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United Nations Development Programme

Country: Sri Lanka

PROJECT DOCUMENT

Project Title: Enhancing Biodiversity Conservation and Sustenance of Ecosystem services in Environmentally Sensitive Areas

UNDAF Outcome 4: Policies, programmes and capacities to ensure environmental sustainability, address climate change mitigation and adaptation, and to reduce disaster risks in place at national, sub-national and community levels

UNDAF Output 4.2: Government agencies, community groups and private sector are equipped with mechanisms, and practices to promote sustainable use of natural resources, biodiversity conservation and climate change adaptation.

UNDP Strategic Plan (2014-2017) Primary Outcome: Sustainable Development Pathways

UNDP Strategic Plan Secondary Outcome: Effective maintenance and protection of natural capital

Executing Entity/Implementing Partner: Ministry of Mahaweli Development and Environment

Implementing Entity/Responsible Partners: UNDP

Brief description: This project will assist the Government of Sri Lanka to safeguard biodiversity in multiple land use areas of special ecological significance (high biodiversity values) through the operationalization of a new land use governance framework called "Environmentally Sensitive Areas" (ESAs), which will be primarily outside protected areas. The primary objective of this project is "To operationalize Environment Sensitive Areas (ESA)—as a mechanism for mainstreaming biodiversity management into development in areas of high conservation significance". In order to achieve this Objective, the project plans on achieving the two major Outcomes, and five Outputs under these. The two Outcomes are:

- Outcome 1: National Enabling Framework Strengthened to Designate and Manage Environmentally Sensitive Areas (ESA)
- Outcome 2: Biodiversity-friendly ESA management for long term integrity and resilience ensured at two sites in the Kala Oya Region

Under Outcome 1, the project will support the development of national policy, strategy and national scale up plan for ESAs and build national institutional capacities to foster inter-sectoral partnerships and coordination to support ESA identification, management and monitoring of ESAs. Under Outcome 2, inter-sectoral partnerships also be fostered at local levels at two sites in Kala Oya Region to effectively manage at least 200,000 ha of landscape and seascape for long term biodiversity conservation, and for the maintenance of environmental services critical for local and national development using the ecosystems approach.

Programme Period:	2015-2020	**Total resources required**	**19,276,690 USD**
Atlas Award ID:	00079607	**Total allocated resources:**	**19,276,690 USD**
Project ID:	00089554	• Regular (UNDP)	6,500,000 USD
PIMS #	5165	• Other:	
Start date:	01 October 2015	• GEF TF	2,626,690 USD
End Date	30 September 2020	• Government Co-Finance	10,150,000 USD[1]
Management Arrangements:	NIM		
PAC Meeting Date	20.03 - 9.04 2015		

Agreed by Mr. Udaya R. Senevirathne (Government):

__/__/2015

Agreed by Mr. Joern Soerensen (UNDP):

__/__/2015

[1] See Annex 1 for co-financing commitments

ACRONYMS AND ABBREVIATIONS

APR	Annual Progress Report
ARR	Annual Review Report
AWP	Annual Work Plan
BCAP	Biodiversity Conservation in Sri Lanka – Framework for Action
BDS	The Biodiversity Secretariat (under the Ministry of Environment)
CBO	Community Based Organizations
CCD	Coast Conservation and Coastal Resource Management Department
CDR	Combined Delivery Report
CEA	Central Environment Authority
CPAP	Country Programme Action Plan
DI	Department of Irrigation
DS	Divisional Secretariat
DAD	Department of Agrarian Development
DF	Department of Forest
DFAR	Department of Fisheries and Aquatic Resources
DFID	Department for International Development (of the United Kingdom)
DFO	District Forest Office , Divisional Forest Office
DLUPC	District Land Use Planning Committee
DOAD	Department of Agrarian Development
DWC	Department of Wildlife Conservation
EPA	Environmental Protection Area
ESA	Environmentally Sensitive Area
FAO	Food and Agriculture Organization
FD	Forest Department
GA	General Administration
GEF	Global Environmental Facility
GIS	Geographic Information System
GIZ	*Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH* (German Federal Enterprise for International Cooperation)
HACT	Harmonized Cash Transfer System
HEC	Human Elephant Conflict
IAS	Invasive Alien Species
IBAT	Integrated Biodiversity Assessment Tool
ID	Identity
IFC	The International Finance Corporation
ILO	International Labour Organization
IR	Irrigation Department
IUCN	International Union for the Conservation of Nature
IW	Inception Workshop
KOR	Kala Oya Region
LUPPD	Land Use Policy Planning Department
M&E	Monitoring and Evaluation
MASL	Mahaweli Authority of Sri Lanka
MDP	Mahaweli Development Programme
MEPA	Marine Environment Protection Authority
MoMDE	Ministry of Mahaweli Development and Environment
MSL	Mean Sea Level
MTR	Mid Term Review

