	6,277	31,385	3
0	GEF	71600	Travel	14,231	13,231	9,231	9,231	9,230	55,154	4
0	GEF	72100	Contractual Services-Companies	38,250	36,250	6,000	6,000	6,000	92,500	5
0	GEF	72100	Contractual Services-Companies	445,853	155,500	84,000	105,000	30,461	820,814	6
0	GEF	74500	Miscellaneous Expenses	1,500	1,500	1,500	1,500	1,500	7,500	
				516,439	237,086	122,836	133,336	58,796	1,068,493	
0	GEF	71200	International Consultants	20,928	12,828	25,828	15,078	15,078	89,740	7
0	GEF	71300	Local Consultants	16,000	0	0	0	0	16,000	8
0	GEF	71400	Contractual Services - Individ	15,508	15,508	15,508	15,508	15,508	77,538	9
0	GEF	71600	Travel	3,500	6,500	11,100	8,825	8,825	38,750	10
0	GEF	72100	Contractual Services-Companies	22,000	13,000	9,000	1,000	3,000	48,000	11
0	GEF	72100	Contractual Services-Companies	89,042	59,551	43,551	43,551	36,886	272,581	12
0	GEF	72500	Supplies	1,600	0	0	0	0	1,600	13
0	GEF	72800	Information Technology Equipmt	10,000	0	0	0	0	10,000	14
0	GEF	74200	Audio Visual&Print Prod Costs	3,000	0	0	0	0	3,000	15
0	GEF	74500	Miscellaneous Expenses	978	978	978	978	979	4,891	21
				182,556	108,365	105,965	84,940	80,274	562,100	
0	GEF	71200	International Consultants	0	0	25,000	0	34,000	59,000	16
0	GEF	71400	Contractual Services - Individ	11,804	11,802	11,802	11,802	11,802	59,012	17
0	GEF	72100	Contractual Services-Companies	2,000	0	0	0	0	2,000	18
0	GEF	72200	Equipment and Furniture	28,615	0	0	0	0	28,615	19
0	GEF	74100	Professional Services	0	0	3,000	0	3,000	6,000	20

Budget Notes	
1	<p>1) International expert to design and implement capacity building workshop to enhance capacity of PA managers in sustainable financing / business planning for Protected Areas (\$7,000);</p> <p>2) International facilitator to lead consultative processes for PA boundary setting and zoning (\$500/day for 10 days) = \$5,000);</p> <p>3) International consultant to develop business Plan and sustainable financing mechanisms for ICS-managed PAs (20 days at \$600/day = \$12,000);</p> <p>4) Guidance / oversight for project implementation by international CTA of the UNDP-GEF Programme Coordination Unit (50% of his/her time for this project).</p>
2	Legal expert to guide process for gazetting 5 new PA units (6 weeks of work at US350/day = \$10,500)
3	Estimates: 40% time of Project Manager to guide activities for strengthening of PA management (technical inputs)
4	<p>1) Travel costs for visiting experts to design and oversee various ecosystem / species assessment, monitoring and conservation programs at 4 project PA management sites (\$57,692);</p> <p>2) travel costs for intl. facilitator for two workshops on PA boundary setting and zoning (\$5,000, including per diem);</p> <p>3) travel costs for intl. expert who will lead development of long-term PA Business Plan (\$4,000)</p>
5	<p>1) Capacity building of PA management staff (ICS, DRC, SIF) and enable effective management of newly established PA Units: (Ia) PA enforcement (\$50 per participant/day; 20 people/days/yr; \$1000x5yrs = \$5,000); (Ib) Data Analysis, Data Recording / Interpretation, and Tour Guiding (4,000 for each of these 3 activities, to pay for local expert, flights, training); (Ic) Basic marine research / monitoring activities (boat handling research; etc. (\$50 per participant/day; 25 people/days/yr; \$6,250); (Id) Communications, awareness building and public outreach training (e.g. photo/video production, website creation and maintenance (at \$50 per participant/day, 25 people/days/yr; \$1250x5yrs = \$6,250); (Ie) costs for two workshops for PA boundary setting and zoning (\$1,000);</p> <p>2) Education, outreach and awareness programs implemented by local partners (ENGOS) to build support for the new Outer Island PA management systems (\$30,000);</p> <p>3) Marine habitat mapping and refining and testing marine monitoring methods at Aldabra, with the goal of developing protocols and best practices that can be replicated at other Outer Islands PA sites (\$40,000)</p>
6	Contract with ICS to implement activities at 4 new Outer Island PA sites (see Annex 4 for details)
7	<p>1) Intl. Spatial Planning Expert and Facilitator to guide process for development of Decision Support System (5 weeks @ \$600/day = \$15,000);</p> <p>2) Intl. Consultant to lead the process of developing Land Use Plans for four Outer Island PA sites (24 working days - 12 on islands and 12 for report writing, finalization and consultation/presentations; 24 days x USD 650 = 15,600);</p> <p>3) Intl. expert to guide development of Ecosystem-wide Zoning and Master Strategy for the Outer Islands (4 weeks in year 3 and 3 weeks each in years 4-5 of project @ \$650/day);</p> <p>4) Guidance / oversight for project implementation by international CTA of the UNDP-GEF Programme Coordination Unit (50% of his/her time for this project)</p>
8	<p>1) Local technical experts to develop Land Use Plans for Outer Island PA Sites (Desroches 3 days, Poivre 2 days, Alphonse 2 days, Farquhar 5 days, for a total of 12 days for island visits and 3 days each for report writing, compilation of data etc.: 60 days x USD 250 = 15,000);</p> <p>2) local expert to adapt existing Biosecurity Manual for use at Outer Islands PA sites (\$1,000)</p>
9	<p>1) 40% time of Project Manager to guide activities for ecosystem planning and sustainable land management;</p> <p>2) one technical staff member at MEE Data Management Section to help develop and maintain the Decision Support System (SR10,000/month for years 1-4 of project = US\$36,923);</p>
10	<p>1) Travel costs (incl. per diem) for Intl. Spatial Planning Expert and Facilitator (1-week and a 2-week trip to Seychelles = \$10,000);</p> <p>2) travel costs (incl. per diem) for Intl. expert on Ecosystem-wide Planning (3 trips @ \$2,000/trip; 70 days @ \$325/day = \$22,750);</p>

