



PROJECT IDENTIFICATION FORM (PIF)¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Enhancing the conservation effectiveness of seagrass ecosystems supporting globally significant populations of Dugong across the Indian and Pacific Oceans Basins (Short Title: The Dugong and Seagrass Conservation Project).		
Country(ies):	Indonesia, Madagascar, Malaysia, Mozambique, Vanuatu, Sri Lanka and Timor Leste ¹	GEF Project ID: ²	4930
GEF Agency(ies):	UNEP (select) (select)	GEF Agency Project ID:	857
Other Executing Partner(s):	<p>The overall Executing Agency will be the Mohamed bin Zayed Species Conservation Fund because of its close proximity and relationship with the UNEP/CMS Dugong MoU Secretariat who will provide technical oversight of the project.</p> <p>Technical Partners include: the UNEP/CMS Dugong MoU Secretariat and its Technical Advisory Team, UNEP-DEPI, Blue Ventures, GRID-arendal & Forest Trends.</p> <p>The key National Partners¹ are: Indonesia: Ministry of Marine Affairs and Fisheries, Ministry of Environment. Madagascar: Ministry of Environment and Forests Malaysia: Ministry of Natural Resources and Environment Mozambique: Ministry for Coordination of Environmental Affairs (MICOA), Natural History Museum / Eduardo Mondlane University. Sri Lanka: Department of Wildlife Conservation, Ministry of the Environment Timor Leste: Ministry of Agriculture and Fisheries. Vanuatu: Department of Environment and Conservation</p>	Submission Date:	2012-04-23
GEF Focal Area (s):	Biodiversity	Project Duration (Months)	48
Name of parent program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/>	n/a	Agency Fee (\$):	490,228

A. FOCAL AREA STRATEGY FRAMEWORK³:

¹ It is very important to consult the PIF preparation guidelines when completing this template.

² Project ID number will be assigned by GEFSEC.

³ Refer to the reference attached on the [Focal Area Results Framework](#) when filling up the table in item A.

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
(select) BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas (includes 400,000\$ FA set-aside)	Output 1.1: New protected areas (number) and coverage (hectares) of unprotected ecosystems. Number and exact locations of sites will be confirmed during preparation. Some sites are existing protected areas. The total area covered is estimated at 867,000+ ha, for all 7 countries. Please see section B.2 and PIF Appendix 1 for more details.	GEFTF	2,500,000	7,800,500
(select) BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas (includes 300,000\$ FA set-aside)	Output 1.2: New protected areas (number) and coverage (hectares) of unprotected threatened species (number). The number of threatened species found at target sites will be defined in detail during project development. Preliminary numbers of threatened species found at target sites include: Indonesia: Bintan: 2 Alor: 14 Madagascar: Nosy Hara Marine Park: 3+ Nosy Tanikely Marine Park: 1+ Iles Radama and Sahamalaza Marine Parks: 7+ Morombe to Andavadaoka Velondriake: TBD Nosy Ve and Androka Marine Park: 3+	GEFTF	1,400,000	5,800,000
(select) BD-2	Outcome 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks (includes 100,000\$ FA set-aside)	Output 2.2: Policies and regulations governing sectoral activities that integrate biodiversity conservation in the project target areas (in 7 countries) as recorded by the GEF tracking tool as a score.	GEFTF	779,441	3,272,450
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(select) (select)	Others		(select)		
Sub-Total				4,679,441	16,872,950

Project Management Cost ⁴	GEFTF	222,831	950,000
Total Project Cost		4,902,272	17,822,950

B. PROJECT FRAMEWORK

Project Objective: To enhance the conservation effectiveness of protected and non-protected areas hosting significant populations of Dugong across the Indian and Pacific Oceans Basins, through sustainable community-led stewardship and socio-economic development						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Protected Areas and Site-level Management at globally important sites	TA	<p>1.1 The management effectiveness of selected globally important coastal seagrass and associated mangrove and reef ecosystems in target areas listed below that are critical for the conservation of the dugong and other seagrass-dependent biodiversity is improved</p> <p>Preliminary list of target areas is provided in section B.2 below, and additional information is in Appendix 1 to the PIF. Target areas will be confirmed during PPG phase.</p> <p>1.2 Incentive-based sustainable financing and certification mechanisms are applied on the basis of existing guidelines and toolboxes (already developed in the framework of the Dugong MOU) at target areas to support the</p>	<p>1.1.1 Development and pilot implementation of integrated community management plans for target areas, with a focus on the engagement of critically important stakeholder / livelihood groups, to improve management effectiveness and include measures for the protection of seagrass-dependent biodiversity in view of anticipated Climate Change.</p> <p>1.1.2 Legal, administrative and governance structures for the protection of target areas in all 7 countries are developed and/or enhanced.</p> <p>1.1.3 Enhanced community engagement, and participation in stewardship and monitoring in seagrass-dependent biodiversity is achieved at target areas, through greater cooperation in PA management, sharing of best practices, capacity building and tailored communications.</p> <p>1.2.1 The Dugong, Seagrass & Coastal Communities Initiative “innovative toolbox” for sustainable economic development and financial incentives for seagrass dependent biodiversity conservation is applied at target areas, which includes incorporation of ecosystem</p>	GEFTF	2,939,721	8,300,500

⁴ GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

		<p>conservation of biodiversity in seagrass, mangrove and reef ecosystems, resulting in a win-win scenario for communities' livelihoods and improved conservation effectiveness</p> <p>Potential indicators for all component:</p> <ul style="list-style-type: none"> - increase in PAMETT score at target PAs - The number of dugong reported caught in nets (dead or alive) is reduced to as close to zero as practicably as possible; - The number of fishers using gill/beach seine nets in the target areas is reduced to as close to zero as practicably as possible; 	<p>services (including potentially blue carbon), developed in collaboration with the GEF Blue Forest Project.</p> <p>1.2.2 The preliminary version of the dugong-friendly seafood certification scheme is tested in selected target areas in Mozambique and Madagascar.</p> <p>1.2.3 Development and implementation of a social marketing plan to effectively engage subsistence and small-scale artisanal and artisanal net fisheries, with incentive-based parameters worked into management planning (in tandem with 1.1) for coastal rural communities and seagrass-dependent biodiversity in target areas.</p>			
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2. Removal of Knowledge Barriers - targeted research on the status and distribution of the Dugong and Seagrass habitats	TA	2.1 Critical knowledge barriers for the protection of seagrass-dependent biodiversity, to support the implementation of national planning frameworks and international biodiversity obligations, are removed, through targeted research on Dugong and seagrass habitats in selected under-studied target areas	<p>2.1.1 Targeted environmental assessments on the conservation status of seagrass-dependent biodiversity and integration of results from related initiatives, allowing data and information gaps to be filled across the Indian and Pacific Ocean Basins which identify information gaps.</p> <p>2.1.2 A centralized repository of results from past and ongoing dugong /seagrass habitat conservation initiatives is developed into a single freely accessible web portal (with multiple interfaces accessible for public, private and academic institutions), disseminated to and used by a wide range of stakeholders.</p> <p>2.1.3. Seagrass and dugong distribution, and threat assessment maps collated and made available for all identified project target areas.</p> <p>2.1.4 Anticipated Climate Change impacts on seagrass-dependent biodiversity at target areas is assessed for inclusion in improved management plans (e.g. mapping anticipated habitat changes as a result of an increase of invasive species, migration of native species, relocation of fisheries to sensitive zones, greater incidence of extreme weather events, etc. Options for management plans include tools which incorporate ecosystem services (including potentially blue carbon developed in collaboration with the GEF Blue Forest Project).</p>	GEFTF	495,505	3,272,450
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3. National and regional plans and mainstreaming	TA	<p>3.1 Seagrass-dependent biodiversity conservation priorities and hotspots areas included into relevant national planning frameworks in all target countries.</p> <p>3.2 Regional-level dugong habitat conservation plans with SMART timeframe and priority-setting frameworks are developed as a basis for adoption and mainstreamed in National environmental management policies for target countries.</p> <p>Potential Indicators: - The total area of seagrass habitats included in protected areas is increased by 15% in each participating country; - The total marine area managed by communities working with the GEF Dugong and Seagrass Conservaton project is increased in target sites</p>	<p>3.1.1 Inter-ministerial / cross-sectoral committees encompassing all key sectors (including the private sector) needed to address the threats on seagrass-dependent biodiversity (agriculture, planning, fisheries, tourism etc.) are established in each target country.</p> <p>3.1.2 Policy and sectoral gaps and required reforms for seagrass-dependent biodiversity, are defined in each target country.</p> <p>3.1.3 Proposals for sectoral and policy reforms for improved seagrass-dependent biodiversity conservation and management, are developed and promoted for adoption by all participating countries.</p> <p>3.2.1 The process for the designation of new priority Protected Areas is initiated in all participating and other range countries, to improve coverage of seagrass and associated mangrove and reef ecosystems i.e. using dugong as the flagship species and integrating seagrass-dependent biodiversity conservation as well as climate change considerations.</p> <p>3.2.2 Integration of internationally agreed dugong habitat protection priorities into national and regional conservation plans is promoted</p> <p>3.2.3 Incentive schemes that stimulate acceptance of biodiversity conservation measures (ref. component 1) are mainstreamed into marine protected area planning and conservation interventions at the national and regional level across the dugong's range</p>	GEFTF	776,272	3,600,000
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<p>4. Capacity development and training, public awareness and regional-level information exchange</p>	<p>TA</p>	<p>4.1 The intra- and inter-regional knowledge sharing and capacity development network for seagrass-dependent biodiversity protection is significantly strengthened</p>	<p>4.1.1 Communication strategy targeting institutions, organizations and public sector entities to be informed of dugong habitat conservation issues 4.1.2 Web-based platform and project site for the dissemination of reports, tool kits, maps and awareness materials. 4.1.3 The existing network of partners dealing with seagrass-dependent biodiversity protection is strengthened and engaged in a dialogue on exchange of best practices via regular meetings and the set-up of a web-based discussion forum. 4.1.4 Existing training and capacity development programs are improved, and targeted regional-level training workshops are implemented for relevant national institutions. 4.1.5 The suite of custom-tailored financial tools promoting community buy-in and adoption of conservation practices (ref component 1) is packaged into a series of case studies, and widely disseminated. Including tools which incorporate ecosystem services (including potentially blue carbon - in collaboration with the GEF Blue Forest Project). 4.1.6 A detailed status report of the threats to and conservation priorities for seagrass-dependent biodiversity and habitats is prepared and widely disseminated. 4.1.7 Available information on climate change impact scenarios are made widely available as a support to improved national and regional conservation planning frameworks for the protection of seagrass-dependent biodiversity.</p>	<p>GEFTF</p>	<p>467,943</p>	<p>1,700,000</p>
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				Sub-Total		4,679,441	16,872,950
				Project Management Cost ⁵	(select)	222,831	950,000
				Total Project Costs		4,902,272	17,822,950

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
Foundation	Mohamed bin Zayed Species Conservation Fund	In-kind	217,000
Other Multilateral Agency (ies)	UNEP/CMS – Abu Dhabi Office	In-kind	1,960,000
Other Multilateral Agency (ies)	UNEP/CMS – Abu Dhabi Office	Grant	840,000
Other Multilateral Agency (ies)	SPREP	In-kind	230,000
Foundation	Community Centred Conservation (C3), Future for Nature (FFN) Project Grant: Developing financial incentives for community conservation of dugongs in Northern Madagascar, 2012 onwards	Grant	50,000
National Government	Government of Australia*	In-kind	758,000
National Government	CSIRO – NERP (Australia)	Unknown at this stage	1,325,544
National Government	Environment Agency – Abu Dhabi - Blue Carbon project	Unknown at this stage	500,000
CSO	WCS - Madagascar	Unknown at this stage	210,000
CSO	University of Malaysia, community engagement project USM	Grant	40,000
National Government	Papua New Guinea - Department of Environment and Conservation*	In-kind	100,000
National Government	Solomon Islands - Ministry of Environment, Climate Change, Disaster Management and Meteorology	In-kind	20,000
Private Sector	Shell Malaysia	Grant	6,600
Foundation	Malaysia – Marine Research Foundation*	In-kind	36,000
CSO	Universiti Sains Malaysia (USM)	In-kind	47,600
National Government	Sarawak Forestry Corporation (SFC) Malaysia	In-kind	21,000
National Government	Department of Fisheries Malaysia	In-kind	54,000
National Government	Department of Marine Parks Malaysia	In-kind	287,000
CSO	Universiti Malaysia Terengganu	In-kind	4,000
National Government	AFMA - Australia	In-kind	503,000
Bilateral Aid Agency (ies)	Life Web initiative - Spain/UNEP - phase 2	Grant	500,000

⁵ Same as footnote #3.