NAP	National Action Plan
NAQDA	National Aquatic Resources Research and Development Agency
NARA	National Aquaculture Development Authority
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Self-Assessment
NEA	National Environment Act
NGO	Non-governmental Organisations
NIM	National Implementation Modality
No	Number
NPP	National Physical Plan
NPPD	National Physical Planning Department
^{o}C	Degrees Celsius
OFP	Operational Focal Point
PA	Protected Area
PB	Project Board
PC	Project Coordinator
PD	Project Director
PIMS	Project Information Management System
PIR	Project Implementation Report
PPR	Project Progress Report
PTR	Project Terminal Report
QPR	Quarterly Progress Report
RCU	Regional Coordination Unit
REDD	Reduced Emission from Deforestation and Forest Degradation
SBAA	Standard Basic Assistance Agreement
SGP	Small Grants Fund
SO	Strategic Objective
STAR	System of Transparent Allocation of Resources (of the Global Environmental Facility)
TEEB	The Economics and Ecosystems and Biodiversity
TOR	Terms of Reference
UDA	Urban Development Authority
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme's Country Office
UNESCO	United National Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
UNREDD	United Nations' Joint Programme on Reduced Emission from Deforestation and Forest Degradation
USD	United States Dollars
VAT	Value Added Tax
WNP	Wilpattu National Park

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STRENGTHENING MULTI-SECTORAL MANAGEMENT OF CRITICAL LANDSCAPES

PART I: SITUATIONAL ANALYSIS

1.1 Background

1. Sri Lanka's land area of 6,561,000 ha and territorial marine area of 51,700,000 ha are known to host globally noteworthy biological diversity. On account of significant biological wealth, the country has been identified as one of the highest priority conservation areas in the world. Sri Lanka's lowland rainforests, montane rainforests and south-western rivers and streams are listed as some of the most important global eco-regions[2]. Sri Lanka's marine areas have also been identified as one of the highest priority areas globally for conservation[3]. It is listed as one of the 34 global "biodiversity hotspots"[4] and as one of the world's 356 endemic bird areas. Despite the nation's relatively small size, species new to science have continued to be discovered – such as three endemic fish species in 2013 and a new species of Gecko (*Cnemaspis rammalensis*) in 2014.

2. As in all nations, Sri Lanka's ecosystems and biological diversity provide an array of critical environmental services that underpin water provision, agricultural/ fisheries production and protection from natural disasters such as storm surges. Ecosystems and biodiversity play significant roles in people's subsistence livelihoods as well as in wider economic development. For example, ecosystems and biodiversity resources directly contribute to Sri Lanka's tourism sector (including wildlife tourism, beaches and scuba diving), fisheries sector (with 85% of fisheries contributions coming from coastal and offshore/ deep sea fishing) and even the health sector (through provision of medicinal plants for the traditional Ayurveda medicine).

3. To conserve its most significant biodiversity, Sri Lanka has instituted a national system of Protected Areas (PAs). Some 28% of the total land area are legally designated Protected Areas - consisting of Strict Nature Reserves, Nature Reserves, National Parks, Jungle Corridors, Refuges, Marine Reserves, Buffer Zones and Sanctuaries. Additionally, areas under Forest Reserves, Conservation Forests and National Heritage Wilderness Area can also be considered as "protected" areas. Notwithstanding actions underway to identify gaps in PAs and to expand the PA estate, many of the globally important ecosystems and habitats of globally significant species will continue to remain outside protected areas and will face accelerating pressures. Unless strong measures are undertaken to put development on a more conservation-friendly trajectory by mainstreaming biodiversity into production activities, biodiversity outside and inside protected areas cannot be safeguarded, especially under the current context of rapid urbanization and high rate of economic development in the country.

4. Whilst there have been several activities to promote biodiversity conservation outside protected areas, this project will greatly strengthen such attempts by supporting a new land use governance framework to establish and effectively manage Environmentally Sensitive Areas (ESAs)[5]. Such areas will be a vehicle for safeguarding globally significant biodiversity on production lands of high conservation values, primarily outside protected areas. Following the ecosystem approach and using the land use planning and management framework as the entry point, the project aims to optimize multiple land management and ensure the compatibility of land uses across landscapes designated as ESAs with biodiversity needs. Whilst several government policies and legislations provide for the creation of ESAs, there is an unmet need to operationalise them. The project will put in place the necessary governance framework at the national level, including enforcement systems. The project will also demonstrate ESA creation and management at Kala Oya Region, where activities to ensure that mechanisms for land use permitting and allocation are configured to balance conservation and development objectives, so as to protect major habitat blocks and ensure structural and functional connectivity across the landscape. The project will ensure that the indirect impacts of development are adequately

[2] http://wwf.panda.org/about_our_earth/ecoregions/ecoregion_list/ecoregions_country/ecoregions_country_s.cfm
[3] http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0082898#pone.0082898.s003
[4] http://www.cepf.net/Documents/final.westernghatssrilanka_westernghats.ep.pdf
[5] An ecologically sensitive area is tentatively defined as "Landscape/ seascape with a mosaic of mixed land/marine uses that merit special management considerations on account of their high national and global significance based on biodiversity, natural and cultural features and/or ecological functions that warrants its special management in the best long-term interest of people and the environment, as it is particularly susceptible to irreversible negative impacts from mismanagement or over use"

understood and factored into decision making. Thus it will deliver immediate global benefits, while improving long term conservation prospects across the country.