Budget Notes	
11	1) Two public workshops to develop, validate and ensure participation and support for the Decision Support System (\$1,000); 2) several public workshops to review / validate island Land Use Plans (2,500); 3) Workshops / consultations for development of Ecosystem-wide Zoning and Master Strategy (4 planning workshops @ \$1,000 each and 2 public consultations @ \$2,000 each); 4) Capacity building of MEE and ICS staff in GIS, database management, decision support tools, mapping and Systematic Conservation Planning (national experts - \$10,000; workshops - \$1,500); 5) Capacity building of island-based staff of ICS, DRC, IDC and hotels to implement sustainable land management at PA sites (re-vegetation, beach profiling, coastal erosion control (national contractors – \$10,000); 6) Capacity building of IDC and ICS staff (Mahe and Outer Islands) to implement biosecurity protocols and procedures at Outer Island PA sites (national expert - \$10,000), as well as training of ICS island staff on biosecurity surveillance methodology (national expert - \$5,000)
12	Contract with ICS to implement activities at 4 new Outer Island PA sites (see Annex 4 for details)
13	Ink cartridges and Paper (3 sets of ink cartridges for plotter: 3 sets of USD 500 each = 1500; Paper A0 or A1: 100; Total: 1,600)
14	Computers, servers, and other info. tech. equipment to enable the MEE Data Management Section to manage the Decision Support System (US\$10,000)
15	Leaflets and declaration cards for Outer Islands biosecurity system (\$3,000)
16	International Consultants for Mid-Term Review (\$25,000) and Terminal Evaluation (\$34,000)
17	1) Project contribution for salaries of staff of the UNDP-GEF Programme Coordination Unit (Programme Coordinator, Finance Manager, Driver, PR Officer, and Program Assistant). As with all other UNDP-GEF projects in the country, project oversight and administrative functions will be carried out by the PCU staff, and the costs for their support are shared by the various projects on a proportional basis based on each project's share of GEF funding (the proposed project constitutes approx. 12% of the overall portfolio); 2) 20% time of Project Manager
18	Project Inception workshop
19	Vehicle for office; laptop and external hard drive for ICS Project Coordinator
20	Audits (two audits at \$3,000 each)
21	Miscellaneous Expenses

SECTION IV: Additional Information

PART I: Letters of co-financing commitment

See separate file for letters [\[Link\]](#)

Name of Co-financier		Date	Amounts (\$)
Islands Development Company	National Government	22-Jun-2013	807,962
Ministry of Environment & Energy		14-Jun-2013	190,471
Seychelles National Parks Authority		11-Jun-2013	25,000
Seychelles Fishing Authority		08-Jul-2013	8,250
Ministry of Land Use & Housing		08-Jul-2013	11,000
Island Conservation Society	CSO	13-Jun-2013	631,866
Save Our Seas / D'Arros	Foundation	17-Jun-2012	2,000,000
SAIAB / Pangaea		04-Jun-2013	4,500,000
Seychelles Islands Foundation		03-Jun-2013	2,000,000
Desroches Island Lodge	Private Sector	02-Dec-2013	109,500
United Nation Development Program	GEF Agency	21-Jun-2013	150,000
Total			10,434,049

PART II: Project Maps

See separate file for maps [\[Link\]](#), which includes:

- **Map 1: Map of the Inner and Outer Islands of the Republic of Seychelles:** Map showing all of the main islands of the Seychelles, including the Inner (Granitic) Islands and the Outer Islands
- **Map 2: Maps of Primary Outer Island Groups:** The location of the Seychelles and its Exclusive Economic Zone (EEZ), including inset maps that show the main Outer Island groups, including: Amirantes and Alphonse Group; Aldabra Group; Farquhar Atoll and Providence and; Ile Platte and Coetivy.
- **Map 3: Habitat Maps for Selected Outer Islands (from the Atlas of the Amirantes):** Habitat maps of the Amirantes Archipelago, focused on shallow marine environments and terrestrial floras. Twelve habitat maps were generated, 10 from the Amirantes Group and 2 from the Alphonse Group. The habitat maps of relevance to the proposed project (D'Arros and St. Joseph, Desroches, Poivre, Alphonse, Bijoutier and St. Francois), are presented in the attached document. (Note of relevance to the project: The Desroches map does not cover the whole of the reef area around the islands. Furthermore, Farquhar Atoll was not mapped during the course of this project and this is the most significant gap)
- **Map 4: Aerial Images of Selected Outer Islands:** Ortho-rectified aerial photographs of the Outer Islands for: a) D'Arros, b) Poivre, c) Alphonse and d) Desroches, acquired in November 2012. New images were not available for all of islands as they were still being processed, thus image e) shows an older aerial photograph for Farquhar.

PART III: Stakeholder Involvement Plan and Coordination with other Related Initiatives

Information dissemination, consultation, and similar activities that took place during the PPG

204. Project design was a highly participatory process, in line with UNDP's and GEF's requirements. During the project preparation stage, numerous meetings were held with stakeholders in order to assess their interests in the project and define their roles and responsibilities in project implementation (see the Stakeholder Analysis in Section I, Part I for a description of the primary stakeholders and their expected participation in / collaboration with the project). Field trips were carried out to Desroches and Poivre islands, and numerous stakeholders participated in the development of the project proposal. Two workshops at the national level were held to present the primary activities of the project and to solicit stakeholder inputs and validation. The Ministry of Environment and Energy (MEE) will be the official executing agency of the project, and the Island Conservation Society (ICS) will be a key sub-contractor for many of the site-based activities in the Outer Islands.

Stakeholder involvement plan

205. The project's design incorporates activities and mechanisms to ensure on-going and effective stakeholder participation in project implementation:

- Project inception workshop to enable stakeholder awareness of the start of project implementation: The project will be launched by a multi-stakeholder workshop. This workshop will provide an opportunity to provide all stakeholders with the most updated information on the project and the project work plan. It will also establish a basis for further consultation as the project's implementation commences.
- Project Steering Committee to ensure representation of stakeholder interests in project: A Project Steering Committee (PSC) will be constituted to ensure broad representation of all key interests throughout the project's implementation. The representation, and broad terms of reference, of the PSC are further described in Section I, Part III (Management Arrangements) of the Project Document.
- Project communications to facilitate on-going awareness of project: The project will develop, implement and maintain a communications strategy to ensure that all stakeholders are informed on an on-going basis about the project's objectives and activities; overall project progress; and the opportunities for involvement in various aspects of the project's implementation.
- Establishing cooperative governance structures to formalise stakeholder involvement in project: The project will actively seek to formalise cooperative governance structures (e.g. *Island Foundations*) at the four ICS-managed protected area units in order to ensure the on-going participation of government, NGO and private stakeholders in project and PA activities.
- Capacity building: Project activities are focused on building the capacity – at the systemic, institutional and individual levels – of the institutions, NGOs, and other stakeholders to ensure the sustainability of initial project investments. Significant GEF resources are directed at building the capacities of MEE at the institutional level to lead ecosystem-level information management and planning for conservation and development, and of ICS and NGO managers of Outer Island protected areas at the institutional and site level to enable more effective PA management.

Coordination with other related initiatives

206. UNDP is implementing several GEF projects in the Seychelles, and the proposed project will build on the experiences and lessons learned from these initiatives and apply them to the context of the Outer Islands. The project “*Strengthening Seychelles’ protected area system through NGO management modalities*” will provide valuable models for how to implement NGO management of protected areas,