CSO	Dugong, Seagrass and Coastal Communities Initiative – various local partners; Papua New Guinea Daru Moro Momoro Project; Mozambique Bazaruto Archipelago pilot project	Unknown at this stage	6,020,000
Bilateral Aid Agency (ies)	Government of Norway	Unknown at this stage	200,000
National Government	Department of Environment and Natural Resources, Protected Areas and Wildlife Bureau - Philippines	In-kind	295,000
National Government	Indonesia (ministry and academic institutions)	In-kind	990,000
National Government	Madagascar (ministry and NGO's)	In-kind	672,000
National Government	Mozambique (ministry, NGO's and academic institutions)	In-kind	295,000
National Government	Sri Lanka (ministry and NGO's)	In-kind	523,206
National Government	Timor Leste (ministry and academic institution)	In-kind	850,000
National Government	Vanuatu (ministry and NGO's)	In-kind	118,000
GEF Agency	UNEP	In-kind	150,000
(select)		(select)	
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(select)		(select)	
(select)		(select)	
Total Cofinancing			17,822,950

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
UNEP	GEFTF	Biodiversity	Indonesia	863,636	86,364	950,000
UNEP	GEFTF	Biodiversity	Sri-Lanka	647,728	64,772	712,500
UNEP	GEFTF	Biodiversity	Madagascar	690,909	69,091	760,000
UNEP	GEFTF	Biodiversity	Malaysia	431,818	43,182	475,000
UNEP	GEFTF(select)	Biodiversity	Mozambique	431,818	43,182	475,000
UNEP	GEFTF(select)	Biodiversity	Timor-Leste	863,636	86,364	950,000
UNEP	GEFTF(select)	Biodiversity	Vanuatu	172,727	17,273	190,000
UNEP	GEFTF(select)	Biodiversity	BD FA set-aside	800,000	80,000	880,000
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
Total Grant Resources				4,902,272	490,228	5,392,500

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

² Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1 the [GEF focal area/LDCF/SCCF](#) strategies /[NPIF](#) Initiative:

The project is aligned with the Goal and a number of core objectives from the Biodiversity focal area contributing to the achievement of GEF Strategic Goals 1 and 4. The project is fully consistent with BD Strategic Objective One (BD-1) “improve the sustainability of Protected Area Systems” (Outcome 1.1) and will support the improvement of overall management effectiveness of existing protected areas, including across trans-boundary areas, as well as via the creation and effective integrated management of new protected areas that extends and improves the coverage of threatened species across their spatial range (contributing to the achievement of BD-1 Core Outputs 1.1 and 1.2).

The GEF FA Strategy highlights that developing climate-resilient protected area systems remains a challenge because the scientific understanding and technical basis for informed decision-making on adaptation or resiliency measures is in its nascent stages. The project will support the development and integration of climate resilience management measures as part of protected area management as well as adaptation strategies required to build sustainable and resilient local communities and the policies needed to implement them by identifying improved/alternative livelihood opportunities.

The project is also consistent with Focal Area Strategic Objective two (BD-2), by creating the necessary market incentives for producers to improve their environmental and/or social practices to receive the price premium, as well as by replicating certification systems to exploit the willingness of the market to pay a premium for goods and services whose production distribution and consumption meets an environmental standard.

The proposed project is also consistent with the Regional Seas programme for East Africa, East Asia Seas, Pacific and South Asia. Under the SPREP Marine Species Regional Species Programme, there is currently a Dugong Action Plan for 2008-2012 which will be extended from 2013- 2017 covering cetaceans, marine turtles and dugongs) which also implements the UNEP/CMS Dugong MOU Conservation and Management Plan on a regional level. The project will be an important catalyzing force in implementing this Action Plan beyond 2012.

Although GEF resources from the IW focal area are not being requested for this project, the project is also aligned with and will contribute to GEF Objective IW-3, through (a) fostering political commitment, shared vision, and institutional capacity demonstrated for joint, ecosystem-based management of water bodies and local ICM principles, and (b) through the improvement of and strengthening of governance and water related practices. Through the project i) new governance and water related practices will be strengthened ii) national inter-ministerial committees established, and iii) trans-boundary diagnostic analyses and relevant strategic action programmes will be updated.

The proposed project also has some strong synergies with the approved GEF-approved project “Standardized methodologies for carbon accounting and ecosystem services valuation of Blue Forests” which, among other project components, aims to develop standardized methodologies for carbon accounting and valuation of ecosystem services for blue forest ecosystems, and to apply the developed methodologies through small-scale interventions including in existing GEF projects. As dugongs live in coastal blue forest ecosystems, seagrass meadows, then the protection of these habitats is closely linked with the protection of the dugongs themselves. The proposed project provides an excellent opportunity to apply the methodologies developed in the Blue Forest project to actual seagrass ecosystem management projects on the ground. The Blue Forest project fulfills the GEF Strategic Framework Focal Area Outcome 3.2 ‘On-the-ground modest actions implemented in water quality, fisheries and coastal habitat demonstrations for blue forests to protect carbon’ and the Outcome ‘Demo-scale local action implemented to restore/protect coastal blue forests’. The GEF Blue Forest project was approved by the GEF Secretariat on September 19th 2011 and

is now in the PPG phase.

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

n/a

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

n/a

A.2. national strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

All participating countries have ratified relevant UN Conventions and related Multilateral Environmental agreements including the CBD, Ramsar Convention on Wetlands, CMS (ref. **Table 1**). The project will support the conservation priorities identified in the NBSAPs for each participating country (ref. **Table 2**).

Table 1 – relevant conventions

Countries	Conventions			
	CBD	CMS	Ramsar	CMS - Dugong MOU
Indonesia	1994	-	1992	-
Madagascar	1996	2007	1999	2007
Malaysia	1994	-	1995	-
Mozambique	1995	2009	2004	2011
Sri-Lanka	1994	1990	1990	2012
Timor-Leste	2007	-	-	-
Vanuatu	1993	-	-	2010

Table 2 – NBSAPs alignment

Country	NBSAP Objectives supported by the project	Other relevant National Plans supported by the project
Indonesia	<p>Indonesian Biodiversity Strategic and Action Plan: 2003-2020 (Chapter 6, number 2, section 3, objective 3, program 6 & 9, page 87, 88, 92 and 93)</p> <p>Objective 1: Goals 2 (2003/05), 3(2003/08), 4 (2003/20) & 6 (2004/09)</p> <p>Objective 2: Goals 3 (2004/20), 4 (2004/20) & 7(2003/08)</p> <p>Objective 3: Goals 6(2004/08), 9(2004/20)</p> <p>Objective 4:Goals 10(2005/20), 11(2005/20),14(2003/50), 16(2003/04),17(2003/20) & 18(2003/20)</p> <p>Objective 5: Goal 2 (2004/20)</p>	National Dugong Conservation Strategy & Action Plan
Madagascar	Only CBD National Report available online (latest 2009) – 2007 NBSAP has been created	NA
Malaysia	Strategies: I,II,IV,V, VI, VII,VIII, IX,X,XII,XIII,XIV,XV	National Plan of Action for Management and Conservation of Dugong in Malaysia
Mozambique	<p>Chapter 3</p> <p>Objective 1.1: Goals 1,2,3 &4</p> <p>Objective 1.2: Goals 1.,3,4,6&7</p> <p>Objective1.4: Goals 2,3&4</p>	Final Draft Management Plan for the Bazaruto Archipelago in Attwell, C. (Ed.) Conservation Ecology of Dugongs in Mozambique, Workshop Report, Maputo 2009

	Objective 1.5: Goals 3,4,5,6,7,8,9&10 Objective 1.7: Goal 1 Objective 2.4: Goals 3,5,8,9,10,11,12,13 Objective 2,3,5&6	
Sri Lanka	Ch. 6.3, Objectives 1,2,3,4,5	NA
Timor-Leste	No reports available online - expected completion of 1 st NBSAP Sep 2011	NA
Vanuatu	Chapter 4 Objective 1: Goals 1,2,3&4 Objective 2: Goals 1,3&5 Objective 3: 1,2 &3 Objective 4: 1,2,3,4,5&6 Objective 5: 1,2,3&4	National Dugong Action Plan (as yet not implemented) SPREP Dugong Action Plan 2008-2012

The project will also contribute to the achievement of the sustainable development needs of recipient countries in their pursuit of the millennium development goals, particularly goal #7 on environmental sustainability, while also helping countries to meet their commitments to the aforementioned global conventions and hence reinforcing efforts to address multiple environmental benefits.

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

The dugong, often known as the “sea cow”, is on the verge of disappearing from most of its range. Amongst marine mammals, the dugong is unique as the only species that is completely herbivorous and therefore, highly dependent on tropical coastal seagrass ecosystems. In many semi tropical and tropical regions, seagrass habitats are also often closely linked to mangrove and reef ecosystems.

Due to their life history of being long-lived and slow breeding, extensive range and their dependence on tropical seagrasses habitats, the dugong is particularly vulnerable to both a broad spectrum of direct human-related influences such as destructive fishing practices and vessel strikes, as well as indirect anthropogenic threats to their habitats, including trawling, dredging, inland and coastal clearing, land reclamation and nutrient loading. All of these impacts can be exacerbated by extreme weather events, sedimentation and climate change. Some of these threats are unique to particular regions while others span the species’ entire range.

Currently dugongs are classified as vulnerable to extinction under the 2009 World Conservation Union (IUCN) Red List of Threatened Species, which indicates that they face a high-risk of extinction in the wild in the medium-term future. Furthermore, the Convention on the Conservation of Migratory Species of Wild Animals (CMS) lists the dugong in its Appendix II, meaning that the conservation of the species would benefit from international cooperative activities organized across the dugong's migratory range. Dugongs are also listed under Appendix I of the Convention on the International Trade on Endangered Species of Wild Fauna and Flora (CITES) as a species threatened with extinction.

Regional Dugong Conservation – Summary of Status and Threats in the Project Region:

As stated above, dugongs are listed as Endangered by CITES, CMS and the IUCN Red List. Classification of sirenians is known to be problematic, due to the difficulty in monitoring animals which often remain underwater for long periods in turbid habitats. Particularly in developing nations, there is insufficient knowledge on populations to make an assessment. Due

to poor quality or lack of data for estimating declines in marine mammal stocks, it is suggested that waiting for a more accurate picture of the decline before intervening with management measures may be unwise; the project aims to address this lack of critical knowledge through initial baseline surveys in relevant areas. Regionally, Marsh et al. (2011) summarise the Dugong's regional conservation status as follows:

East Africa – Endangered

Red Sea and Gulf of Aden – Data Deficient

Arabian/Persian gulf – Data Deficient

Indian Subcontinent – Endangered

Continental East and South-east Asia – Endangered

East and South-east Asia: Major archipelagoes – Vulnerable to Critically Endangered

Australia – Critically Endangered, Vulnerable, Least Concern, Data Deficient

Western Pacific Islands – Data Deficient

(see Chapter 8 in Marsh et al, 2011 for more detailed descriptions.)