5. This project document describes the concept of ESAs as a mechanism to safeguard biodiversity outside protected areas and the project's Outcomes, Outputs and indicative activities. In addition, the management arrangements and budgets of the project are also described, along with the project's monitoring and evaluation framework.

1.2 Environmental Context

6. Sri Lanka is a tropical country that lies between 5^0 55' 10'' to 9^0 50' 6'' North latitude and between 79^0 31' 19'' to 81^0 52' 36'' East longitude. Mean annual rainfall varies from under 900mm in the driest parts to over 5000 mm in the wettest parts of the country. The driest parts fall in the South-eastern and North-western corners of the country while the wettest parts fall in the western slopes of the Central Highlands. Due to the distinct rainfall distribution pattern around the nation, Sri Lanka has 3 climatic zones - the Wet zone, Intermediate zone and the Dry zone. The Wet zone receives mean annual rainfall of above 2500mm. The Intermediate zone receives mean annual rainfall of 1750-2500 mm. The mean annual rainfall of the Dry zone is below 1750 mm.

7. Physiographically, the country can be described as having three zones/ peneplanes consisting of:

   I. The coastal belt and its surrounding area extending up to 300 m elevation, where the slope gradient is generally between 0 – 8%

   II. The middle belt from 300m to 900m MSL (called "Middle peneplain"). The slope gradient of this zone is generally between 15-30%

   III. Area above 900m MSL up to 2000 MSL, with general slope gradient between 30-45%, with some areas having 60% gradient or more. This region lies almost in the middle of the country and is commonly called the Central Highlands

8. The coastal lowlands have an annual mean temperature of 27.5 ^{0}C, and the mean annual temperature decreases with an increase of altitude in the Central Highlands. The mean annual temperature of Nuwara Eliya, located at an altitude of over 1800 m is 15.9 ^{0}C. The wide variation in temperature, rainfall, topography and soils in the country has contributed to its stunning biodiversity.

9. The most recent land use assessment (2007) shows that 65% of the total land is covered by agricultural land, including homesteads, plantations (tea, coconut, rubber and other perennial crops); followed by forest lands (28.8%- including natural forests to forest plantations), water bodies (4.6%), barren land (1.2%) and urban areas (0.6%).

10. Sri Lanka's major ecosystem types include forests, grasslands, agro-ecosystems, wetlands and marine and coastal areas. Their diversities are presented in Table 1 below. Recognizing their global importance, four forests have been recognized as Natural World Heritage Sites based on their exceptional biodiversity values due to high endemism in Sri Lanka and six wetlands of international importance (Ramsar sites) have also been designated- Bundala National Park, Annaiwilundawa Tanks Sanctuary, Maduganga, Vankalai Sanctuary, Kumana Wetland Cluster and the Wilpattu Ramsar Wetland Cluster. Additionally four areas have been designated as UNESCO's Man and Biosphere Reserves.

Table 1: Sri Lanka's[6] Natural and Modified Ecosystem Diversity

Major types	Categories
Forests and related ecosystems	Tropical wet lowland evergreen forest (includes lowland and mid elevation rain forests) • tropical sub-montane forest • tropical montane forest • tropical moist monsoon forest • tropical dry monsoon (mixed evergreen) forest† • tropical thorn forest (Arid Zone) • riverine dry forest • Grasslands (wet patana, dry patana, savannah, etc.) - categorized in Grasslands – hence remove
Grasslands	wet *patana* grasslands, savannahs, dry *patana* grasslands
Inland wetland ecosystems	• flood plains • swamps • lentic waters (tanks/reservoirs and ponds) • river basins • flood plains two floodplains remove one • swamps • streams and rivers • wet villu grasslands
Coastal and marine ecosystems	• mangroves • salt marshes • sand dunes and beaches • mud flats • sea grass beds • lagoons and estuaries • coral reefs
Agroecosystems	• paddy lands • fruit cultivations • small crop holdings or other field crops (pulses, sesame etc.) • vegetable cultivations(excluding root and tuber crops for 2012)‡ • crop plantations (major export crops) • minor export crops†† • home gardens (cultivated, includes fruit cultivations in home gardens) • chena lands (slash and burn cultivation)

11. Available information on Sri Lanka's species diversity shows significant number of plant and animal species – including high endemism –amongst several taxonomic groups. Over 50% of species of spiders, land snails, terrestrial reptiles, amphibians, freshwater fish and freshwater crabs described till date from Sri Lanka are endemic to the country.

Table 2: Sri Lanka's Species Diversity

Taxonomic group	**Total recorded**	**Number of endemic species**	**% endemism**
Lichens*	661	NA	
Liverworts*	222	**NA**	
Mosses ‡	560	**63 +**	11
Pteridophytes (Ferns)	336	49	15
Angiosperms	3,154	894	28
Hard coral species	208		
Soft corals	35		
Dragonflies	118	47	40
Bees	130	NA	
Ants	194	33	17
Butterflies	245	26	11
Spiders	510	257	50
Freshwater crabs	51	50	98
Marine crustaceans	742		

6 Source: 5th National Report to the CBD, 2014

Land snails	253	205	81
Freshwater fish	91	50	55
Sharks	64		
Skates and rays	33		
Marine and brackish water bony fish	316		
Amphibians	111	95	86
Reptiles (terrestrial)	193	124	64
Birds (including migrants)	453 (240 residents)	27 definitive* and 8	
Mammals	95	21	22
Marine mammals	30		

Source: Modified from 5th National Report to the CBD, 2014.