including the process and strategies for official designation of NGO-managed PAs, boundary setting and zoning, development of management plans, reporting requirements (e.g. annual reports), and delegation of enforcement authority. In addition, the work of the Seychelles Islands Foundation on Aldabra will provide technical guidance and models for marine habitat mapping and monitoring, as well as recommendations for enhancing sustainable financing for NGO-managed PAs in the Seychelles. The work of Nature Seychelles on coral reef restoration may also guide similar work for PA sites in the Outer Islands, and its work on identifying potential sites for new Important Bird Areas throughout the Seychelles EEZ will be valuable as an input to the spatial planning process for the Outer Islands. Similarly, the work of the Marine Conservation Society of Seychelles on temporal conservation zones for turtles and whale sharks also will feed into the spatial planning process and siting of new conservation zones. The project "*Mainstreaming Biodiversity Management into Production Sector Activities*" will provide valuable lessons learned on the involvement of the private sector in joint management (e.g. with hotels) of ecologically sensitive sites; on the development of land use plans for the Outer Islands; and on working with local fishermen's groups (e.g. the Praslin Fishers' Association) to develop and implement sustainable fishing strategies and cooperative monitoring of fish stocks and marine ecosystem conditions. The project "*Capacity development for improved national and international environmental management in Seychelles (CB2)*" is developing a national environmental data management system; data compiled in this system will be applied in the creation of the Ecosystem Wide Zoning and Master Strategy for the Outer Islands. During the preparation phase of the proposed Outer Islands project, coordination with all three of the aforementioned projects was initiated to develop synergies and avoid duplication on activities related to environmental information management, spatial planning and decision-making, and related capacity building (for government and NGO partners) on such activities. The Ecosystem Wide Zoning and Master Strategy for the Outer Islands also will incorporate data and guidelines regarding the threats posed by shipping (spills; ballast water; vessel strikes) to Outer Islands ecosystems developed under the project "*Western Indian Ocean GEF Marine Highway and Coastal Contamination Prevention Project*".

207. The Project "*Mainstreaming Prevention and Control Measures for Invasive Alien Species into Trade, Transport and Travel across the Production Landscape*" is developing policy and legislation to prevent and control the entry and spread of IAS into and within the Seychelles, and a national Biosecurity Manual and associated protocols developed by that project will be adapted for use in the Outer Islands. In addition, the project has field-tested cost-effective measures for control of IAS in the field, and these will be incorporated into the IAS control measures applied in the Outer Islands. The proposed project also will coordinate with SIF on the EU-funded project "*Mainstreaming the Management of Invasive Species in Seychelles' World Heritage Sites*" with regard to strategies for invasive species management developed at the Aldabra Special Reserve and other islands in the Aldabra group.

208. To complement the work of the proposed project on assessment, monitoring and conservation of the marine environment of the Outer Islands, the project will seek to integrate data and lessons learned from the proposed GEF Small Grants Programme project "*Conserving marine mammals around Seychelles while maintaining sustainable use of marine resources against a background of urban development, petroleum exploration*", which is expected to begin implementation in late 2013. Among other activities, this project (which will be managed by MCSS, with ICS as a partner) for a cetacean monitoring network around the Seychelles will investigate the migratory patterns of cetaceans through the Amirantes Group, and will build national capacity (including PA staff in Outer Islands) in monitoring marine mammals by visual and acoustic methods to capture data on diversity, distribution and associated behaviour.

209. The project will seek lessons learned from the "*Agulhas and Somali Current Large Marine Ecosystem (ASCLME) Project*" with regard to the development of decision support systems for INRM and will complement the work of the ASCLME project by developing additional information on the marine ecosystems of the Outer Islands (the project also will seek on-going collaboration with the 2nd

phase of the ASCLME when it begins). Similarly, the proposed project expects to collaborate closely on the development of decision support systems and their use for spatial planning in the Seychelles EEZ with an effort being led by the Ministry of Environment and The Nature Conservancy (TNC) to develop and implement a *Debt for Climate Adaptation Swap* that will establish a large-scale marine protected area in the Seychelles. In exchange for debt forgiveness from the Paris Club group of creditors, the Government of Seychelles will establish an MPA covering 30% of the country's EEZ, with approximately 50% of the MPA being a fisheries no-take zone. Through this swap, the Government also will create a Seychelles Conservation & Climate Adaptation Trust (SCCAT) to oversee and fund conservation activities in the new MPA (with an annual budget of approx. US\$2.9 million); grants from the SCCAT will go to government or civil society organizations, targeting activities such as: expanding and improving management of marine protected areas and replenishment no-take zones; developing and/or improving coastal zone management, fisheries, and marine policy and regulatory protection regimes; coral and mangrove restoration projects; providing alternative livelihoods for affected users; improving social resiliency to climate change; and developing a comprehensive Disaster Risk Reduction strategy for the Seychelles marine coastal system. TNC expects to initiate "design of the MPA system" in October 2013, including a participatory process to determine the location and boundaries of the MPA. It is expected that this activity will provide critical data and experience with decision support tools and processes that will feed into the Ecosystem-wide Zoning and Master Strategy for the Outer Islands under the proposed GEF project.

210. Finally, the proposed project also will coordinate and share information with the regional Fonds Français pour l'Environnement Mondial (FFEM) project "*Contribution à la gestion durable et à la conservation du milieu marin dans la zone du sud-ouest de l'océan Indien: Appuis aux innovations locales et aux partenariats*", whose objective is to "consolidate, build and disseminate procedures validated by field experience in the areas of ICZM and the protection of marine and coastal biodiversity, based on active partnerships with local and regional actors". Although the FFEM project will not include any site-based activities in the Seychelles, Component 1 of the project (Capitalization and Experience and Knowledge Sharing) will seek to consolidate and disseminate "best practices and partnerships developed in the region and beyond, by local communities, NGOs, private sector, local government in the field of protection and management of habitats and marine and coastal resources", and will include activities for exchange visits and regional databases and information systems to support PA management in the region.

Specific areas of synergies with PCU implemented projects (*in response to LPAC recommendation*)

BD project '*Strengthening Seychelles' protected area system through NGO management modalities*', 2011-15, is strengthening the enabling environment for the project through a new PA Policy and legislation, and provides lessons learned from management arrangements with NGOs that may be more widely applied in the expanded PA system. Policy advancements are essential for the success of the Outer Islands project.

BD project '*Mainstreaming biodiversity management into production sector activities*', 2010-14, provides experience on the engagement of the private sector, specifically the tourism industry, and in the involvement of local communities in the co-management of MPAs, including the cost-effectiveness of these approaches. Collaboration on the sustainability label is an area to be explored.

IW project '*Agulhas and Somali Current Large Marine Ecosystems*' (ASCLME), 2008-13 contributes with information and strategic approaches to key threats facing the Seychelles waters including the management of the pelagic fishing industry that could otherwise impact on the expanded marine PA system. The ecosystem approach piloted by this project provides essential data from the Trans-boundary Diagnostic Analyses (TDA), key lessons and a cohesive and integrated management of the land- and seascape are enshrined in the Strategic Action Programme (SAP).

BD EA project '*National Biodiversity Planning to Support the implementation of the CBD 2011-2020 Strategic Plan in Seychelles*' 2012-2014/5 aims at supporting Seychelles with the updating of its NBSAP. A sound strategy on biodiversity that supports the PA expansion plans are essential, so synergies will also be sought.

PART IV. Terms of References for key project staff

OVERVIEW OF PROJECT CONSULTANTS

All TORs will be fully developed and validated prior to the launching of recruitment processes.