Threats depend on the region and nations involved. Broadly speaking, in developing nations the threats come from incidental capture in artisanal fisheries, direct capture for consumption or sale (possibly through illegal poaching), destructive fishing techniques such as the use of dynamite, and habitat loss or degradation. In developed countries, the main threats are from incidental catch by large scale fisheries (chiefly gillnetting), legal hunting, habitat degradation and loss due to extensive coastal remodeling and pollution, and vessel strikes.

Dugongs are particularly vulnerable to negative interactions with humans as their seagrass habitats are in easily accessible shallow coastal areas, and their life history (slow to mature, low rates of breeding) makes the loss of even a small number from a population, particularly of breeding adults, a serious problem. More dugong range states are developing countries than developed countries, and the forecasted population rises in some developing countries may add to the threats from increased fishing and increased capture to satisfy protein requirements.

The Seagrass ecosystems on which these species depend are important not only for the survival of the dugong but also for a plethora of other marine biodiversity. Seagrass ecosystems provide important habitat and breeding grounds for many marine species, including important fishery species that millions around the globe depend on daily for their livelihoods. These same ecosystems provide a suite of environmental services, including coastal protection from extreme weather events, seabed stabilization, the provision of shelter to myriad species and astounding carbon sequestration sink capacity. Unfortunately, it is estimated that at least one third of the world's seagrass habitat has already been lost, and the remaining habitat is currently disappearing at a rate of 7% per year (Waycott et. al.2009). The economic benefits to coastal communities of seagrass protection cannot be overstated: i.e. shrimp and fish use these ecosystems as development grounds. Local artisanal fisheries depend on these habitats to supply for to a growing community of hundreds of millions.

Dugongs are effective flagship species which can support biodiversity conservation and ecosystem based management of coastal seagrass habitats, while promoting protection for the sources of livelihoods upon which millions of families depend. The dugong's vulnerability to adverse anthropogenic influences puts them in the front lines of many insidious and compounding threats across their extensive geographical range. Moreover, given the dugong's capacity to move across jurisdictional boundaries, coordinating management initiatives across these boundaries will be crucial to its long-term survival. Without cooperative decision-making and the necessary critical mass for collective action, the future of the dugong, and of the seagrass ecosystems on which it depends, is uncertain.

Due to the dugong's precipitous decline and the scientific consensus that the species will disappear from the majority of its range without significant conservation interventions, its

long-term survival of the dugong will be contingent on effective conservation and collaborative management throughout its extensive range. The proposed full-sized GEF project, coordinated with the UNEP/CMS Dugong MOU Secretariat’s “Dugong, Seagrass & Coastal Communities Initiative”, will provide the much-needed boost to catalyse the conditions for more robust dugong conservation measures across the Indian and Pacific Ocean Basins. The overall Goal of the project will be to support sustainable management and protection of the globally-significant seagrass-dependent biodiversity across the Indian and Pacific Oceans by addressing the primary threats posed by subsistence and small-scale artisanal net fisheries and unsustainable direct take. The immediate project objective will be developing innovative sustainable financing and market opportunities, while delivering livelihood improvement and economic opportunity in exchange for dugong stewardship and environmental services in the target areas, as well as mainstreaming of biodiversity conservation and management approaches to national sectoral policy and fostering international cooperation among range states.

The management approach needed to successfully address the underlying threats to seagrass-dependent biodiversity requires a broad cooperative and consultative international approach incorporating innovative tools across a wide spectrum of stakeholders. In collaboration with the GEF Blue Forest Project, this project will develop and trial innovative tools which incorporate ecosystem services (including potentially coastal Blue Carbon). Taken together, the project - implemented both regionally and at the national level - will provide a springboard for developing new and strengthening existing local, national, regional and international partnerships that are absolutely indispensable for restoring the conservation status of the dugong to a more favourable state across its entire range. Using dugongs as a flagship species, the project would not only provide significant improvement in its survival rates but also the protection of seagrass and associated mangrove and reef ecosystems, wider improvements in coastal biodiversity and environmental services including preservation of fish nurseries, increasing coastal carbon sequestration, and buffers from climate change impacts.

The project intervention will build upon ongoing and planned national and international conservation efforts sustained by all participating national governments and conservation organisations involved in the project at the local, national and regional level. The project will build on the commitments of countries to meet their obligations with regards to conservation of biodiversity and coastal ecosystems under the UNEP Regional Seas conventions and action plans for East Africa, East Asia Seas, Pacific and South Asia. The project will also contribute to meeting the biodiversity conservation goals of the Coral Triangle Initiative on Coral Reefs Fisheries and Food Securities (CTI-CFF) in Indonesia and, Malaysia and Timor Leste (in addition to Papua New Guinea, Philippines and Solomons participating under the “Dugong, Seagrass and Coastal Communities Initiative”). In Timor Leste, Indonesia and Australia, this project will align with the GEF Arafura and Timor Seas Ecosystem Action (ATSEA) program which aims to ensure the integrated, cooperative, sustainable, ecosystem-based management and use of the living coastal and marine resources, including fisheries and biodiversity.

The main ongoing efforts in the target areas are summarized in **Table 3** for each participating country and will be further detailed during the Project Preparation phase. Some of these activities will also be supported within the “Dugong, Seagrass & Coastal Communities Initiative”

Table 3 – relevant baseline investments

Country	Relevant ongoing and planned baseline interventions that the project will build upon, in the project target areas and countries <i>NB: Please refer to Appendix 2 for more details on relevant past, ongoing and planned projects</i>
Indonesia	Government of Indonesia: baseline funding for protected areas management (tbd at PPG) Alor: Baseline data and information collection, WWF Indonesia

	<p>Nationwide: CML- Leiden and RCO – Jakarta: follow-up of the National Dugong Conservation Strategy and Action plan 2009, funding still pending.</p> <p>East Kalimantan and South Sulawesi: CML Leiden with NIOO Yerseke, Nijmegen University, RCO Jakarta and the University of Manado: Seagrass research programme (funded by KNAW and NOW)</p> <p>Marine surveys in Pulau Raja Ampat, West Papua (funded by The Nature Conservancy, TNC)</p> <p>Wetlands International, National Sustainable Mangrove Management Programme (NGO funding)</p> <p>UNEP/CMS Dugong MOU Standardised survey Questionnaire tool in 3 target areas (USD \$15,000)</p>
Madagascar	<p>Government of Madagascar: baseline funding for protected areas management (tbd at PPG)</p> <p>Extension of Dugong MOU Standardised Survey Questionnaire to other target areas (\$10,000)</p> <p>Assessment of hunting and bycatch and conservation of coastal marine mammals on the west coast of Madagascar, WCS (\$50,000)</p> <p>Implementation of three community-based marine protected areas on the west coast (Ankarea and Ankivonjy in the north-west and Salary in the south-west), WCS (\$ 100,000)</p> <p>Implementation of community-based marine protected areas and integrated coastal management in Antongil Bay, WCS (\$ 60,000)</p>
Malaysia	<p>Government of Malaysia: baseline funding for protected areas management (tbd at PPG)</p> <p>Interview surveys of dugong distribution and bycatch in Sabah 2011 (\$4,500) UNEP/CMS</p> <p>Status, Issues and Perceptions: conserving dugongs in Johor, Malaysia, March 2011 – March 2012 (\$1,600) USM Incentive Grant</p> <p>Testing the effectiveness of conservation education programmes: the dugong (<i>Dugong dugon</i>) as a case study in Johor, Malaysia August 2011 – August 2014 (\$40,000) University - Community engagement project USM</p> <p>Community-based seagrass meadows conservation in Penang South Channel March 2012 – March 2013 (\$6,600) Shell sustainability grant 2012</p>
Mozambique	<p>Government of Mozambique: baseline funding for protected areas management (tbd at PPG)</p> <p>Extension of Dugong MOU Standardised Survey Questionnaire to other target areas, UNEP/CMS (\$10,000)</p> <p>Pilot project planning & development in Bazaruto Archipelago, UNEP/CMS (\$70,000)</p> <p>Dugong By-catch survey and alternative livelihood project, US Marine Mammal Commission – UEM & Centre for Dolphin Studies</p> <p>EWT the Dugong Emergency Protection Project, IUCN SOS Fund - Bazaruto National Park (\$99,550)</p>
Sri Lanka	<p>Government of Sri Lanka: baseline funding for protected areas management (tbd at PPG)</p> <p>Sustainable Management of the Bay of Bengal (BOBLME)</p>
Timor-Leste	<p>Government of Timor-Leste: baseline funding for baseline surveys and establishment and management of protected areas system (tbd at PPG)</p> <p>Other - to be defined at PPG stage based on site selection</p>
Vanuatu	<p>Government of Vanuatu: baseline funding for protected areas management (tbd at PPG)</p> <p>Extension of Dugong MOU Standardised Survey Questionnaire to other target areas (\$10,000)</p> <p>Dugong Project (surveying dugongs and dugong habitats), Vanuatu Cultural Center</p>

Main international efforts underpinning the project intervention include the decisions and targets of major international conventions such as the Convention for Biological Diversity (CBD) concerning coastal ecosystem services and biodiversity conservation and the United Nations Framework for Climate Change Convention Cancun Agreement concerning climate

change mitigation targets. Furthermore, the CBD, along with the UNFCCC, the UNCCD, the Ramsar Convention and CMS promote the evaluation and protection of coastal ecosystem services by member states.

Overview of the Baseline Activities being implemented by the UNEP/CMS Dugong MOU Secretariat and all partner countries at the regional level:

The UNEP/CMS Office – Abu Dhabi has been actively supporting the implementation of the provisions of the UNEP/CMS Dugong MOU since 2009. The Dugong MOU covers some 40 range states, of which there are currently 21 Signatory States. However, the Secretariat has been actively supporting conservation efforts in all five sub-regions: the North West Indian Ocean, South West Indian Ocean, South Asia, South East Asia and Pacific Islands/Australia.

To achieve the main objectives of the Dugong MOU, the Secretariat has focused on a number of regional initiatives which has included supporting various dugong conservation meetings and training workshops held in Phuket (Thailand), Goa (India), Antananarivo (Madagascar) and Abu Dhabi (UAE), Tuticorin (India) and Lawas (Malaysia) from 2010 – 2012. These meetings have facilitated information sharing on dugong and seagrass conservation initiatives at a regional level through reports and presentations. Most Dugong MOU range states have participated in the sub-regional meetings which have been the primary stimuli for regional cooperation.

With the help of a team of specialists on marine megafauna bycatch, a standardised Dugong Catch/Incidental Catch Survey Tool was developed and used as a means of rapidly obtaining data from fishermen to assess the status of artisanal fisheries and dugong conservation in places where data are deficient, and where threats to dugong survival may be high. Over 2500 surveys have now been conducted in partnership with a wide range of partners which include national government agencies and research institutions, universities, international NGOs (i.e. IUCN, WWF, CI, WCS), local NGOs and community fisher associations in 17 countries: Cambodia, Thailand, Vietnam, Myanmar, Malaysia, Palau, Papua New Guinea (PNG), Solomon Islands, Vanuatu, New Caledonia, India, Pakistan, Bangladesh, Madagascar, Mozambique, Tanzania, UAE.