12. About 410 species wild relatives of food crop from 47 families and 122 genera have been identified in the country, of which 289 species are indigenous and 77 are endemic to Sri Lanka. Among the extant indigenous breeds are a type of locally adapted native cattle (*Bos indicus var ceylonicus*) or "Batu Harak" and the white cattle of Thamankaduwa that are reared for draught and milk, hardy indigenous goats including the locally adapted breed Kottukachchiya; and village chicken that are poor egg producers but are highly adapted to a harsh environment.

1.2. National Development and Socioeconomic Context

13. Sri Lanka ranked 92 amongst 186 countries in UNDP's Human Development Index in 2012. The report has noted that the nation's human development achievements are impressive compared to other SAARC countries, in spite of the fact that it was affected by conflict for nearly three decades. Sri Lanka's Human Development ranking is the highest amongst all South Asian countries: the nation achieved a sharp decline in headcount poverty from 23 percent in 2002 to less than nine percent in 2009. It graduated from a Least Development Country category to a Middle Income Country in 2010. The country is rapidly urbanizing – with urban population density almost doubling over the past decade. The current rates of economic growth in Sri Lanka is between 6-8% per annum.

14. With a population of 21 million persons (2013) on a relatively small land area, Sri Lanka's average population density is quite high in the global context. Most of the population in the country is rural (80%). Significant number of people are employed in sectors that are directly or indirectly dependent on ecosystems – In 2008, 2.3 million people were employed in the agricultural sector, making it Sri Lanka's largest employment sector.

1.3 Threats to biodiversity

15. Sri Lanka's biodiversity is under increasing threat from a variety of sources. Several species found in Sri Lanka are considered globally threatened. Around 139 Critically Endangered species are found in the country, as well as 170 Endangered and 263 Vulnerable species[7]. Examples of some of these species are listed in the Table 3 below. In fact, around 21 species found in the country are considered to have been extinct. Around 80% of all Sri Lanka's freshwater crabs are threatened while one in every 2 species of freshwater fish, amphibians, reptiles and mammals and one in every 5 species of birds are currently facing the risk of becoming extinct in the wild.

16. Sri Lanka's Western purple – faced langur *Semnopithecus vetulus nestor* has also been identified as one of the 25 most threatened primates worldwide[8].

[7] Www.redlist.org, downloaded on 23rd September 2014

[8] http://www.primate-sg.org/storage/pdf/Primates_in_Peril_2012-2014_Full_Report.pdf 2014

Table 3: Number and Some Example of Globally Threatened Species Found in Sri Lanka[9]

IUCN Redlist Global threat status	Number of species found in Sri Lanka	Some key species of flora and fauna
Critically Endangered	139	*Mesua stylosa* (Calophyllaceae) *Stemonoporus moonii* (Dipterocarpaceae) *Dicellostylis axillaris* (Malvaceae) *Hortonia angustifolia* (Monimiaceae) *Sihalestes orientalis* (Dragonfly) *Labeo lankae* (Freshwater fish) *Nannophrys marmorata* (Amphibian) *Cophotes dumbara* (Reptile)
Endangered	170	*Vatica obscura* (Dipterocarpaceae) *Diospyros oppositifolia* (Ebenaceae) *Cinnamomum citreodorum* (Lauraceae) *Eugenia sripadaense* (Lauraceae) *Ophiothelphusa gallicola* (Freshwater crab) *Tor khudree* (Freshwater fish) *Adenomus kelaartii* (Amphibian) *Elephas maximus* (Mammal)
Vulnerable	263	*Mangifera zeylanica* (Anacardiaceae) *Cycas zeylanica* (Cycadaceae) *Cinnamomum capparu-coronde* (Lauraceae) *Vanda spathulata* (Orchidaceae) *Cyclogomphus gynostylus* (Dragonfly) *Crocodylus palustris* (Reptile) *Centropus chlororhynchus* (Bird) *Melursus ursinus* (Mammal)

17. Key threats to Sri Lanka's biodiversity are summarized below.

I. ***Habitat loss and fragmentation:*** An analysis of land use changes between 1956 and 2007 has shown significant loss of Sri Lanka's forests. The country's rate of deforestation – loss of more than 35 percent of its old growth forest cover since 1990, is considered amongst the highest in the region. The proportion of land area covered by forest has declined from 33 percent in 1990 to 26.6 percent in 2010. Meanwhile, during the same period, there was an increase in agriculture land, water bodies, urban land and barren land.

One of the key reasons for forest loss is their conversion to agriculture use including cash crops such as tea and vegetables in the wet zone, and slash and burn cultivation (*chena*) in the dry and intermediate zones. Expansion of human settlements, irrigated agriculture and *chena* cultivation has caused forest fragmentation, particularly in the dry zone, and has also affected wildlife migration, such as of elephants, leading to human-wildlife conflicts and frequent losses of human lives and or wildlife. Likewise, severe fragmentation of wet zone forests due to plantation agriculture in the past has affected primate dispersal, leading to the present co-occurrence of monkeys, peacocks, wild boars and giant squirrels in home gardens and crop plantations. *Ad hoc* reclamation of wetlands- particularly for the traditional practice of clearing wetland vegetation for "deniya" cultivation is also a primary cause for habitat loss. Coastal ecosystems such as mangrove forests and salt marshes have been converted to prawn farming/aquaculture, or salt pans or used for hotel constructions. In addition, coral mining to use for construction has also severely impacted coral reefs in many parts of the country.