Overview of Inputs from Technical Assistance Consultants per financier

Natl. Intl.	Purpose	Financier	Intensity of input	Indicative budgetary allocation (US\$)	Key Tasks and Responsibilities
N	Project Manager	GEF	1 person for 5 years	78,462	See TOR
N	ICS Project Coordinator	GEF	1 person for 5 years	92,308	TBD
N	PA Site Conservation Officers (PA Managers)	GEF & ICS	4 persons for 5 years	304,615	Based on existing ICS staff positions
N	PA Site Conservation Rangers	GEF & ICS	5 persons for 5 years	226,154	Based on existing ICS staff positions
N	PA Site Rotating Staffer	GEF & ICS	1 person part time (3 months / year) for 5 years	17,308	To replace PA Site Conservation Officers and Rangers when they are “off-island”
I	Short Term Consultant: PA Business Planning	GEF	1 person for 4 weeks	12,000	Refer to description of Output 1.5
I	Short Term Consultant: Decision Support Systems for Integrated Natural Resource Management	GEF	1 person for 5 weeks	15,000	Refer to description of Output 2.1
I	Short-term Consultant: Island Land Use Plans	GEF	1 person for 24 days	15,600	Refer to description of Output 2.2
I	Short-term Consultant: Ecosystem-wide Zoning & Master Strategy for the Outer Islands	GEF	1 person for 10 weeks	32,500	Refer to description of Output 2.3
I	Mid-Term and Terminal Evaluations	GEF	20 person-weeks at approx. \$3,000 / week	59,000	Standard as per UNDP-Policy GEF guidance

Project Manager

Background

The Project Manager (PM) will be locally recruited by the UNDP CO based on an open competitive process. He/She will be responsible for the overall management of the project, including the mobilization of all project inputs and the supervision of project staff, consultants and sub-contractors. The PM will report to the PC-CTA and Programme Coordinator of the PCU for all of the project's substantive and administrative issues. From the strategic point of view of the project, the PM will report on a periodic basis to the Project Steering Committee (PSC). Generally, the PM will be responsible for meeting government obligations under the project, under the national implementation modality (NIM). He/She will perform a liaison role with the Government, UNDP, ICS, and other stakeholders, and maintain close collaboration with any donor agencies providing co-financing.

Duties and Responsibilities

- Supervise and coordinate the production of project outputs, as per the project document;
- Mobilize all project inputs in accordance with procedures for nationally implemented projects;
- Supervise and coordinate the work of all project staff, consultants and sub-contractors;
- In close liaison with the implementing partner ICS, prepare and revise project work and financial plans;
- Liaise with relevant government agencies, and all implementing partners for effective coordination of all project activities;
- Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, MEE and other oversight agencies;
- Disseminate project reports and respond to queries from stakeholders;
- Report progress of project to the PSC, and ensure the fulfilment of PSC directives.
- Oversee the exchange and sharing of experiences and lessons learned with relevant conservation and sustainable development projects nationally and internationally;
- Ensure the timely and effective implementation of all components of the project;
- Assist relevant government agencies and implementing partners with development of essential skills through training workshops and on the job training, thereby upgrading their institutional capabilities;
- Carry out regular, announced and unannounced inspections of all sites and activities.

Qualifications

- A post-graduate university degree in Environmental Management;
- At least 10 years of experience in natural resource planning and management (preferably in the context of protected area planning and management);
- At least 5 years of project management experience;
- Working experience with the project stakeholder institutions and agencies is desired;
- Ability to effectively coordinate a multi-stakeholder project;
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project;
- Strong writing, presentation and reporting skills;
- Strong computer skills;
- A good working knowledge of English is a requirement.

S

Financial Scorecard, LD-PMAT, Capacity Scorecard

*Scorecards applied in the project**

Business Tracking Tool (METT)** [[Link](#)]

Adopted in 2013:

(St. Francois / Bijoutier

North Island)

(South Island, Ile Goellettes, Banc du Sable)

(St. Joseph)

Capacity Scorecard for Protected Area Systems** [[Link](#)]

Portfolio Monitoring and Tracking Tool (LD-PMAT) [[Link](#)]

Cost Assessment Scorecard for Protected Area Systems [[Link](#)]

reproduced below. **METT and FS are combined into one Excel file as per GEF template.

SUMMARY OF PA SITES' MANAGEMENT EFFECTIVENESS TRACKING TOOL (METT)

See Separate File for detailed METT information [[Link](#)]

Name of Protected Area	<i>Desroches Sustainable Use PA</i>	<i>Alphonse Sustainable Use PA; St. Francois and Bijoutier Strict Nature Reserve</i>	<i>Poivre (South Island)</i>	<i>South Island Farquhar National Park; Banc du Sable / Ile Goelettes Strict Nature Reserve</i>	<i>D'Arros & St. Joseph</i>
Is this a new protected area?	Yes	Yes	Yes	Yes	Yes
Area in Hectares	34669	13024	2975	22692	4135
Global designation or priority lists	none	none	None	Important Bird Area	None
Local Designation of Protected Area	Sustainable Use Area	Sustainable Use Area	To be determined	National Park & Ecological Reserve	Sustainable Use Area (marine) & St. Joseph Strict Ecological Reserve
IUCN Category	6	6	2	2	1
METT Score 2013	60	59	30	30	58
METT Score 2013 (% of possible)	58.8%	57.8%	29.4%	29.4%	56.9%

FINANCIAL SUSTAINABILITY FOR PA SYSTEMS – SCORING

See Separate File for detailed Financial Scorecard information [[Link](#)]

Summary of Scoring for the Financial Scorecard in 2013 – FS Part II

FINANCIAL SCORECARD – PART II Summarised – ASSESSING ELEMENTS OF THE FINANCING SYSTEM	<i>Current Scores 2013 FS (in GEF SOI TT)</i>	<i>GEF TT Total Possible Scores</i>	<i>% per element</i>
Component 1 – Legal, regulatory and institutional frameworks	21	95	22%
Element 1 – Legal, policy and regulatory support for revenue generation by PAs	1	6	17%
Element 2 - Legal, policy and regulatory support for revenue retention and sharing within the PA system	1	9	11%
Element 3 - Legal and regulatory conditions for establishing Funds (endowment, sinking or revolving)	1	9	11%
Element 4 - Legal, policy and regulatory support for alternative institutional arrangements for PA mgt to reduce cost burden to Gov.	3	12	25%
Element 5 - National PA financing policies and strategies	1	18	6%
Element 6 - Economic valuation of protected area systems (ecosystem services, tourism based employment etc)	2	6	33%
Element 7 - Improved government budgeting for PA systems	1	8	13%
Element 8 - Clearly defined institutional responsibilities for financial management of PAs	2	3	67%
Element 9 - Well-defined staffing requirements, profiles and incentives at site and system level	9	24	38%
Component 2 – Business planning and tools for cost-effective management	17	59	29%
Element 1 – PA site-level business planning	6	18	33%
Element 2 - Operational, transparent and useful accounting and auditing systems	3	9	33%
Element 3 - Systems for monitoring and reporting on financial management performance	4	12	33%
Element 4 - Methods for allocating funds across individual PA sites	0	2	0%
Element 5 - Training and support networks to enable PA managers to operate more cost-effectively	4	18	22%
Component 3 – Tools for revenue generation by PAs	22	71	31%
Element 1 - Number and variety of revenue sources used across the PA system	5	12	42%
Element 2 - Setting and establishment of user fees across the PA system	4	15	27%
Element 3 - Effective fee collection systems	6	11	55%
Element 4 - Marketing and communication strategies for revenue generation mechanisms	2	6	33%
Element 5 - Operational PES schemes for PAs	4	12	33%
Element 6 - Concessions operating within PAs	0	12	0%
Element 7 - PA training programmes on revenue generation mechanisms	1	3	33%
Total Score	59	225	26%