The Secretariat has also committed seed funding to develop pilot projects to trial financial incentive tools in PNG and Mozambique in recognition of the threatened status of these globally significant dugong populations. In Daru (Western Province, PNG), The Secretariat has partnered with SPREP, the PNG Department of Environment and Conservation, the National Fisheries Authority, the PNG Sustainable Development Program Ltd and EcoSEEDS, a local NGO. The project is also supported by the Australian Government Department of Sustainability, Environment, Water, Populations and Communities, the Torres Strait Regional Authority, the Australian Fisheries Management Authority, James Cook University and Commonwealth Science and Industry Research Organisation. This pilot is designed to reduce pressure on marine resources by providing livelihoods with a specific focus on artisanal aquaculture to provide steady incomes and stable protein supplies. The project will provide the Daru communities with microfinance or other financial incentive tools, information and technical assistance with access to wider markets. The resulting community benefits will drive better outcomes for dugongs and seagrass ecosystems.

The second pilot project is based in Bazaruto Archipelago in Mozambique, which is the last remaining stronghold for dugongs in the South West Indian Ocean. It is rapidly growing as a tourist destination because of the Archipelago's beautiful beaches, surfing and fishing. The project partners include the Ministry for Coordination of Environmental Affairs, the Natural History Museum, Eduardo Mondlane University and WWF Mozambique on a program certify 'dugong-friendly' seafood, harvested in ways that protect dugongs and seagrass habitat. We will also investigate other market-based livelihood opportunities such as handicrafts. Our initial targets are developed-world tourists willing to pay a premium for dugong friendly produce in

tourist restaurants serving the growing industry. The project is designed so that part of the premium flows as a direct economic benefit to local fishing communities that take up 'dugong-friendly' practices. The project's larger objective is to encourage the spillover of 'dugong-friendly' practices to other fisheries in the region.

Another project which we are implementing across the global range of the dugong is the Global Dugong Genetic. The project aims at building a network across dugong range, interested in collaborating in a study of dugong genetics. The network would include participants that can help provide already collected or new samples for genetic analysis. The genetic analyses can be done in Australia or in any of the range states where appropriate facilities and expertise exist. This approach will provide valuable information to provide an estimate of the genetic diversity remaining in different parts of the range, estimates of gene flow and population size.

The above meetings and projects have been very effective in facilitating a range of sub-regional and national/local activities to improve the available information on the distribution and abundance of dugongs and their habitats. Such information is crucial in order to assess the conservation status of dugongs throughout their range.

In summary, the Secretariat has taken a regional approach to address the need for more information and to identify solutions to address the impact of dugongs being caught incidentally by fishers. In addition to the other components of the GEF Dugong and Seagrass Conservation Project will provide a most crucial contribution to the following initiatives being taken by the Secretariat in the 7 Partner Countries:

- Supporting Range States of the Dugong MOU in decision making and priority-setting based on the most appropriate and best available information, methods and solutions to address the key threats to dugongs.
- Building and enhancing regional cooperation amongst the range states of the Dugong MoU to address key threats to a threatened migratory species.
- Addressing shared conservation synergies with other threatened marine megafauna including turtles, inshore cetaceans and sharks including incidental catch in fisheries gear as this poses the single largest threat (Read 2008).
- Supporting the application of the Standardised Dugong Catch/Incidental Catch Survey Tool to help build an updated global picture of dugong populations, dugong habitats, and key dugong threats to inform the challenges and opportunities to progress their conservation and management.
- Spatial Risk Assessment: the data obtained from the standardised survey questionnaire will be used to conduct regional/global spatial risks assessment.
- Implementation of the Mitigation/Management Toolbox: A multi-disciplinary expert panel was convened to provide advice and guidance on innovative and novel approaches to progress favorable conservation outcomes for dugong. The tools most frequently adopted in the past, such as legal protection and marine protected areas, need to be supported by market-based mechanisms that assist with the social and economic wellbeing of the affected communities. The Mitigation and Management Toolbox developed for dugong will include a range of current approaches, including gear modification, spatial and temporal management as well as bio-economic approaches (see section B.2 for additional information on the Toolbox)

The progress of the implementation of the Dugong MOU was formally reported to the Signatory and Non-signatory range states at First Official Dugong MOU Signatory State Meeting (SS1) held in Abu Dhabi, October 2010. This was a successful meeting of governments, International and Non-Governmental Organizations and experts from about 30 countries who adopted a novel and innovative conservation strategy to protect dugongs and their habitats. The Second Signatory State Meeting is to be hosted by the Government of Philippines in Manila in December 2012, and will include updates on national activities through a standardised reporting procedure.

Proposed Strategic Focus for 2012 and beyond: The Dugong, Seagrass and Coastal Communities Initiative is an international programme of conservation measures aimed at increasing protection of dugong populations and their seagrass habitats through tailored plans which promote local environmental stewardship through trialing alternative livelihood, sustainable development assistance in potentially accessing wider trade markets. Funds are being sought to involve as many dugong range states as possible in the Initiative.

With the dugong as a flagship species, the initiative aims to return broad ecological and financial benefits in areas where both dugongs and local communities are in most need of assistance. Projects will be located across range states, primarily in the South West Indian Ocean, Western Pacific Islands, South and South East Asia. Educational and knowledge transfer tools will be used to increase awareness and facilitate access to vital information on dugong populations and seagrass habitats. Pilot projects are already underway in Mozambique and Papua New Guinea, and a first trans-boundary pilot project has been planned between India and Sri Lanka. Preliminary baseline data collection in the form of dugong catch surveys taken by local fishers is also ongoing in many of the project locations, and will provide vital information for identifying priority sites.

It is anticipated that the Dugong, Seagrass and Communities Initiative will become the primary platform for implementation of the Dugong MOU for the next five year: 2012-2017. While the Initiative will have a primary focus on those range states which are developing countries – many of the social marketing/educational, monitoring, research, conservation and management activities can be provided to add value and co-benefits to most range states which are not directly involved in pilot projects in the first instance. Through the combined efforts of Dugong, Seagrass and Communities Initiative and the GEF Regional Dugong and Seagrass Conservation, this coordinated approach will be a powerful mechanism to facilitate national/local level and trans-boundary actions which enhance the conservation of dugong populations and their habitats by addressing some of the key threats in an innovative ways.

- B. 2. [incremental /Additional cost reasoning](#): describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated [global environmental benefits](#) (GEF Trust Fund/NPIF) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The dugong will be used as the overall “Flagship Species” of conservation concern within this project. However the GEF intervention will clearly benefit a far greater number of globally important species and associated ecosystems such as mangroves and coral reefs. The species’ critical seagrass ecosystems provide nurseries, shelter, and food for a variety of commercially, recreationally, and ecologically important species (e.g. fin-fish, sharks and rays, marine turtles, inshore cetaceans, seahorses, crustaceans and molluscs). Additionally, seagrasses filter estuarine and coastal waters of nutrients, contaminants, and sediments and are closely linked to other community types in the tropics such as coral reefs and mangrove forests. Seagrass ecosystems thus provide key ecosystem services such carbon sequestration, supporting ecotourism, providing fisheries habitats and filtering water of sediments and pollutants. Furthermore, coastal communities are closely tied to seagrass ecosystems through cultural heritage, their dependence on food security and through the opportunity for coastal development. Seagrass is thus recognized as a foundation species as it is crucial for many other species, and so while this project aims to lead with dugongs as the flagship species it also adopts an ecosystems-based approach (as outlined in Hughes et al. 2009).

The dugong is just one of a suite of large marine vertebrates, including turtles and inshore cetaceans, which are under pressure from human activities in target areas. The green turtle (*Chelonia mydas*) is the marine turtle species most reliant on seagrass ecosystems although all other six species of marine turtles are likely to spend a portion of their time in seagrass and associated mangroves and reef habitats. Threatened inshore cetacean species such as the

Irrawaddy dolphin (*Orcaella brevirostri*), Australian snubfin dolphin (*Orcaella heinsohni*) and Indo-Pacific humpback dolphin (*Sousa chinensis*) as well as Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) are also reliant on seagrass and associated mangrove and inshore reef habitats. In some areas of range states (e.g. Madagascar), there exists unregulated artisanal hunting of dugongs and coastal dolphins in areas where the species overlap. The conservation of dugong and protection of their seagrass ecosystems therefore represents the opportunity to support national government's responsibility to contribute significantly to the conservation of ocean and coastal zones biodiversity.

The incremental GEF contribution will be designed so as to be fully complementary and additional to ongoing baseline interventions described above. Target areas will be confirmed during PPG phase. This process will require obtaining information necessary to select the best potential and manageable set of target areas in each country. A preliminary list of target areas is provided below, (and additional information is provided in Appendix 1 to the PIF):

Indonesia: Bintan: 2600 Ha, Alor: 21,850 Ha

Malaysia: Lawas (Labuan), Kudat (Sandakan), Mersing (Johor Bahru)

Madagascar: Nosy Hara Marine Park: 75,000 Ha, Nosy Tanikely Marine Park: 9 Ha, Iles Radama and Sahamalaza Marine Parks: 12,000 Ha, Morombe to Andavadaoka Velondriake: 70,000 Ha, Nosy Ve and Androka Marine Park: 211,559 Ha

Mozambique: Priority sites: Bazaruto Archipelago National Park (BANP): 143000 Ha, and adjacent coastal areas. Other potential sites include: Northern Quirimbas Archipelago, Mossuril Bay, The Primeras Secundas Archipelago, The Bartolomeu Dias estuary, Inhambane Bay with the Linga Linga Estuary, An extension of the Maputo Special Reserve to include a marine component.

Sri Lanka: West coast from Colombo and Jaffna including Palk Bay and Gulf of Mannar regions

Timor Leste: TBD – based on the results of seagrass habitat surveys

Vanuatu: Possible areas include Epi, Efate, Malekula, Uri and Uripiv Islands, Vanua Lava and Ureparapara

At the above target areas, the project will focus on addressing the following main threats to the conservation of seagrass ecosystem on which the dugong and a wealth of other species depend upon:

- Incidental capture as bycatch of vulnerable marine biodiversity in inshore small-scale artisanal meshnet fisheries / commercial fisheries
- Destructive fishing methods, i.e. blast fishing
- Illegal hunting of dugong, coastal dolphins and marine turtles
- Unsustainable tourism and vessel strikes
- Deterioration and degradation of key hotspots of critical importance to seagrass-dependent marine biodiversity;
- Inadequate or non-existent market mechanisms, financing and incentives for small scale fisheries and consumers to support marine biodiversity conservation efforts;
- Weak involvement of rural coastal communities in national biodiversity conservation measures and both the management and monitoring of seagrass habitats.

These threats will be addressed through the following project Components (ref. Table B for more detail on expected Outcomes and Outputs):

1. Protected Areas and Site-level Management at globally important sites
2. Removal of Knowledge Barriers
3. National and regional plans and mainstreaming
4. Capacity development, awareness and information exchange

More details on project framework are provided in Table B. In particular, under **Component 1**, The project will enhance marine and coastal conservation through supporting activities which build the capacity of national project partners to effectively manage established marine protected areas (MPAs), including National Parks/Reserves and Locally Managed Marine Protected Areas (LMMAs) or support and/or foster the establishment of other types of new community endorsed protected areas. Where appropriate, the project will also work to enhance the relationship and collaboration between the responsible authorities and tourism operators and other stakeholders utilising the MPA.

Improving the Management Effectiveness of existing MPAs: In existing MPAs, the project will operate in line with existing Management Plans and will work closely with local PA Management teams to enhance their conservation, enforcement and compliance effectiveness through a range of measures which may include, as appropriate (for both National Parks/Reserves or LMMAs):

- Developing dugong and seagrass conservation and management plans which are nested within a regional, national and local context, using a range of management tools;

- Considering equipment and services required to improve and sustain effective law enforcement;

- Reviewing existing legislation around gill netting and other threats;

- Reviewing and clarifying demarcation and policing policies for park boundaries and/or Zones of Special Protection/Dugong Sanctuaries, if established, including i.e.:

- Publicizing and circulating new or reinforced measures such as: (a) limitations, (b) penalties, (c) protocols for handling live and dead dugong stranding, (d) procedure for reporting mortality;

- Enhancing communication networks and reporting structures to stakeholders;

- Building capacity in the local community through establishing a citizen-science reporting system for reporting and monitoring of illegal netting activity and dugong stranding;

- To create awareness for these project activities, and to facilitate peer-to-peer learning and the exchange of experiences between communities, a range of targeted media may be produced including, i.e.: (a) audio, photographic and video content documenting successful community actions and (b) Cartoon manuals suitable for subsistence and small-scale artisanal and artisanal net fishers.