[9] IUCNredlist.org

II. ***Unsustainable use of natural resources*:** Unsustainable harvesting practices have caused reduction or loss of populations of many plant and animal species. Coastal fish, marine and freshwater ornamental fish and other marine species such as lobsters, and medicinal plants have been particularly affected by overuse. For example, one study has suggested that Sri Lanka's fishing is responsible for over 55% of known global manta ray and mobula ray catches. Overharvesting of trees for domestic use (particularly as fuel wood) continues to be particularly damaging to forests. Overall, over extraction both live and dead plants represents a serious threat as it affects canopy gaps, regeneration (lower fruit and seed production), stand density, basal area, and population structure. It also causes local reduction of preferred species. For example, international demand for agarwood (*Gyrinops walla*) has also led to its illegal harvest from forests, causing its decline. In addition local communities living within forest areas or on the forest fringes are frequently dependent on the extraction of NTFPs to meet a diversity of subsistence and commercial needs. Over 80% of medicinal plants in Sri Lanka are considered to be collected from the wild, with many species being over harvested. For example, *Munronia pinnata* is considered endangered due to over exploitation.[10] Livestock grazing inside and around protected areas by high numbers of domestic animals is causing habitat degradation in some areas. [11] Destructive fishing practices such as blast fishing and the use of moxy nets to catch reef fish have shown to be damaging coral reefs, used of dragnets and push nets are causing damages to sea grass beds, nylon gill nets have also caused mortalities to dolphins and turtles as by-catch. Other examples of unsustainable use of natural resources that impact biodiversity include *ad hoc* harvesting of non-biological resources, and changes in hydrological regimes. Several ecosystems are impacted by *ad hoc* removal of gems, minerals and rocks from forests, and riparian areas. Sand and coral mining have impacted several area of rivers, beaches and coral reefs in the country. Construction of dams, large reservoirs, irrigation structures and release of irrigation waters and digging of wells have caused changes in natural water flow, and in water quality.

III. **Invasive alien species (IAS)**: Many endemic and native species have been threatened by IAS in Sri Lanka and other introduced species – especially in the wetlands. Tilapia (*Oreochromis mossambicus*) is competing with the native fish species such as *Labeo porcellus* (L. lankae) and *L. dussumieri*, threatening them to the brink of extinction. Spread of clown-knife fish (*Chitala ornata*) have affected populations of endemic fish species such as *Esomus thermoicos, Clarias brachusoma, Aplocheilus dayi, Channa orientalis, and Puntius singhala*. The rainbow trout (O*ncorhynchus mykiss*) has bred in Horton Plains and established in fast-flowing rivers in the area affecting the populations of the globally threatened endemic shrimp (*Caridina singhalensis*) and endemic crabs (*Perbrinckia punctata* and *P. glabra*). Feral populations of dogs (*Canis familiaris*) feed on eggs of marine turtles in the coastal areas of the island, and also eat birds, reptiles and small mammals (e.g. in Bundala National Park) affecting their populations. Spread of pasture grasses such as *Pennisetum clandestinum, Pennisetum thunbergii* and *Vulpia bromoides* have affected the original montane grassland vegetation in the Horton Plans National Park, thereby impacting on the Park's biodiversity.

IV. **Pollution:** Degradation of freshwater wetlands has also been severe due to pollution and siltation from unsustainable land use (including deforestation) and agricultural runoff. Agro-chemicals (pesticides, chemical fertilizers) are heavily used in leafy vegetable cultivation, in paddy cultivation and even in upland farming. Clear signs of eutrophication are evident in aquatic habitats as a result of nutrient accumulation from agrochemicals, particularly in inland wetlands and lagoons. These chemical residues pose a serious threat to the aquatic organisms. Pollution of coastal waters with oil from ships and boats and ballast water have also been a concern in many coastal areas of Sri Lanka.

[10] Inventory, documentation and status of medicinal plants in Sri Lanka, DSA Wijesundara, Medicinal Plants Research in Asia, Volume 1, 2004 (http://www.bioversityinternational.org/uploads/tx_news/Medicinal_plants_research_in_Asia_944.pdf)
[11] http://www.mantatrust.org/wp-content/uploads/2011/09/Sri-Lankas-Manta-Mobula-Ray-Fishery.pdf

V. **Loss of genetic diversity of crops and livestock due to** increased reliance on fewer high yielding varieties over traditional crop varieties and livestock breeds has led to the decline in the availability of traditional breeds of crops in most parts of the country.