GEF 5 LD-PMAT

See Separate File for detailed LD-PMAT information [[Link](#)]

Summary of TT LD3 – SLM in wider landscapes (integrated management)			Notes
i. Enhanced cross-sector enabling environment for integrated landscape management	Framework strengthening INRM	4	A National Action Plan (NAP) and an Integrated Financing Scheme (IFS) for sustainable land management for Seychelles exist as policy frameworks as of 2010
	Integrated land management plans (# of plans)	5	Exists for Mahe, Praslin, La Digue, Cerf and Coetivy islands
	Capacity strengthening (Score, out of 5. Score of 2 means “INRM framework has been discussed and formally proposed”)	2	Only 1 person amongst 9 trained with on-site practical expertise to undertake land use planning at the GIS centre, as part of 2 year understudy program of an expatriate expert
ii. Integrated landscape management practices adopted by local communities	Spatial coverage of integrated natural resource management practices in wider landscapes (ha)	21,147	Area covering the 5 islands of Mahe, Praslin, La Digue, Cerf Island and Coetivy for which land use plans exist
	Indicate number of INRM tools and methodologies introduced and list at most three below (# of tools)	7	Also newly introduced methodologies include using a multi-stakeholder group representing different sectors to carry out ground truthing of demarcated zones from aerial photography.
	Drip irrigation introduced on Desroches island for agricultural production	n/a	
	Hand-held GPS used for more accurate demarcation of area boundaries in the development of island management plans	n/a	
	Use of aerial photography dated 2012 to undertake initial land use demarcation for island land use plans	n/a	
iii. Increased investments in integrated landscape management	1. Direct payments or PES schemes	\$37,400	Combined costs borne by Government of Seychelles , Islands Development Company, Great Plains Seychelles and Desroches Island Lodge for the production of the island land use and conservation management plans as of December 2012
	2. Small credit schemes	n/a	
	3. Voluntary carbon market	n/a	
	4. Eco-labeling, certification schemes	n/a	

SUMMARY OF CAPACITY DEVELOPMENT ASSESSMENT SCORECARD

See Separate File for detailed Capacity Development Assessment Scorecard information [[Link](#)]

Matrix of the Capacity Development Assessment Scorecard for Protected Area Systems (Summary)										
Strategic Areas of Support	Systemic			Institutional			Individual			Average %
	Project Scores	Total possible score	%	Project Scores	Total possible score	%	Project Scores	Total possible score	%	
(1) Capacity to conceptualize and develop sectoral and cross-sectoral policy and regulatory frameworks	4	6	67%	2	3	67%	N/A	NA	NA	67%
(2) Capacity to formulate, operationalize and implement sectoral and cross-sectoral programmes and projects	5	9	56%	18	27	67%	5	12	42%	58%
(3) Capacity to mobilize and manage partnerships, including with the civil society and the private sector	4	6	67%	4	6	67%	2	3	67%	67%
(4) Technical skills related specifically to the requirements of the SPs and associated Conventions	2	3	67%	2	3	67%	2	3	67%	67%
(5) Capacity to monitor, evaluate and report at the sector and project levels	3	6	50%	4	6	67%	1	3	33%	53%
TOTAL Score and average for %'s	18	30	60%	30	45	67%	10	21	48%	60%

Annex 2. Technical reports

See separate file [[Link](#)]

<i>Contents</i>
1. Summary Table of Proposed New Protected Areas
2. Summary Table of All Existing Protected Areas in the Seychelles
3. Seychelles Biodiversity
4. Details on Project Sites (proposed Protected Areas)
5. Details on Development of Terrestrial and marine habitat maps for the core PAs

Annex 3. UNDP Environmental and Social Screening

Applied in June 2013, concluded on 28 Aug 2013 -- See separate file [[Link](#)].

of Implementing Partner Island Conservation Society

Ministry of Environment & Energy (MEE)

and Conservation Society (ICS)

Name: GEF

Notes in the TBW: 6 and 12

_Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	TOTAL	Notes
Consultants	47,250	47,250	2,000	2,000	2,000	100,500	1
Contractual Services-Companies	18,000	34,250	8,000	13,000	8,000	81,250	2
Materials & Goods	144,949	0	0	0	0	144,949	3
Audio Visual & Print Prod Costs	5,000	0	0	0	0	5,000	4
Total for Output 1.1	215,199	81,500	10,000	15,000	10,000	331,699	
Contractual Services - Individuals	57,000	57,000	57,000	57,000	3,462	231,462	5
Total for Output 1.2	57,000	57,000	57,000	57,000	3,462	231,462	
Equipment and Furniture	129,423	0	0	0	0	129,423	6
Supplies	1,923	1,923	1,923	1,923	1,923	9,615	7
Information Technology Equipmt	17,231	0	0	0	0	17,231	8
Total for Output 1.3	148,577	1,923	1,923	1,923	1,923	156,269	
Local Consultants	0	0	0	16,000	0	16,000	9
Total for Output 1.4	0	0	0	16,000	0	16,000	
Contractual Services-Companies	5,000	0	0	0	0	5,000	10
Supplies	1,600	1,600	1,600	1,600	1,600	8,000	11
Information Technology Equipmt	5,000	0	0	0	0	5,000	12
Audio Visual & Print Prod Costs	2,400	2,400	2,400	2,400	2,400	12,000	13
Total for Output 1.7	14,000	4,000	4,000	4,000	4,000	30,000	
Contractual Services - Individ	11,077	11,077	11,077	11,077	11,077	55,385	14
Total for Cross-Cutting	11,077	11,077	11,077	11,077	11,077	55,385	
	445,853	155,500	84,000	105,000	30,462	820,815	

4529 Project Output under Budget lines 6 and 12	_Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	TOTAL	Notes
Institutional Capacity for Integrated Natural Resource Management	Information Technology Equipmt	0	2000	0	0	0	2,000	16
	Total for Output 2.4	0	12,000	0	0	0	12,000	
Output 2.5: Ecosystem Restoration & Invasive Species Management	Local Consultants	7,000	7,000	7,000	7,000	7,000	35,000	17
	Contractual Services - Individ	22,500	22,500	22,500	22,500	22,500	112,500	18
	Materials & Goods	40,408	0	0	0	0	40,408	19
	Total for Output 2.5	69,908	29,500	29,500	29,500	29,500	187,908	
Output 2.6: Monitoring & Management of Ecosystem Functions	Local Consultants	11,750	0	0	0	0	11,750	20
	Materials & Goods	0	10,662	6,667	6,667	0	23,996	21
	Total for Output 2.6	11,750	10,662	6,667	6,667	0	35,746	
Cross-Cutting	Contractual Services - Individ	7,386	7,385	7,385	7,385	7,385	36,926	22
	Total for Cross-Cutting	7,386	7,385	7,385	7,385	7,385	36,926	
Sub-Total: Component 2		89,044	59,547	43,552	43,552	36,885	272,580	
TOTAL PROJECT		534,897	215,047	127,552	148,552	67,347	1,093,395	