The project will also engage with relevant government and non-government actors including local communities actors *outside MPAs* and in the MPAs' surrounding buffer zones, to raise awareness and help PA managers address external pressures on MPAs from development, changes in permitted use of land and marine resources and related legal and institutional issues that have an impact on the MPA management effectiveness. In some cases, highlighting the international and trans-boundary conservation importance of specific MPAs may be beneficial to enhance their visibility and conservation status and address the above external pressures.

Establishment of new protected sites: Subject to national authority approval and in line with identified needs and national conservation priorities and plans, the project will also support the establishment of new national Ramsar sites in critical seagrass areas, consistent with Ramsar's Criteria for Assessing Wetlands of International Importance. In this case the project will also be the catalyst for establishment of new MPAs with a focus on working with local communities to

establish LMMAs or other community endorsed protected areas, through the development and implementation of fully integrated community management plans for target areas, which take into account cross-cutting challenges faced by local communities and provide pragmatic solutions. The projects will focus on empowering coastal communities to manage their own resources, developing marine protection initiatives designed to sustain local fisheries and safeguard marine biodiversity. These initiatives have guided fisheries policy and legislation, and will be replicated through work with coastal communities, NGOs, and government agencies.

To achieve this, the Dugong MOU will facilitate countries' access to existing Blue Ventures⁶ experience, an organisation that has received international recognition for the creation of the largest community-managed marine reserve network in the Indian Ocean. With Blue Ventures support, the project can focus on scaling-up existing models for community-based conservation activities at national and international levels across the Indian and Pacific Ocean region.

Additional Information on Incentive Schemes to be applied under outcome 1.2 and 3.2: Successful execution of the GEF Dugong and Seagrass Conservation project will critically depend on the careful development of conservation programmes that bring local communities tangible benefits; that tackle livelihood challenges that they face; and that are financially sustainable. Drawing on the Secretariat's innovative conservation "toolbox", this project will support, i.e.:

1. Identification and design of incentive-based sustainable financing mechanisms at the target areas to support the conservation of biodiversity in and bring economic benefits to participating communities. This will include the incorporation of ecosystem services (including potentially blue carbon) and the use of innovative financing approaches, such as "mortgages" based on natural capital (see 'Additional Information on Incentive Schemes' below);
2. For example, modeling work to date in PNG and Mozambique (as detailed above), the actual schemes will be designed in coordination with community and fisher associations depending on their appropriateness to the local context;
3. Other types of incentives may include compensation for net damage on releasing by-caught animals, compensation for release of a live animal, rewards for reporting illegal hunting within the community, recovery and reporting of carcasses for data collection and preservation purposes.

A major challenge in the application of economic instruments to reduce the impacts of gill netting on dugongs is determining how to monitor the outcomes of the initiative. Most populations will be too small for visual or acoustic monitoring to have the statistical power to detect change in abundance at a local spatial scale, especially as dugongs move in response to natural habitat changes, and attempts to monitor sales of dugong or manatee meat would be likely to drive that activity underground. However, it should be possible to monitor changes in fishing practices such as the use of gill nets. These incentives have been applied in other contexts but that may be useful for application to dugong conservation, and are possible 'tools' identified by the Dugong MOU in collaboration with the Strategic Support Team. Examples include:

⁶ Blue Ventures is a social enterprise that works with local communities to conserve threatened marine and coastal environments, both protecting biodiversity and alleviating poverty. The NGO has developed integrated marine conservation programmes in the western Indian Ocean for over 10 years, and business models include ecotourism, sustainable fisheries management and aquaculture, as well as research into the feasibility of finance for mangrove conservation through mangrove REDD+. The foundation of Blue Ventures' work is the creation of Locally Managed Marine Areas (LMMAs) and Blue Ventures has worked with local communities to pioneer some of the largest and most successful LMMAs of the Western Indian Ocean. Blue Ventures are the recent recipient of a Darwin Initiative grant for their work in Madagascar.

1. Conditional Cash Transfers.

These have been used with success in developing countries as a poverty intervention strategy, particularly for health or education improvements. They target individual households. For example payments may be made to the mother of a family as a reward for having her children vaccinated, or attending school regularly. Such schemes need careful targeting of vulnerable areas and households as well as rigorous evaluation of outcomes. These typically operate in arrears with payments made after the health or education outcome has been achieved.

2. Cash on Delivery and “Buy Downs”

These schemes provide incentives to governments through a financing contract that agrees in advance on the outcomes sought and the guaranteed payments to be made on achievement of the outcomes. Usually the governments are required to pre-finance the agreed activities and are reimbursed following independent evaluation of the outcomes. These arrangements can be between a donor agency and a national government or between different levels of government within a country. Improved schooling and health outcomes for children are a common use of this mechanism. Rigorous independent evaluation is needed to ensure that outcomes are achieved and that there is not over-reporting of results.

Where it is difficult for governments to arrange pre-financing for such programs, “buy downs” may be used. These work by arranging for a government to take out a loan for the agreed program (e.g. health or education), and having the donor agency pay out or “buy down” all or part of that loan after successful implementation of the program has been achieved. This mechanism has been used with success in polio eradication programs in Pakistan and Nigeria.

3. Direct approaches of relevance to dugong conservation include payments of ecosystem services (PES). These direct approaches may work alongside indirect approaches, such as the creation of marine protected area networks, which can be inefficient and difficult to measure in terms of conservation benefit. Payments for ecosystem services can be in the form of infrastructure, training and education to develop skills and capacity for new economic activities, or cash payments. Examples of this approach include, i.e.:

Payment to forest owners in Costa Rica for four ecosystem services – watershed protection, carbon sequestration, biodiversity protection and scenic beauty. This has been successful in reversing the trend of deforestation, but separating the outcomes attributable to the PES program from other policy initiatives is difficult.

Direct payments for turtle conservation i.e. focused on the particular environmental asset rather than the ecosystem service. Monitoring the outcomes from such direct approaches can be difficult.

Performance-based biodiversity contracts for protection of nesting sites for endangered waterbirds in Cambodia . Once again monitoring results and outcomes is challenging.

4. eMortgages

Often in low-income nations, efforts to alleviate poverty produce incentives to degrade the local environment, and similarly efforts to protect the environment can result in no improvement in livelihoods. Indirect approaches to environmental protection include support for alternative livelihoods that reduce the use of local natural resources, such as non-timber forest product production or ecotourism. Such livelihood approaches have been common over the past decades, and have largely failed to protect biodiversity to the extent needed. Incentive payment approaches have been recently advocated and

explored; these include payment for environmental services, restricted land easements, and direct performance-based payments for biodiversity. The latter, such as paying directly for in situ sea turtle hatchlings, is the most direct and cost-effective way to protect an environmental asset.

Incentive payments, however, are not livelihoods. Rather, they are short-term payments that rely on a long-term funding stream, which could result in ephemeral incentives. A lump or one-time payment does not guarantee a lasting incentive for protection of an environmental asset. Direct payment schemes can also be complicated by other factors. For example, ethical issues can arise due to difference in purchasing power between the “buyer” and “seller”. Further, there is no clear link between direct conservation payments and sustainable development, the latter inextricably linked to poverty alleviation. An alternative approach is one that uses debt as a finance mechanism, linking investments in low-impact livelihoods with paying for biodiversity directly. Such an initiative could also assist in encouraging sustainability in traditional livelihoods and cultural revitalization.

By combining microfinance-lending approaches with incentives for environmental stewardship, long-term incentives for environmental conservation and sustainable economic development can be coupled. Using solidarity lending principles, a community could receive a loan based on the global conservation value of an environmental asset in return for protecting that asset. A line of credit, which is tied to the state of the asset, is extended to the community members. In contrast to other loans available to the community (the average non-collateral microfinance loan rate: 22%), the environmental mortgage, which has added security and a second form of return, could carry a reduced interest rate, while still helping to cover costs. The line of credit could be managed by a trust embedded in the community at a local or regional level, balancing external oversight with community engagement and ownership of the process.

There are a number of potential advantages with using debt investment as a tool for biodiversity conservation. While assessments and audits of the asset will be required, an independent third-party can oversee those processes, which would minimize governmental involvement. Since there is no transfer of legal or de-facto ownership, the approach avoids equity issues that are associated with direct purchases of assets or access rights. The establishment of an ongoing lending program also creates a lasting incentive, since current and future participants have repeat access to the credit as long as the asset is maintained. Because the program is aimed directly at improving livelihoods and lending can be targeted at reducing unsustainable resource use, an environmental mortgage program would directly address the alleviation of poverty. Conservation payments, in contrast, might be seen as an entitlement and not necessarily result in improved livelihoods. Finally, environmental mortgage programs could potentially be incorporated into existing microfinance infrastructure, which would reduce overhead and transaction costs.

Given the recent success of microfinance institutions on poverty alleviation over the past two decades, environmental mortgages is a promising approach in linking sustainable development and biodiversity conservation. Today, environmental assets are often valued solely for their extractive uses, and much of that extraction is unsustainable, often due to a lack of alternatives. If challenges in design and implementation can be overcome, environmental mortgages could provide monetary values for the conservation of environmental assets, and provide not only the incentive but also the means for low-impact livelihoods and development.

Finally, also under Component 1, the project will seek to apply existing improved management options at target sites, using the existing Dugong MOU “Management Toolbox” that is already

in use as recently developed in the framework of regional activities by the Dugong MOU Secretariat. An example of the range of management options and activities for improved Dugong conservation found in the toolbox is provided the table below, and additional detail is available from the Secretariat upon request:

Management option	Definition	Example
Education	Activities that impart skill or knowledge that result in a change of behaviour.	Environmental education on the biology of dugongs and their existing threats to raise awareness in the community.
Incentives	Set of tools that encourage people to modify existing practices and change behaviour.	Providing line-fishing gear to communities so that they can remove their gill-nets at a low cost.
Training	Activities that lead to skilled behaviour and improved conservation outcomes.	Communities taught fishing techniques (e.g. line-fishing) that are less harmful to dugongs than gill-netting.
Gear change	Replacement of one fishing gear type with another to reduce the risk of incidental catch.	Communities provided with line-fishing gear in return for their gill-nets.
Microfinance loan	Small loans and other financial services in exchange for improving the protection of an area.	Fisherman stops using gill-nets and is payed a loan to buy a new boat.
Conditional cash incentives	Money provided in exchange for participation in an environmental program.	Individuals who stop using gill-nets in an important dugong area are given a money to pay children's school fees
Cultural tools	Cultural lore that protects/manages natural resources.	Communities agree not to hunt or fish in a special/sacred/taboo area.
Spatial closures	Restrict human activity in a defined area to protect marine resources. Spatial closures are also known as area closures, marine reserves, marine parks and marine protected areas.	Banning gill-netting in an important dugong area.
Temporal closures	Restrict human activity in a defined area <i>at a specific time</i> . For example, temporal closures restrict the catching of fish when the fish are known to be breeding.	Banning gill-netting when dugongs are known to be feeding, breeding or moving through a defined area.
Permits	A legal document that gives official permission to do something otherwise prohibited. Permits are used to control: the amount and type of fish caught (quota); the type of boat used by fishermen; the type of fishing gear used by fisherman; and the area where fishermen can operate.	Permits to fish only issued to fishermen with demonstrated capacity to avoid dugong incidental catch in gill-nets.
Fines	Money extracted as a penalty when an offence has been committed.	A gill-net fisherman is fined for fishing inside a protected area.
Vessel/gear confiscation	A penalty resulting in the confiscation of a vessel or gear for a specified period of time or indefinitely.	The boat or gear of a gill-net fisherman is confiscated because he fished inside a protected area.