VI. **Natural disasters and Climate change:** Studies suggest that Sri Lanka's mean air temperature increased by 0.016°C per year in the period 1961-1990, and the country's mean annual precipitation decreased by 144 mm (7%) during that period compared to the period 1931-1960. There is a general agreement among available projections that gradual warming will be experienced throughout the country within this century 0.9-4°C increase in mean annual temperature) but different models predict different trends for rainfall. More projections indicate that climate change impacts will be greater in the dry zone. Sri Lanka's assessment of vulnerability of ecosystems and biodiversity to climate change has noted that potential climate change vulnerabilities of natural resources and biodiversity include:

- Land degradation due to extreme weather events, natural hazards, and soil erosion that causes loss of soil fertility and agricultural productivity.
- Changes in water quality and quantity in inland freshwaters.
- Degradation of vegetation in watersheds due to climate change.
- Changes in terrestrial, inland wetland and coastal systems, their species and ecosystem services, due to changes in rainfall regimes and rising temperatures.
- Changes in growth rates, reproduction and geographic ranges of species and phenology of plants due to climatic changes.
- Changes in coastal and marine systems, species and ecosystem services due to sea level rise, global warming and ocean acidification, with particular impacts on coral reefs and associated species.

Natural disasters and climate change are also expected to impact biodiversity negatively – particularly on marine biodiversity through coral bleaching etc. Natural disasters such as tsunami of 2004 also badly affected coral reefs and mangroves in Sri Lanka. Thus, climate change and natural hazards are expected to impact biodiversity in the country negatively.

1.5 Policy and Legal Frameworks for Biodiversity Conservation and Sustainable Use

18. Sri Lanka has prioritized biodiversity conservation through several national policies and action plans – starting from its Constitution itself. The country's Constitution (1978), notes that "the State shall protect, preserve and improve the environment for the benefit of the community". Sovereign rights over natural resources (including genetic resources) is enshrined under Articles 27 (Directive Principles of State Policy) and 28 (Fundamental Duties). Though sovereignty is given to the State on natural resources, it is vested in the hands of the people and the state cannot contravene the interests of citizens of the country. The constitution notes "State shall hold all Natural Resources in guardianship for the people and ensure that it be used in a cautionary manner." Article 28f states "The exercise and engagement of rights and freedom is inseparable from the performance of duties and obligations, and accordingly, it is the duty of every person in Sri Lanka to protect nature and conserve its riches.

19. In line with the Constitutional directives, several cross sectoral and sectoral policies have been developed for biodiversity conservation. Under National Action Plan for Haritha (Green) Lanka for the period 2009-2016, several specific actions related to conservation have been identified such as actions to reduce land degradation in agricultural areas; to prepare a national action plan to replace *chena* (shifting) cultivation with a sustainable farming system and to develop and implement programs for the use of non-cultivated agricultural lands; to establish a forest cover in degraded and neglected cultivated land and also to improve management practices in natural forests and forest plantations; to plan and implement a mechanism to provide incentives for establishment of community woodlots near areas of high biodiversity to minimize extraction of firewood from natural forests; to conserve and restore representative landscapes and to revise national, regional and local level physical plans, where necessary. The National Action Plan for Haritha (Green) Lanka, has been developed through an interactive process involving all the key ministries. Its mission focus on addressing the critical issues that, if left unattended, would jeopardize the economic development programs. It has recognized, among others that the

country's priceless natural heritage of fauna and flora must not be allowed to get degraded, and the island's limited land resources should be used optimally. Strategies were developed to address the key issues, and actions are proposed under the ten missions of the program. Under the Mission 2: Saving the Flora, Fauna and Ecosystems, a wide range of strategies and corresponding actions have been set out to strengthen the conservation now in place, and to introduce new measures where gaps exist, for conserving biodiversity in forests, wildlife areas, wetlands and in croplands

20. Sri Lanka's National Biodiversity Strategy and Action Plan (NBSAP), entitled Biodiversity Conservation in Sri Lanka – Framework for Action (1999) has accorded high priority to protecting bioregions that are considered high priority for conservation. Its revised addendum produced in 2007, has emphasized several biodiversity mainstreaming activities. These include "Identify critically important biodiversity hotspots in the country outside forests and bring these under a relevant protected area category" and "Study the status/trends in wildlife areas, and identify the need for wildlife corridors and linkages as an option for species conservation"

21. The National Physical Plan (NPP) has, additionally, identified a number of areas as environmentally sensitive and stressed that these should be taken note in developing physical infrastructure. The NPP also notes the need to promote and regulate integrated planning of the nation's land considering economic, social, physical and environmental aspects to protect natural amenities, to conserve the natural environment, and protect places of natural beauty.

22. Around 20 policies and over 100 statutes have been developed to address various aspects of environment and natural resources management in Sri Lanka. Such policies include the umbrella National Environmental Policy (2003) to subsidiary conservation-related policies such as the National Policy on Wildlife Conservation (2000), National Forest Policy (1995), National Watershed Management Policy (2004), National Wetlands Policy (2005), National Policy on Elephant Conservation (2006), and National Policy on Biotechnology and Bio safety (2004). These are supported through development of several plans such as the National Coastal Resources Management Plan (2003), National Wetland Conservation Action Plan (2004), National Bio safety Action Plan (2004) and the National Action Plan on Alien Invasive Plants (2004).