ICS Budget ref.	ICS Budget Notes
1	Various local consultants for ecosystem/species assessment, monitoring and conservation activities (see Output 1.1 worksheet for details)
2	1) Boat hires to conduct assessments/conservation in remote areas (\$40,000); 2) Video training modules for conservation field work (\$20,000 for editing of resulting video footage and production of finished video training modules, production of adapted web-based video portal, technicians); 3) Certification of two skippers on each of the 4 islands with a 10 nautical mile license (\$10,000); 4) Dive certification, small engine/outboard/generator/ compressor maintenance at \$50 per participant/day, 25 people/days/yr; \$1250x5yrs = \$6,250); 5) Training of a curator for Coral Collection Facility (\$5,000; send someone to SAIAB)
3	Equipment and materials for all ecosystem / species assessment, monitoring and conservation activities (see Output 1.1 worksheet for details)
4	Video Training Modules for conservation field work (\$5,000 for purchase of video recording materials)
5	Hiring of staff for Farquhar and Poivre PAs (\$214,154; see Project Manage worksheet for details)
6	General Office Equipment (desks, chairs, filing cabinets, book shelves, dry cabinets, fridges, A/C, notice boards, signboards, dry boxes, deep freezers; satellite phones; cooking equipment; bicycles; Boats (19-foot boats with 40hp engine and 15hp backup engine; anchors, radios, safety equipment, cover for SR20,000; (see ICS Logistics worksheet for details)
7	Office supplies (Reference books, stationary, etc.) (see ICS Logistics worksheet for details)
8	Each island: 1 hard drive and replacement; laptops + one replacement, printer, maintenance costs (see ICS Logistics worksheet for details)

9	Local consultants to work with ICS to create official PA Management Plans (\$5,000 each for Farquhar and Poivre, \$3,000 each for Desroches & Alphonse)
10	Local contract company to design and maintain website for ICS (\$5,000)
11	Supplies for ICS education and awareness program for Outer Island Protected Areas
12	Presentation equipment for ICS education and awareness program for Outer Island Protected Areas
13	Production of videos, photography exhibits, etc. for ICS education and awareness program for Outer Island Protected Areas
14	ICS Project Coordinator (60% time)
15	National consultant to develop ICS information management system (8 weeks at \$250/day = \$10,000)
16	Server and hard drives for ICS information management system (\$2,000)
17	Local part time consultant project manager to guide ecosystem restoration activities on Desroches & Alphonse (14 days per year per island @ \$250/day = \$35,000)
18	5 part time workers to carry out ecosystem restoration activities on Desroches & Alphonse (SR500/day for 45days/yr per island = SR1,125,000 or \$86,538 for whole project, + SR337,500 or \$25,962 for their food);
19	1) Equipment and materials for sustainable land management activities (beach profiling, coastal erosion control = \$3000); 2) Equipment/material for re-vegetation of native species (\$32,308); 3) Equipment for control of invasive alien species (400 rat traps at \$11.5 each = \$4,600 + \$500 for replacement parts)
20	1) Local consultant to review and develop protocol for coastal erosion control and beach profiling (20 days @ \$250/day = \$5,000); 2) Local consultant to assess coastal erosion and propose mitigative measures on all 4 islands (20 days @ \$250/day = \$5,000); 3) Local part time consultant to manage implementation of rainwater harvesting (250/day for 7 days = \$1,750);
21	1) Beach profiling equipment for Desroches, Alphonse, Poivre and Farquhar (\$2,000); 2) Rainwater harvesting equipment (\$1,000); installation (\$1,000); 3) Energy and carbon footprint reduction (low-impact island lifestyle) strategy: Photovoltaic systems, rainwater catchment systems, solar-water heater, LED light technologies, ultra-efficient appliances, thermal insulation, FSC certified paper products, and alike): Equipment (\$15,000); Installation costs (\$5,000).
22	ICS Project Coordinator (40% time)

Detailed Budget for Output 1.1: BD Assessment, Monitoring and Conservation

Activities	Budget	Budget Notes	Responsibilities & Technical Inputs
Activity 1.1.1: Preparation of terrestrial and marine habitat maps	\$14,720	1. ICS-managed islands: Worldview satellite imagery (@ US\$20 per sq. km., 230 sq. km for Farquhar, 346 sq. km. for Desroches; 130 sq. km. for Alphonse; 30 sq. km. for Poivre = \$14,720); equipment is covered under 1.1.2	1. Technical experts provide on-the-job training to MEE, ICS and DRC staff to carry out ground-truthing and accuracy assessment field surveys. 2. Technical expert to work with MEE (and ICS?) staff to prepare final set of habitat maps.
Activity 1.1.2: Assessment, Monitoring and Conservation of Coral Reefs	\$114,500	1) Establish Coral Reef Monitoring Stations: Running costs of \$6,000 per year (10 sites at 5 islands) = \$30,000; GVI onsite fish and coral ID training with ICS staff; Dive equipment + tanks (4 full sets and 8 tanks for Alphonse, Farquhar, Desroches, Poivre) and relevant servicing kits = \$20,000; Dive compressor and relevant servicing kits, for Farquhar and Poivre (\$10,000) + running and maintenance costs (\$5,000) (on islands with hotels, dive operators will provide use of their compressors); Underwater paper, pencils, clipboards, 50m fibre glass measuring tapes, and other accessories (\$3,000); Basic underwater camera and casing and accessories for 4 islands (\$3,000); 2 High quality underwater video camera & casing. Software, accessories, service kits, to be shared among centres for dedicated/specific monitoring and research (\$8,000); ID guides and reference material e.g. Corals of the World CD ROM for each island (\$3,000); 2) Coral Disease Monitoring & Data Management: Training workshop on coral disease identification and monitoring techniques (\$5,000); ID guide/manual (\$2,000; equipment (bone cutters, hammer and chisel, Steel rods, rope, stainless steel nails, florescent tape, zip-loc bags, 70% ethanol and Z-Fix concentrate for preservation of samples, specimen containers etc.) (\$3,500); 3) Monitor Physical Parameters: Instruments to measure water characteristics (e.g. turbidity meters, secchi disks, settling cones, salinity and pH recorders, Or all-in-One system, E. coli, etc....) for 4 target islands (\$7,500); 4) Coral Collection Facility: Storage and labelling related equipment and material (\$2,000), running costs, microscope with USB & camera/screen capture capability (\$1,500), expert curator technical assistance, and postal costs related to sampling and identification (\$2,000), develop protocol (\$4,000); 5. Coral reef conservation plan for 4 island sites (\$5,000)	1. A coral disease expert will guide the monitoring activities, with inputs from MEE, MoH and others; 2. ICS will work with UniSey and SAIAB to establish the Coral Collection Facility, possibly with support of a scientific collections expert