How the capacities developed will contribute to the sustainability of project outcomes: The project will allow the capacity of existing and new project partners to be increased through their involvement in conservation and management actions, research and monitoring which will allow value-added benefits and cost-efficiencies at the global, regional, national and local levels. The project will enhance the capacity of *national government officers* to work directly with the community groups on project activities. Through the project, they will not only have more on-ground contact with local groups but will also be able to interact officers from other national governments where they can benefit from cross-fertilisation of ideas, knowledge and shared experiences. As some of the project partners are *universities*, for example in Indonesia, Malaysia and Mozambique, the project will provide a hands-on experience for *undergraduate, graduate and especially post-graduate students*. This will help build crucial technical expertise within partner countries.

The project will also provide essential capacity building for local *national parks officers* as

well as *communities involved in locally management marine areas as community conservation rangers* – as they will be actively undertaking research, monitoring and surveillance activities. The project will build the capacity of *local community groups such as fishers, women, handicraft artisans and local tourist operators* to participate actively in conservation. This will ensure local ownership of the project and direct tangible benefits. For some of the countries, such as Timor Leste, the project will be the first opportunity for *village associations, fishers, and women from remote areas* to participate in biodiversity and marine management. In some regions, the engagement of elders who have already voiced concern over the disappearance of dugongs will help ensure that education of the younger generations is facilitated through respected community members supporting the project.

Outline of Project Execution and regional coordination arrangements:

Regional Coordination: The Dugong MOU Secretariat will oversee the overall coordination of the GEF Regional Dugong and Seagrass Conservation Project to ensure that all of the activities are complementary to those being undertaken by under the framework of the Dugong Seagrass and Communities Initiative. The main Dugong Secretariat MOU staff involved will be: Abu Dhabi Office 1 x P4 programme officer – dugong, 1 x P2 associate programme officer, 2 or more interns (each for periods up to 6 months); The Secretariat will also closely liaise with UNEP/GEF as the project GEF Implementing Agency, as well as with other relevant UNEP branches, most specifically those officers involved in the Blue Carbon project as well as UNEP Regional Offices in Africa, Asia and the Pacific and West Asia (ref. section C.2 for more detail) and GRID Arendal.

Execution Arrangements: As the Executing Agency, the Mohamed bin Zayed Species Conservation Fund (MBZSCF) will work closely with the Dugong MOU Secretariat to administer, manage and report to UNEP/GEF on all aspects of project execution and on the funds disbursed from the project to country partners, according to agreed arrangements and milestones set out on the project document. Project execution at national level and periodical release of funds to country partners will be subject to periodical review/approval from each respective National Steering Committee (NSC) and overseen by the Dugong MOU Secretariat. Each respective NSC will be responsible for overseeing the work of national project management teams and review/approve regular reporting on the use of funds to the MBZSCF and Dugong MOU Secretariat. The MBZSCF, in close collaboration with the Dugong MOU Secretariat, will have the responsibility of collecting and maintaining the financial information on disbursement to and expenditure by each of the Partner Countries, review/approve associated progress reports on activities executed at national level, and periodically report in a consolidated fashion (i.e. for the entire project, including regional and country level) to the UNEP/GEF on project financial and technical status and progress, (the technical aspects being largely supported by the Dugong MOU Secretariat).

The MBZSCF has agreed to provide this function because it is consistent with their mission to support in-situ species conservation by providing grants to grass-root initiatives, as well as to increase awareness of conservation and attract further contributions towards global species conservation work. MBZSCF is a not-for-profit fund set up by the Crown Prince of Abu Dhabi to support species conservation worldwide. The organization was launched in 2008 with an initial endowment of 25 million Euros and has since supported over six hundred projects worldwide to a total of \$7,194,588. Through their experience in handling the international disbursement of funds and related reporting procedures, they are ideally placed to be the Executing Agency on behalf of the Dugong MOU Secretariat. More information is available at: <http://www.mbzspeciesconservation.org/>

The Dugong MOU Secretariat has a well-established relationship with MBZSCF through its proximity (both are based in Abu Dhabi), and a close association with key members of the

MBZSCF Board of Directors. This execution arrangement for the project is fully supported by the MBZSCF Board of Directors which includes members of the Executive Management of EAD, our host agency in the UAE (H.E. Mohamed Al Bowardi, Environment Agency – Abu Dhabi Executive Committee Chair; H.E. Majid Al Mansouri, EAD Executive Committee Member; H.E. Razan Khalifa Al Mubarak, Secretary General of EAD; Dr Frédéric Launay, Senior Advisor to Secretary General of EAD).

Project Steering Committees

Regional-level Project Steering Committee: At the regional level, the Secretariat will coordinate the set-up and operation of a Regional-level Project Steering Committee with representation from all Dugong MOU Focal Points of each Country Partners, UNEP/GEF, MBZSCF, Dugong MOU Secretariat and other major project donors and partners. The committee may be supported by a Strategic Support Technical Advisory Group. The function of the Regional Steering Committee will be to ensure coordination of the GEF Regional Dugong and Seagrass Conservation Project at the regional level and facilitate the related national coordination of activities. Regional coordination will be supported by the GEF Regional Dugong and Seagrass Conservation Project with overall collaboration on relevant activities undertaken by the Secretariat in order to provide the most cost-effective opportunities. For example, subject to approval of the GEF Dugong and Seagrass Conservation Project by the GEF Secretariat, the first Regional project preparation workshop is planned to be held in association with the Second Signatory State Meeting scheduled to take place in early December 2012 in Manila.

National Steering Committees: At the national level, project execution will be overseen by a National Steering Committee chaired by the respective country's Dugong MOU Focal Point (or their delegate) and comprised of members from the key partner organizations. The National Steering Committee will be responsible to oversee a national project management team (responsible for the day-to-day management of the project) and ensure a participatory project development, design and implementation so as to foster community ownership and commitment to achieving successful project outcomes. Each National Steering Committee will be required to lead and provide guidance to the in-country project management team, which may include appropriate local technical experts, government and non-government partner organizations and local community groups. Under guidance from the Regional Steering Committee and supported by the Dugong MOU Secretariat with a Strategic Support Team of advisors (see below), the national steering committee will oversee and ensure that there is active participatory approach in the development and implementation of the various project components through activities which include:

- Identifying and liaising with appropriate community organisations, groups and individuals, NGOs as well as local, provincial and national government officials, etc.;
- Developing a process which supports the community to identify and select suitable management tools, particularly novel finance tools based in existing models already developed by the Dugong MOU partnership, to be trialed in target areas which will be used to indirectly or directly generate conservation action;
- Developing the budget and work plan for project implementation;
- Developing an appropriate monitoring and evaluation framework to demonstrate the project's performance and outcomes;

- Identifying other interested project partners.

Technical Support

International: The Dugong MOU Secretariat has assembled a multi-disciplinary core team of qualified technical advisors to work with and support our local teams as they develop and implement the Dugong, Seagrass and Coastal Communities Initiative. This Strategic Support Team will work with other technical partners identified for the GEF Regional Dugong and Seagrass Conservation project (such as UNEP/DEPI, Blue Ventures, GRID-Arendal and Forest Trends) and bring together their collective experience to ensure the best available local and international skills and expertise in the disciplines required: ecology, planning, finance, fisheries, sociology, project management and environmental conservation.

National/Local: National or Local expertise will be the key to support and guide the day-to-day management of the project at the local and national level. Additional local expertise will be mobilized as appropriate to each country's specific situation, to provide support on local contexts that is crucial for the proper design and execution of the project. The national technical experts will be supported by and work closely with the international technical advisors, as appropriate and required.

- B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read [Mainstreaming Gender at the GEF.](#)":

The socio-economic benefits and ecosystem services associated with the enhanced protection of coastal seagrass ecosystems are well documented. For example, shrimps and fish use these habitats as spawning grounds, and this in turn provides the basis for the livelihood of artisanal fisheries and local communities supporting the local economy along extensive portions of the Indian and Pacific Oceans coastlines. Coastal seagrass habitats are often closely linked to mangrove and reef habitats and thus provide other significant ecosystem services and direct and indirect economic benefits at the local and national levels in terms of i.e. mitigating the impact of natural disasters, as well as climate change mitigation functions and, in some cases providing the basis for sustainable eco-tourism development. The project design will focus on engagement with local communities and supporting livelihoods of the poor and most disadvantaged groups living within and around the project target areas, prioritizing the involvement of women groups as well as indigenous community groups (where applicable). Activities in each country will be adjusted during the project design phase to fit the local context, needs, capacity, priorities and aspirations of key stakeholders and local communities, and will also be (a) aligned with existing national conservation and development plans for each target country and specific target areas, (b) adapted to fit the local and national institutional framework, and (c) enshrined in common and regional-level conservation efforts that are already being fostered and coordinated by the Dugong MOU Secretariat in collaboration with a wide range of local government and non-government partners, including local community groups.

The focus will be on the development of incentive-based sustainable financing and certification mechanisms in target areas, to support biodiversity and ecosystem conservation, resulting in a win-win scenario for improved communities' livelihoods and improved conservation effectiveness. In collaboration with the GEF Blue Forests project, the project will develop small-scale interventions and pilot projects that will trial an innovative approach to use combined Blue Carbon and Ecosystem Services to secure long-term sustainable funding and management which can support conservation as well as socio-cultural and livelihood development in target areas. Baseline socio-economic data will be collected and analysed in a gender-disaggregated fashion during PPG to allow the subsequent proper assessment and monitoring of project's socio-economic impacts

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

Multi-country projects are inherently complex and present their own potential risks and challenges with respect to project implementation. Key risks envisaged during the implementation of the project include:

Identified Risk	Likelihood/ Severity	Proposed risk management measures
1. Weak coordination among ministerial bodies and lack of support from national governments	M	Building on the lessons of other projects on migratory species, it will be critical to foster government ownership from the onset. Practical measures to pre-empt this risk would be to establish a coordination team at each target area, comprised of both civil society and government personnel. Government staff will also be involved at the strategic level on relevant Steering Committees and governance structures. To ensure sustainability, measures ought to be taken for the government to carry on with activities after the project cycle has ended.
2. Government turnover leading to changes in political direction	M	To counter this risk it is essential foster a sense of Return on Investment (RoI) and demonstrate how the project benefits national interests. Particular attention needs to be devoted to sustaining government engagement through a combination of high level, public, and working level meetings in order to leverage maximum political commitment. All major agreements and key discussion should be clearly documented and signed off by any relevant government agencies.
3. Unwillingness to cooperate and sacrifice local or national interests for the benefit and of the wider network	L	Within a regional network context it will be critical to establish a technically competent, enthusiastic and motivated team who see themselves working towards a unified and shared objective. In this context it is also important that a sense of ownership is also established at all levels for the collaborative field work to have demonstration value.
4. Suboptimal capacity building efforts	M	All existing gaps in information should be identified prior to project implementation during the rapid assessment to be undertaken in the PPG phase of this project. Successful completion and replication of synergistic pilot capacity building projects will be adequately budgeted for. A sound and well-designed capacity building programme under component 4 will contribute to the foundation for project success, networking among PA practitioners, while also highlighting the benefits of potential measures to improve biodiversity conservation and habitat quality across boundaries.
5. Insufficient awareness of biodiversity conservation and climate change issues	M	With respect to biodiversity and climate change, several project partners (e.g. CMS, UNEP, Ramsar, GRID-Arendal, Indonesian Ministry of Marine Affairs and Fisheries, Environment Agency – Abu Dhabi) are already active on addressing these issues and working collaboratively with all participating countries through synergistic parallel projects.