23. Examples of biodiversity related key legislation include The National Environmental Act No. 47 of 1980 and the amendment No. 56 of 1988; The Forest Ordinance No. 16 of 1907, and its subsequent amendments; The Fauna and Flora Protection Ordinance No. 2 of 1937, and subsequent amendments; Felling of Trees Control Act No. 9 of 1951; The National Heritage Wilderness Area Act No. 3 of 1988; Coast Conservation Act No. 57 of 1981, and the amendment No.64 of 1988; The Fisheries and Aquatic Resources Act No. 2 of 1996; Marine Pollution Prevention Act No. 59 of 1981; National Aquatic Resources and Development Agency Act No. 54 of 1981; and the Plant Protection Act No. 35 of 1999. Some of the legal provisions still considered in effect date back to the colonial times such as the Water Hyacinth Ordinance No 09 of 1909 and the Botanic Gardens Ordinance No. 31 of 1928.

24. Several biodiversity conservation related plans have also been developed in Sri Lanka such as Pollination Conservation Action Plan (2012), Palaeo-biodiversity Conservation Action Plan (2014), and Butterfly Conservation Action Plan (2014).

25. In addition, several legislation also support biodiversity conservation indirectly – such as

I. Soil Conservation Act, No. 25 of 1951; amended in 1996.
II. Agrarian Research and Training Institute Act No 5 of 1972
III. Agrarian Services Act No. 58 of 1979,and and its subsequent amendments
IV. Control of Pesticides Act, No. 33 of 1980, as amended by No. 6 of 1994
V. The State Lands Ordinance No. 8 of 1947 and its two amendments.
VI. Land Development Ordinance No.19 of 1935; and its subsequent amendments.

VII. Colombo District (Low Lying Areas) Reclamation and Development Board Act of 1968, and the
VIII. Sri Lanka Land Reclamation and Development Corporation Act No. 52 of 1982.
IX. Town and Country Planning Ordinance No.13 of 1946.
X. Housing and Town Improvement Ordinance, No.19 of 1950.
XI. Urban Development Authority Law of 1978, and subsequent amendments
XII. Mahaweli Authority of Sri Lanka Act No. 23 of 1979; subsequent amendments
XIII. Mines and Minerals Act No. 33 of 1992.
XIV. Water Resources Board Act No.29 of 1964.
XV. Science and Technology Development Act No. 11 of 1994.

1.6 Institutional arrangements for biodiversity conservation

26. At the national level, biodiversity issues are considered by the Parliamentary Consultative Committee on Environment, chaired by the Minister of Mahaweli Development and Environment. The Committee has the overall mandate "to inquire into and report upon such matters as are referred to it by the Chairman or by Parliament, including any Bill proposals for legislation, supplementary or other estimates, statements of expenditure, motions, annual reports or papers."[12] Such Consultative Committees can appoint sub committees from amongst its own members to examine and reports on any relevant matters within a period specified by the Consultative Committee.

27. Of the 59 Ministries of the government[13], several Ministries have broad impacts on biodiversity conservation through their policies and plans – such as Ministries dealing with Finance and Planning Economic development and Education. Several additional Ministries have roles in biodiversity conservation as they impact land use decisions of the country. These include Ministries of Coconut Development and Janatha Estate Development; Indigenous Medicine; Minor Export Crop Promotion; Sugar Industry Development; Botanical Gardens and Public Recreation; National Heritage; Ports and Highways; Water Supply and Drainage; Resettlement; Construction, Engineering Services, and Housing and Common Amenities.

28. The most direct and important roles in biodiversity conservation, however, are played by the following key Ministries because of their roles in setting up national biodiversity policies (Ministry of Mahaweli Development and Environment) or as they play key roles in land use decisions (such as Ministry of Defence etc.):

I. Environment: this Ministry includes the Department of Forests; Central Environmental Authority; Marine Environment Protection Authority; Mahaweli Authority of Sri Lanka and its Subsidiary Companies and Associates (except Mahaweli Livestock Enterprise Company Ltd.) for their role in water resources use and allocation, Geological Survey and Mines Bureau; National Gems and Jewellery Authority and Timber Corporation of Sri Lanka amongst others. Key roles of some of these institutions on biodiversity conservation are discussed later in this section.

II. Wildlife Resources Conservation: This Ministry includes the Department of Wildlife Conservation, which is the main entity for protected areas management in the country.

III. Fisheries and Aquatic Resources Development: this Ministry includes Department of Fisheries and Aquatic Resources; National Aquaculture Development Authority; Ceylon Fishery Harbours Corporation; and the National Aquatic Resources Research and Development Agency amongst others and thus plays an important role in marine and other wetlands resources management.

IV. Agriculture: This Ministry includes Hadabima Authority, and thus plays an important role in promoting land use related to agriculture.

V. Defence: Under this Ministry, the relevant agencies for biodiversity conservation include the Department of Coast Conservation, Urban Development Authority, and the Sri Lanka Land Reclamation and Development Corporation.

[12] http://www.parliament.lk/en/component/committees/categories?id=2andItemid=533
[13] http://www.priu.gov.lk/Ministries_2010/subjects_functions_institutions.pdf

VI. Irrigation and Water Resources Management: Agencies under this Ministry that are most directly relevant for biodiversity conservation include the Department of Irrigation.