Activities	Budget	Budget Notes	Responsibilities & Technical Inputs
Activity 1.1.3: Assessment, Monitoring and Conservation of Seagrass Beds	\$5,000	On-going monitoring of ecosystem conditions + Seagrass bed conservation plan for 4 ICS islands (\$5,000)	1. Technical expert to work with and provide training to ICS and SIF staff; 2. ICS and SIF staff to implement field surveys
Activity 1.1.4: Assessment, Monitoring and Conservation of Mangroves	\$5,000	On-going monitoring of ecosystem conditions + Mangrove conservation plan for 4 ICS islands (\$5,000)	1. Technical expert to work with and provide training to ICS, SIF and DRC staff; 2. ICS, SIF and DRC staff to implement field surveys
Activity 1.1.5: Assessment, Monitoring and Conservation of Terrestrial Fauna	\$6,229	1. Feral tortoises (tagging materials; data processing, protocol development, approx. \$4,229); 2. Invertebrate surveys (technical guidance, \$2,000)	ICS
Activity 1.1.6: Assessment, Monitoring and Conservation of Sea Turtles	\$57,500	1) Initial Training & Rapid Surveys: Expert to devise protocol, train personnel, data analysis, report writing (80 days) (\$20,000); Turtle tags (\$4,000); 15 applicators (\$4,500), 2 GPS (\$500); 2) New Protocols & Long-Term Data Collection: Adaptation of cybertracker software and creation of database (\$5,000), training workshop (\$1,500), sea turtle expert to assess turtles and tracks, foraging surveys, clutch survival, growth rates, etc. (\$5,000); 10 handheld computers (with GPS) adapted for Cybertracker use (\$12,000); 3) Sea turtle conservation plan for 4 ICS islands (\$5,000)	1. ICS, DRC and SIF will work together to develop a joint monitoring protocol; 2. SAIAB / Pangaea will provide logistical and technical support; 3. Sea Turtle expert to facilitate upgrading and standardizing of field survey methods.
Activity 1.1.7: Assessment, Monitoring and Conservation of Fish	\$23,000	1) Fish Biodiversity Surveys: \$8,000 (\$2,000 per island) for building of fish traps, fuel for boats, rental of boat; 2) Logistical / travel support for 4 ICS participants/volunteers on Pangaea (2 person for 2 cruises/year x 5 years = \$10,000); 3) Fishing pressure survey (\$2,500 for a university student, in collaboration with SFA); 4) Study of the impacts of FADs on marine fauna , such as juvenile sea turtles (\$2,500 for a university student, in collaboration with SFA)	1. ICS, SFA and SAIAB will collaborate; 2. Fisheries expert to carry out fish biodiversity surveys; 3. SFA and university student to conduct fishing pressure survey and analysis of FAD impacts

Activities	Budget	Budget Notes	Responsibilities & Technical Inputs
Activity 1.1.8: Assessment, Monitoring and Conservation of Seabirds	\$52,000	1) Training: Cost for 12-14 trainees include food (\$2,500), Bird steal rings (\$2,000), ringing equipment (\$1,000), misc. equipment (\$1,000), 2 GPS (\$500); Expert(s) for 2 x 10 days (\$5,000); 2) Monitoring Systems: Database (\$5,000); seabird expert (\$2,500); also items budgeted under Sea Turtles (10 handheld computers with GPS adapted for Cybertracker use; Cybertracker software; training workshop; 3) Ornithologist / Seabird expert to devise protocols, train personnel, data collection (75 days) and analysis & report writing (35 days) (\$27,500); 4) Seabird conservation plan for 4 ICS islands (\$5,000)	1. Ornithologist / Seabird expert to lead training; 2. ICS, SAIAB, DRC and SIF to collaborate on digital and spatio-temporal data recording device and protocol; 3. Cybertracker expert, Seabird expert and database developer; 4. ICS, SAIAB, DRC and SIF on data collection
Activity 1.1.9: Current and potential climate change impacts on biodiversity and ecosystem functioning assessed and monitored	\$10,500	\$7,500 for 40 data loggers and accessories (e.g. shuttle, software) on 4 islands; \$3,000 for technical expert for analysis of time-series data	1. ICS and DRC responsible for deploying temperature loggers and archiving and analysis of data, in collaboration with SFA and the MET office; 2. Technical Expert will support analysis of time-series data in final year of project
Activity 1.1.10: Establishment of 'citizen science' recreational diver observation monitoring programme	\$7,000	\$2,000 for technical expert to design survey protocol and data collection sheet; \$1,000 for training; \$2,500 for equipment (e.g. GPS, identification manuals); \$1,500 for data verification and entry and project management	1. ICS and Dive Centres will prepare survey protocol and data collection sheets and ensure that data is regularly entered in database; 2. Technical expert to design survey form and undertake training with participating institutions
Activity 1.1.11: Establishment of 'citizen science' recreational fisheries monitoring programmes	\$7,000	\$2,000 for technical expert to design survey protocol and data collection sheet; \$1,000 for training; \$2,500 for equipment (e.g. GPS, identification manuals); \$1,500 for data verification and entry and project management	1. ICS and operators to collaborate on use of surveys; 2. Technical expert to assist ICS in reviewing survey protocol used by sports fishing operators on Alphonse, and to facilitate use of survey protocol with operator on Desroches
Activity 1.1.12: Marine habitat mapping & monitoring programs on Aldabra	\$40,000	SIF will work on Aldabra to finalize its marine habitat mapping, and to further refine and test marine monitoring methods, which could then be applied to the other Outer Islands	
Total	\$342,449		

Annex 5: Draft Memorandum of Understanding (MOU) between the Government of Seychelles and the Island Conservation Society

MEMORANDUM OF UNDERSTANDING

BETWEEN

The Government of Seychelles represented by the Ministry of Environment and Energy
hereafter referred to as MEE

AND

The Island Conservation Society, hereafter referred to as ICS

1. Description and Scope of Work

1.1 The purpose of this MOU is to provide a framework and facilitate cooperation between MEE and ICS for the implementation of the UNDP/GEF funded project: "Expansion and Strengthening of the Protected Area Subsystem of the Outer Islands of Seychelles and its Integration into the broader land and seascape".

1.2 ICS has the responsibility to implement activities (XXX) of the project: i.e. (title) with an allocated budget of (USD X) as described in the project document (Annex 1).

1.3 All activities will be carried out according to the agreed project document (Annex 1) and in accordance with the current applicable rules, regulations, and directives of GOS.

2.0 Areas of Cooperation

2.1 GOS and ICS agree to cooperate and coordinate activities to facilitate implementation of the project within the approved allocated time frame (See Annex 1)

3.0 Commencement and Duration

3.1 *This MOU shall commence on (Commencement Date) and terminate (Termination Date) subject to earlier termination in accordance with the terms of Agreement.*

4.0 Deliverables

4.1 The deliverables are set out in the project document in Annex 1.

5.0 Obligations of ICS

5.1 ICS shall

- Execute the Project with the highest standards of professional and ethical competency and integrity and with reasonable skill, care and diligence;
- Provide co-finance which shall be utilised in the execution of the Project in accordance with the Project Budget;
- Provide personnel time and logistical support.

- Starting in year 5 of the project, cover the costs of new protected area staff at Poivre and Farquhar (1 Conservation Officer and 1 Conservation Ranger on each island)

6.0 Payment and Reporting

6.1 MEE shall pay ICS a total amount of US\$ X (US dollars in words) for the implementation of activities described in the project document (Annex 1) over the period of this Agreement

6.2 GOS shall request UNDP/GEF to make payments to ICS in accordance with the agreed Project Budget and Milestones for Payment set out in the project document. Should any funds remain after finalisation of the Project, ICS shall return all unused funds to GOS.

6.3 The funds provided under this agreement shall not be used for any purpose other than the ones specified under this Agreement. Any expenditure over and above the funds provided under this contract shall not be reimbursed or otherwise covered by MEE.