		<p>For example the CMS Dugong MOU Secretariat will collaborate with the GEF Blue Forests Project to develop a demo-scale local pilot project to raise awareness and develop local capacity for biodiversity conservation and climate change adaptation of coastal areas used by migratory species such dugong and sea turtles.</p> <p>The project will build upon the above initiative (to support and enhance project interventions in the target areas by highlighting the potential to of Blue Carbon investments to improve livelihoods, biodiversity conservation and climate change adaptation.</p>
6. Communities resident in areas surrounding target PAs are not supportive of conservation plans	M	<p>This is a risk that can only be mitigated through continued and focused and well-targeted communication, consultation, education and involvement of local communities. A comprehensive and well-costed communication plan for each target site will be developed during the PPG and operationalised as a first step at the outset of the project to engage local residents in the new initiatives and mitigate any risks of misunderstanding or conflict. The project will also place emphasis the generation of socio-economic benefits associated with the establishment and incentive schemes and sustainable management and conservation of biodiversity at target areas, including Protected Areas. Where applicable, priority in job creation and capacity building will be given to the disadvantaged social groups, including women groups, within the surrounding community.</p>
7. The needs and priorities of the more disadvantaged groups of society, including Indigenous groups and Women Groups are not adequately taken into account by development plans	L	<p>This risk is fully acknowledged also on the basis of the review of the lessons learned in previous UN and GEF projects at the global level. Therefore all aspects of the project's design, implementation strategy and monitoring and evaluation process will closely look at this important aspect and take this risk into account. This will inform the set-up of adequate stakeholder consultation and involvement mechanisms from project outset, with full support from all project partners, and under the auspices and supervision of UNEP as the GEF implementing agency.</p>
8. Climate Change Risks	M	<p>The impacts of climate change on seagrass habitats, and consequently on dugongs, are yet to be determined, however possible positive and negative scenarios include:</p> <ol style="list-style-type: none"> 1. An increase in seagrass due to rising CO₂ and sea temperatures, providing a greater range for dugongs in some areas; 2. Decline in quality of seagrass due to higher storm frequency resulting in perturbation from physical damage and land run-off leading to increased occurrence of harmful algal blooms, disease organisms, and a shift from seagrass to algal dominance. There is also a higher risk of dugong stranding following unusual tidal activity during severe storms. <p>If climate change has a negative impact on fish stocks,</p>

		<p>particularly in dugong range states where subsistence and artisanal fisheries are prevalent, this may also have a detrimental impact on dugongs through added fishing effort (incidental catch) and direct catch; predicted population increases in these areas may further exacerbate the problem (see Marsh et al. 2011).</p> <p>While the real impact of climate change remains to be seen, this project will provide greater monitoring and assessment of dugong populations and seagrass habitats to better identify changes, as well as provide alternative livelihoods to fishing communities to alleviate reliance on fisheries and capture of dugongs as a protein source.</p>
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B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

Category	Stakeholders	Roles and Contributions
National Government and affiliated organizations	<p>Indonesia: Ministry of Marine Affairs and Fisheries Ministry of Environment Ministry of Forestry Research Centre for Oceanography (RCO-LIPI) District Government (Bintan and Alor)</p> <p>Madagascar: Ministry of Environment and Forests Centre National de Recherches Océanographiques Madagascar National Parks Centre de Surveillance des Pêches Service d'Appui à la Gestion de l'Environnement /ASLME Université d'Antananarivo Comité National GIZC</p> <p>Malaysia: Ministry of Natural Resources and Environment Department of Fisheries Malaysia Department of Marine Parks Malaysia Sabah Parks Sabah Wildlife Department Sarawak Forestry Corporation (SFC) Forest Department of Sarawak (FDS) Marine Department, Johor State Parks Universiti Malaysia Terengganu (UMT), Universiti Sains Malaysia (USM) Universiti Malaya (UM) Borneo Marine Research Unit (Universiti Malaysia Sabah) National Oceanography Directorate (Ministry of Science, Technology and Innovation) Universiti Malaysia Sarawak (UMS) Universiti Putra Malaysia (UPM)</p> <p>Mozambique: Ministry for</p>	<p>The national governments and a wide range of government-affiliated institutions will play a major role in the project and contribute a significant baseline investment on which the GEF contribution will build upon. These will include, i.e.: Management of Protected Areas including staff, infrastructure, equipment and operations; National, regional and local level Land-use and development planning processes and underlying government staff and infrastructure, including relevant legal expertise; National and local level academic research based on extensive data collection and analysis (both in terms of space and time series) on climatic and environmental parameters, biodiversity conservation and natural resources management; coastal zone management and provision of other environmental data, etc.</p>

	<p>Coordination of Environmental Affairs (MICOA) Ministry of Tourism Natural History Museum / Eduardo Mondlane University Sri Lanka: Department of Wildlife Conservation Ministry of the Environment Timor Leste: Ministry of Agriculture and Fisheries Vanuatu: Department of Environment and Conservation Department of Fisheries Department of Lands Vanuatu Cultural Centre</p>	
Local and Indigenous Community Groups, including Women groups	<p>All relevant local indigenous community groups, including women groups will be identified for each specific target area, during the PPG phase. Indonesia: Pengudang and Berakit Village Communities Madagascar: Groupement des Armateurs de la Pêche Crevetrière à Madagascar</p>	Participation in project consultations mechanisms and in project activities including policy dialogues and working groups at all stages including: project design, implementation and monitoring and evaluation.
Private Sector	<p>The possible involvement of Private Sector will be explored during the PPG phase, focusing mainly on the engagement of small scale, community-based enterprises (SMEs – such as i.e. artisanal fisheries) active within the target areas, as larger investment groups at the national level, that may be interested in supporting the objectives of this project. Indonesia: P.T. Bintan Resort Cakrawala Lagoi,</p>	Participation in project consultations mechanisms and in project activities including policy dialogues and working groups at all stages including: project design, implementation and monitoring and evaluation.
International CSOs, conservation NGOs & other conservation-oriented partners	<p>Project Partners to the “Dugongs, Seagrasses and Communities Development Initiative” include Conservation International (Pacific Islands), Papua New Guinea Sustainable Development Programme and Ecoseeds (PNG). Relevant project partners associated with the GEF Blue Forests Project include GRID-Arendal, Environment Agency – Abu Dhabi, Blue Ventures, Forest Trends plus possibly additional NGO’s plus BINGOs such as i.e. WI, IUCN’s Freshwater Biodiversity Unit, the LIFEWEB initiative. National partners include: Indonesia: CML-Leiden University Indonesian Seagrass Foundation Institute of Environmental Sciences WWF - Indonesia</p>	Will be involved in various biodiversity conservation elements of the project including i.e.: monitoring and field research, training and capacity building, development of incentive-based mechanisms, conservation policies and legal instruments, community involvement, outreach and awareness programs; assessment and evaluation of the ecosystem services provided by the target protected areas, etc. All such contributions will be defined in detail during the PPG phase, and will be supported through in-kind support as well as grants

	<p>Madagascar: Wildlife Conservation Society (WCS) Blue Ventures CetaMada Conservation International WWF</p> <p>Malaysia: Marine Research Foundation WWF – Malaysia Malaysia Nature Society (MNS)</p> <p>Mozambique: Centre for Dolphin Studies WWF</p> <p>Sri Lanka: Dilmah Conservation</p> <p>Timor Leste: TBD</p> <p>Vanuatu: Secretariat of the Pacific Regional Environment Programme (SPREP) Wan Smol Bag</p>	
International Multi-lateral Environmental Agreements	The Convention on the Conservation of Migratory Species of Wild Animals (CMS Secretariat), CMS Dugong MOU Secretariat, Ramsar Convention on Wetlands (Ramsar), the CBD Secretariat CITES Secretariat, IUCN’s Global Programme.	Provide linkages with relevant international processes; provide guidance and technical expertise to counterpart institutions in target countries, if and as required; support compliance by partner countries to relevant conventions; assist in showcasing the experience and achievements of the project in international fora
UN and International Organisations	The following partners have been involved in the preparation of the PIF and will be involved to a variable degree during project design and implementation. These include i.e. UNEP-CMS Secretariats and CMS Dugong MOU Secretariat, Ramsar Convention Secretariat, UNEP/WCMC, CITES Secretariat, SPREP and UNEP/DEPI (BD/GEF, FMEB, LIFWEB and ESE teams)	UNEP and its specialised partner agencies will (in addition to the GEF Implementing Agency functions played by the UNEP GEF team) provide a wide range of technical in-kind contributions to the design and implementation of the project, including i.e.: linkages with parallel UNEP programmes of national and global nature and focusing on related issues; protected areas, conservation planning, environmental policy and climate change-related expertise; biodiversity databases, data analysis, decision-support and GIS systems; coastal zones, wetlands and natural resources management, etc. The contributions of each division and UNEP partner organisations will be defined in detail during the PPG phase.

B.6. Outline the coordination with other related initiatives:

To date, there have been few coordinated range-wide management interventions at the regional or global level to reduce anthropogenic impacts on the seagrass and associated mangrove and reef ecosystems supporting the dugong and other globally important species, apart from legislative protection which is almost ubiquitous throughout its range. It is estimated that management plans have been developed for some 22-24% of the range, but are in place in only 18-22% of the range. The dugong is protected by marine protected areas in 22-23% of its

range.

The UNEP/CMS Dugong MoU, which entered into force on 31 October 2007 and has grown to 21 signatories to date, is designed to facilitate national level and transboundary actions that will lead to the conservation of dugong populations and their habitats. A Conservation and Management Plan provides the basis for focused species and habitat-specific activities, coordinated across the dugong's migratory range. The Plan contains nine broad objectives ranging from, inter alia, facilitating research and monitoring awareness raising and enhancing national, regional and international cooperation on the species. The Dugong MoU is serviced by the UNEP/CMS Office – Abu Dhabi being hosted by the Government and the Environment Agency of Abu Dhabi (EAD), and it is from this base that a new Initiative called “the Dugong, Seagrass & Coastal Communities Initiative” (see attached document) is being spearheaded. This Initiative is helping to foster the use of financial incentives to address direct hunting and the accidental capture of dugongs by encouraging people to change their practices and improving the livelihoods of local communities. The initiative is one of the actions being promoted under the Pacific Year of the Dugong in 2011. The Initiative is currently focused on Bazaruto Archipelago, Mozambique and Daru Island, Western Province Papua New Guinea. A transboundary project between India and Sri Lanka is being developed. International conservation agencies such as WWF and national governments are engaged in dugong conservation measures through their national marine programming and biodiversity priorities, though these efforts are carried out piecemeal and largely disconnected from one another. It is precisely this disconnect that that project will seek to address. This will be achieved through the development of national professional capacity and the establishment of enhanced coordination and knowledge-sharing mechanisms, hosted by the overarching UNEP/CMS Initiative, developing novel tools and harmonization of strategies based on community needs and impact driver factors to leverage conservation action through long-term benefit-sharing.

The project intervention will be Regional in nature with an operational presence at the national level in the following countries: Indonesia, Madagascar, Malaysia, Mozambique, Sri Lanka, Timor Leste, and Vanuatu. Relevant parallel initiatives that the project will coordinate with in the target countries/region(s) include: SPREP Regional Action Plan for Dugongs; Indonesia's National Strategy; Malaysia's Dugong action plan; Mozambique's Draft Action Plan for Bazaruto Archipelago; CTI-CFF Goals 3 and 5 (Indonesia, Malaysia and Timor Leste) Marine protected areas established and effectively managed and Threatened species status improving), BOBLME (Indonesia, Malaysia and Sri Lanka) and ATSEA (Indonesia and Timor Leste).

The Dugong MOU Secretariat will support the establishment and operation of a Project Steering Committee that will comprise representatives of the main organisations involved in implementation, execution and technical and administrative delivery of the project. Representatives of selected government agencies, relevant parallel initiatives and donors will also be invited to participate at the national and regional level. The Steering Committee will play a dual role: (a) to guide and oversee the project's technical progress and performance, and (b) to coordinate the roles of the organisations they represent and ensure that strategic decision-making therein is made with due consideration of the project's activities and objectives.

The project will enhance regional coordination with other initiatives and implement actions that contribute to the following CMS programmes of work with Ramsar, CITES and SPREP.

CMS have had a Memorandum of Understanding (MOU) with Ramsar since 1997, highlighting common interests, cooperation and joint actions. This was followed by a Joint Work Plan from 2003 – 2005. A new Joint Work Plan has been devised for 2012 – 2014 and this will strengthen the bond through a wide array of activities ranging from managing species populations and wetland ecosystems to the joint implementation of information, outreach and capacity building initiatives, while maximizing efficiency and funding.

CITES and CMS also have a MOU, in existence since 2002, to enhance collaboration and

coordination of common activities. In 2011, a meeting between CITES and CMS mapped out areas of work where activities under each Convention complement, or reinforce, one another, and could therefore benefit from national coherence and regional cooperation. Dugongs are listed on Appendix 1 of CITES.

CMS has had an MOU with SPREP since 2005, which notes shared concerns and the importance of Small Island Developing States in both migratory species conservation and the significance of some species to local livelihoods and cultures in this region. Since 2003, SPREP has administered a Dugong Action Plan through the six SPREP member states with dugong populations (Australia, Papua New Guinea, Palau, New Caledonia, Solomon Islands and Vanuatu) and ran the Pacific Year of the Dugong campaign in 2011 to strengthen awareness and protection. The cooperation between SPREP and CMS has been further strengthened recently with the appointment of a CMS Pacific Officer who has been based at SPREP since early 2012.

Australia: Australia is involved through the PNG project outlined above. Following a meeting in March 2012, it has been agreed that three related projects – the NERP Torres Strait Futures, AFMA Subsistence Fisheries in the PNG Treaty villages, and DEC/UNEP/CMS My Dugong – will be phased into one combined programme, which will maximize on support from James Cook University, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Torres Strait Regional Authority (TSRA) and AFMA (The Australian Fisheries Management Authority).

Mayotte: As reported to CMS in 2007, Mayotte has a number of legal measures in place to protect dugongs, including fines and imprisonment if convicted of killing a dugong and a network of Marine Protected Areas. The Dugong MOU Secretariat is also in contact with conservation authorities in Mayotte involved in Dugong conservation, and this will ensure a continued two-way flow of information, complementarity and synergy between the GEF project's regional-level initiatives and ongoing and planned Dugong conservation work in Mayotte.

New Caledonia: Amongst other activities, a recent dugong tagging program has been sponsored by l'Agence des Aires Marines Protégées, the Southern Province, WWF and Opération Cétacés. This and other activities will be entirely synergic with regional-level work coordinated under this project through the Dugong MOU.

NWIO Regional By-catch Workshop: In the NWIO region (North Western Indian Ocean), a workshop on 'Addressing marine mega-fauna by-catch from gillnet fisheries in the North-West Indian Ocean region' will seek to address regional issues such as governance, data collection, community involvement and quantitative analysis. This proposal is supported by the League of Arab States (LAS) and will also complement the objectives of the GEF project through the involvement of the Dugong MOU team and partners.

Frequent updates on dugong related conservation measures are submitted to the Dugong MOU and are documented on the Dugong MOU website 'Noticeboard' (http://www.cms.int/species/dugong/dugong_noticeboard.htm) or 'Media' pages.

Finally, it is important to emphasize that the Dugong MOU Secretariat is already working closely with most if not all government and non-government partners engaged in Dugong Conservation in the entire Dugong Range. These partners are already in constant contact and meeting regularly to discuss regional-level Dugong conservation issues. This provides the optimal framework to ensure coordination, complementarity and synergy during project design and implementation. This set-up will also ensure the alignment work conducted at the country level through the GEF project with all the above regional-level conservation efforts (both project and non-project sponsored), and maximize the value-added through the GEF intervention by fostering uptake and replication and the wider regional level across the entire Dugong Range.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

C.1 Indicate the co-financing amount the GEF agency is bringing to the project:

Several branches of UNEP, UNEP partner institutions and UNEP-hosted Secretariats of Multi-lateral Environmental Agreements (MEAs) will contribute to the design and implementation of this project. These include i.e.: The UNEP Regional Offices in the target regions, through their active programmes of collaboration with partner countries; The Division of Environmental Policy Implementation (DEPI), through several of its units/branches including: the UNEP/DEPI Terrestrial Ecosystems Unit (TEU - Nairobi) and its LIFEWEB team; UNEP/DEPI Freshwater and Marine Ecosystems Branch (FMEB, Nairobi); the GEF BD/LD Unit (Nairobi) and the Ecosystem Services Economics Unit (ESE - Nairobi). Other external UNEP partners include GRID-Arendal (involved in other major parallel “Blue Forest” GEF project in collaboration with the UNEP-FMEB)) and the UNEP-WCMC (World Conservation Monitoring Centre) that is conducting significant relevant work on migratory species issues with several national and international research institutions, NGOs, Private Sector and MEAs that will be involved in this project. The cumulative direct in-kind co-financing that UNEP is bringing to the project will therefore amount to a minimum of approximately 300,000 USD over the project period (to be further assessed during PPG).

C.2 How does the project fit into the GEF agency’s program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The project is consistent with the following areas of UNEP’s mandate in the GEF (as identified in the UNEP Action Plan on Complementarity, approved in May 1999 by the GEF Council):

UNEP’s mandate is to coordinate the work of the UN in the area of environment. Its projects promote regional and multi-country cooperation to achieve global environmental benefits, focusing on diagnostic analyses and cooperative mechanisms, and associated institutional strengthening

UNEP contributes to the ability of the GEF and of countries to make informed strategic and operational decisions on scientific and technical issues in programs and project design, implementation and evaluation, through scientific and technical analyses. These include assessments, targeted research, methodology development and testing and structured programme learning projects.

UNEP implements projects to promote specific technologies and demonstrate methodologies and policy tools that could be replicated on a larger scale by other partners.

The project is fully consistent with and complementary to the objectives and expected outcomes of the ongoing UNEP Programme of Work 2010-2011 and upcoming POW for 2012-2013 (approved in Feb 2011), specifically under the Ecosystem Management and Environmental Governance sub-programmes.

Furthermore, the project is consistent and complementary to the objectives and expected outcomes of the UNEP Marine and Coastal Strategy, particularly the Ecosystems for Humanity strategy to ‘enhance the understanding of the status, trends and key drivers impacting marine and coastal ecosystems and the services they provide for human well-being and poverty alleviation as a basis for informed and coherent policy making and governance’ with expected outcomes of ‘global marine and coastal biodiversity targets met by countries and regions through enhanced access to appropriate and timely scientific information.’, ‘compatible tools, guidelines and frameworks developed for defining, assessing and valuing marine and coastal habitats and their ecosystem services’. ‘integrated and regular national, regional and global regular assessments of the status, trends and key drivers of marine and coastal ecosystems’ and ‘enhanced understanding and awareness of the role of marine and coastal ecosystem services for human well-being and climate regulation.’

In addition, as seagrass is a ‘blue forest ecosystem’, so this project is consistent with the objectives of

the UNEP Blue Carbon Initiative, in collaboration with the GEF Blue Forests project. The main elements of the initiative and the project are to ‘developing methodologies, standardized around the world, for carbon accounting and economic valuation of ecosystem services in coastal blue carbon ecosystems; ‘use these methodologies in a range of small-scale interventions’; ‘fill gaps in our knowledge of ecosystem services and of carbon sequestration and fluxes in blue carbon ecosystems;’ and ‘explore how the international community can adopt the methodologies to influence international climate frameworks and create incentives for protecting ecosystem services and carbon sequestration.’

Finally, UNEP is also involved with several marine mammal activities around the world such as manatee regional action plans in the Caribbean and in West Africa, as well as a marine mammal and corridors and critical habitats’ project in the Caribbean. The relevant elements of the UNEP PoW that are supported by the project are highlighted below in **Table 4**.

Areas of UNEP comparative advantage in the GEF (all Focal Areas)		UNEP Thematic Priority Areas					
		Climate change	Disasters & conflicts	Ecosystems management	Environmental governance	Harmful substances & hazardous wastes	Resource efficiency
1. Sound science for national, regional and global decision-makers	Early warning and emerging issues	X		X	X		
	Science to Policy linkages				X		
	Environmental monitoring and assessment	X		X	X		
	Norms, standards, and guidelines			X	X		
	Enabling Activities for MEAs and synergies	X		X	X		
2. Cooperation, coordination and partnerships (regional or international)	Trans-boundary cooperation	X		X	X		
	Regional, or South-South cooperation	X		X	X		
	Global transformative actions						
3. Technical assistance and capacity building at country level (contribution to Bali Strategic Plan)	Technology assessment, demonstration, and innovation	X		X			


In addition to the UNEP/GEF staff involved in fulfilling the UNEP function as the project GEF Implementing Agency, the UNEP regional Offices for Western Asia (UNEP-ROWA – Bahrain), South Asia and Pacific (UNEP-ROAP – Bangkok), Easter and Southern Africa (UNEP-ROA, Nairobi) and UNEP Representative based in Apia (Samoa), within the SPREP Office. UNEP-ROWA will specifically assist in project implementation especially through its MEAs Implementation Support Branch. Several other UNEP Technical staff based at UNEP HQ and involved in the UNEP initiatives listed above, will be providing support to the implementation of this project, including but not limited to staff from the following UNEP divisions and units, i.e.: Freshwater and Marine Ecosystems Branch of UNEP’s Division for Environmental Policy Implementation (UNEP/DEPI/FMEB), as well as UNEP/DEPI Biodiversity Unit, Ecosystem Services and Economics Unit, GEF BD-LD Unit, and UNEP/DEPI-hosted LifeWeb Program. Also technical staff from UNEP’s partner specialized Technical Centre of GRID-Arendal (Marine Programme) who are involved in the above parallel initiatives, will be supporting this GEF and Dugong and Seagrass project. Finally also the staff of the UNEP-hosted CMS Secretariat in Bonn will provide technical support to this project, both directly and through the CMS Dugong MOU Secretariat.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dana A. Kartakusuma	Assistant Minister, Economy and Sustainable Development	MINISTRY OF ENVIRONMENT, INDONESIA	03/15/2012
Christine Edmee Ralalaharisoa	Director of Department	MINISTRY OF ENVIRONMENT AND FORESTS, MADAGASCAR	11/25/2011
Lian Kok Fei	Undersecretary of Environmental Management	MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT, MALAYSIA	03/16/2012
Marilia Telma Antonia Manjate	Director for Cooperation	Ministry for the Coordination of Environmental Affairs, Mozambique	03/07/2012
B.M.U.D. Basnayake	Secretary	Ministry of Environment, Sri Lanka	03/15/2012
Mario Francisco Correia Ximenes	Secretariat of State for Environment	National Directorate for International Environmental Affairs, Timor Leste	02/22/2012
Albert Williams	Director of Environmental Protection and Conservation	Ministry of Lands and Natural Resources, Vanuatu	03/15/2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller, Director, GEF Coordination Office, UNEP		04/23/2012	Edoardo Zandri, GEF Task Manager, DEPI, GEF BD/LD Unit, UNEP, Nairobi	+254 20 762 4380	edoardo.zandri@unep.org

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Attached Appendices

- Appendix 1: Additional Site and Species Information
- Appendix 2: Additional information on relevant baseline interventions that the project will build upon in the project target areas and countries
- Appendix 3: Dugong Seagrasses and Coastal Communities Initiative Brochure