6.4 ICS will need to submit a quarterly workplan to the Project Manager with associated budget.

6.5 MEE will advance the fund on a quarterly basis Based on quarterly workplan

6.6 At the end of the quarter, technical and financial report will need to be prepared and submitted to the Project Manager following format provided by UNDP (See Annex 2).

6.7 The replenishment of the advance can be requested when 80% of the advance has been spent for project implementation.

6.8 Payments shall be transferred to the account of the NGOs at the following bank:

Bank Name:	X
Bank Address:	X
Account Name:	X
Account No.:	X
SWIFT Code:	X

6.9 ICS shall, within seven (7) calendar days, confirm each receipt of funds from MEE.

6.10 ICS shall use acceptable accounting procedures and reconcile expenses with the funds received from MEE. Any interest accrued from advance payments shall be credited to the project as income.

6.11 Prior written approval by MEE is required for any reallocation of funds among the budget lines.

6.12 Financial reports must be signed and certified by ICS. Original supporting documents related to each financial report must be sent to PCU with copies retained and made available for review and inspection by MEE and/or MEE's appointed representatives.

6.13 Upon completion or termination of this contract, NGO shall maintain the financial records for a period of at least five (5) years, unless otherwise agreed between the two Parties.

7.0. Procurement of goods and services and disposal of equipment

7.1 ICS shall use UNDP and GEF procedures for procurement of goods and services, which comply with accepted international accounting and procurement practices.

7.2 If the work is to be sub-contracted to a third party, then ICS is required to notify MEE the name of the sub-contractor and the value of work sub-contracted.

7.3 Equipment purchased with the financial resources provided by this contract and in accordance with the budget to remain the property of UNDP until the end of the project, when they will become the property of GOS or ICS depending for what purpose it was procured. ICS shall maintain an inventory of such equipment and shall submit the inventory with each financial report.

8. Communication and Reporting

8.1 All correspondence in connection with this contract shall be directed to the project Manager (PCU) as per UNDP/GEF and MEE requirements with copies sent to the following:

Didier Dogley
(Contact details)

Project Manager
Contact details

Tel :
Fax:
Email:

8.2 ICS shall promptly inform MEE of any event or circumstance which it becomes aware of that, in ICS's opinion, is likely to impact on the scope, cost or timing of the Project and as a result, it may affect or interfere with, or seriously hinder or impair, its ability to perform under this contract.

8.3 The Project Manager from the UNDP office, on behalf of MEE, shall also conduct monitoring of the project from time to time. The arrangements for each monitoring visit shall be communicated in advance to the ICS.

9.0 Intellectual Property Rights and Acknowledgements

9.1 All legal rights in all outputs that are produced under this contract in any format and media shall jointly vest in UNDP/GEF, MEE and ICS.

9.2 Use of the UNDP/GEF and MEE logos for any purpose requires prior written approval from UNDP/GEF and MEE. Neither shall use the name, logo or trademarks of the other party, or any its subsidiaries, and/or affiliates, or any abbreviation thereof, without the express prior written approval of the other Party.

9.3 MEE acknowledges that it is familiar with the ideals and objectives of ICS and recognizes that its name and logo may not be used in a manner inconsistent with its

status, reputation and neutrality.

10.0 Indemnification

10.1 ICS agrees to indemnify MEE against any claims which may be made against MEE, or losses MEE may incur, for any injury or damage suffered by any person, arising out of, or as a consequence of, the execution of this Agreement. Provided that MEE is not indemnified against, nor is ICS liable for, any claim or loss caused by the gross negligence of MEE.

11.0 Dispute Resolution /settlement of disputes

11.1 If any dispute of whatsoever nature arises between MEE and ICS in respect of any matter arising from or connected to this Agreement, MEE and ICS shall make every effort to resolve through dialogue any disputes arising from the execution of this contract.

11.2 if the dispute cannot be settled by way of negotiation or in any other form agreed on by them within three months from the date on which one notifies the other of the existence of the dispute, shall be submitted to arbitration in accordance with the laws of the Republic of Seychelles.

12.0 Modification

12.1 Any notice or request required or permitted to be given or made under this MOU shall be in writing. Such notice or request shall be deemed to have been duly given or made when it shall have been delivered by hand, certified mail or fax to the party to which it is required to be given or made at the address specified below or such other address as shall be hereafter notified:

13.0 Consultation and Exchange of Information

13.1 MEE and ICS shall, at such intervals as deemed appropriate, convene meetings to review the progress of activities being carried out under the present MOU and to plan future activities.

13.2 Consultation and exchange of information and documents shall be without prejudice to arrangements, which may be required to safeguard the confidential and restricted character of certain information and documents. Such arrangements will survive the termination of this MOU and of any agreements signed by the parties within the scope of this collaboration.

14.0 Termination

14.1 MEE and ICS shall give each other ninety (90) days prior written notice of intent to suspend or terminate this contract for any reason other than default. In the event of voluntary termination prior to the expiration of this contract, MEE and ICS shall agree in writing to a plan for orderly conclusion of all activities. Any expenses not included in the agreed termination plan shall not be reimbursed or otherwise covered by MEE.

14.2 In the event that ICS defaults in carrying out any of its obligations under this contract, MEE shall send a written notice specifying the measures that must be

taken to remedy the default and specifying the period within which those measures must be implemented. In the event that the default is not remedied within the specified period, MEE shall notify ICS to suspend all activities and expenditures and shall specify in writing a plan for orderly conclusion of all activities. Any expenditure incurred after the date of such notice that is not included in the termination plan shall not be reimbursed or otherwise covered by MEE. MEE reserves the right to terminate this contract immediately in the event of default.

- 14.3 If this contract is not completed for reasons beyond the control of ICS, MEE shall reimburse only the costs actually incurred in accordance with Annex 1, up to the date that ICS notifies MEE that it is unable to complete the contract. In such a case, final payment shall be made on the basis of deliverables actually produced as of the date of notification.
- 14.4 Reimbursements on termination for any reason, when added to amounts previously paid by MEE, shall not exceed the total amount of this contract.
- 14.5 ICS acknowledges that MEE's liability for payment of the Project is being funded through a UNDP-GEF funded and approved Project Document. If UNDP-GEF's funding to MEE is terminated for any reason, then MEE may terminate this Agreement on written notice to ICS, which termination shall not affect MEE's liability for payment to be made in terms of the milestones prior to the date of such notice or for a *pro rata* payment in respect of services rendered between the date of the last payment and the date of the notice.

15.0 Miscellaneous

- 15.1 This MOU and project document comprise the complete understanding of MEE and ICS in respect of the subject matter in this MOU and supersede all prior agreements relating to the same subject matter. Failure by either Party to enforce a provision of this MOU shall not constitute or waiver of that or any other provision of this MOU. The invalidity or unenforceability of any provision of this MOU shall not affect the validity or enforceability of any other provision of this MOU.

16. Governing Law

This MOU is subject to the laws of the Republic of Seychelles.

17. Annexes

All annexes form an integral part of this MOU.

The undersigned indicate their agreement to the obligations set out in this MOU and its annexes.

For MEE

For ICS

Mr. Didier Dogley
Special Advisor to the Minister

(Address)

Date:

Details

(Contact Address)

Date

**Annex 1
PROJECT DOCUMENT**

**Annex 2
Project Reporting Schedule**