VII. Minister of Construction, Engineering Services, Housing and Common Amenities: This Ministry includes the Department of National Physical Planning.

VIII. Economic Development: This Ministry includes the Sri Lanka Tourism Development Authority

IX. Plantation Industries: This includes Department of Rubber Development; National Institute of Plantation Management; Tea Small Holdings Development Authority; Tea and Rubber Estates (Control and Fragmentation) Board. All plantation companies fall under this Ministry.

X. Lands and Land Development: This includes Department of Land Commissioner General; Department of Land Settlement; Department of Surveyor General; Institute of Survey and Mapping; Land Survey Councils; Department of Land Use Policy Planning

XI. Minister of Public Administration and Home Affairs: All District Secretariats and All Divisional Secretariats fall under this Ministry

XII. Ministry of Botanical Gardens and Public Recreation

XIII. Local Government and Provincial Councils

29. **The Ministry of Mahaweli Development and Environment** has the primary responsibility of providing policy direction for the protection and management of the environment, including biodiversity conservation. Its mission is to "provide leadership to manage the environment and natural resources in order to ensure national commitment for sustainable development for the benefit of the present and future generations". The Ministry is the focal Ministry for the Rio Conventions dealing with biodiversity (UNCBD), climate change (UNFCCC), and desertification and land degradation (UNCCD). Focal agencies for the three conventions are respectively the Biodiversity Secretariat (for UNCBD), Air Resource Management and International Relations (delegated GEF focal point), and Natural Resources Division (UNCCD).

30. Environment related technical functions and responsibilities of the MoMDE are shared among nine Divisions. Of these, the most important Divisions for biodiversity conservation include

I. **Policy Planning Division:** Its roles include to: Facilitate the implementation of the National Environmental Policy through policy and planning efforts with relevant partners involved in environmental and natural resources management. Co-ordinate with the various divisions of the Ministry and related agencies in preparation of short-term plans, such as the action plans, budget estimates district environmental programmes etc.

II. **Promotion and Environmental Education Division:** roles of this Division include formulating Environment Awareness and promotion of the Ministry's strategy, its implementation and periodic review. Creating awareness on sustainable management of environment and natural resources among different categories of people of the society in order to foster environmental responsibility.

III. **Climate Change Secretariat** works to provide national platform to address climate change issues at the national level for incorporation into the development process; undertake climate change responses including development of relevant policies and programs; liaise with sectoral agencies at national and sub-national levels for identifying priorities and developing mechanisms to implement national policies on Climate Change.

IV. **Sustainable Development Division:** Functions as the Secretariat for the National Council for Sustainable Development. Coordinates with the Provincial administration for achieving national Sustainable Development targets. Undertakes actions to introduce and promote the concept of Sustainable Human Development Index.

V. **Sustainable Environment Division:** Provides coordination, leadership, guidance and financial assistance to the stakeholders from national to regional levels to ensure the sustainable environment in the cities and villages.

VI. **Natural Resources Management Division:** roles include: Identification and formulation of natural resources and other related policies and coordination of their implementation; Co-ordinate implementation of activities identified in the National Action Programme for land degradation and desertification; and provide necessary support for the formulation of legal instruments related to NRM.

VII. **The Biodiversity Secretariat:** The Secretariat was established in 1999, and is responsible for NBSAP development/ updating and national reporting to the UNCBD. Its functions include to: Provide leadership and policy directions for the conservation of country's biodiversity, while ensuring the national commitment to sustainable development. Coordinating with Convention on Biological Diversity and other related conventions and agreements. Coordination, implementation and effective monitoring of in-situ conservation activities, projects and programs at national level; Preparation of policies and action plans related to Biodiversity Conservation and administer legal aspects.

Its activities are supported/ advised by a number of committees and Task Forces such as:

- National Experts Committee on Biodiversity, which has been set-up to review, monitor and advice the Government on matters relating to biodiversity conservation and implementation of the CBD.
- National Species Conservation Advisory Group - for the development of the National Species Conservation Strategy.
- National Invasive Species Specialist Group
- Palaeo-biodiversity Advisory Committee
- National Coordinating Committee on Biosafety
- National Experts Committee on Pollinators
- National Experts Committee on Traditional Knowledge
- Expert Sub Committee on Traditional Knowledge
- Expert Subcommittee on Access to Genetic Resources & Benefit Sharing
- National Steering Committee on mainstreaming Agro-biodiversity Conservation and Use in Sri Lankan Agro ecosystems for Livelihood and Adaptation to Climate Change
- National Steering Committee on mainstreaming Biodiversity Conservation and Sustainable Use for Improved Human Nutrition and Wellbeing.
- National Steering Committee for the Pricing the Biodiversity of the Island Project.

Whilst the BDS has the overall policy advisory role on biodiversity conservation nationally, specific conservation actions on the ground are implemented by a number of Departments/ Agencies under the MoMDE – the most important of which include the Department of Forests and the Central Environment Authority.

VIII. The **Central Environmental Authority** (CEA) was established in 1981 under the provision of the National Environmental Act (NEA) No: 47 of 1980. The CEA is responsible for implementing laws and policies pertaining to general environmental management. One of the key functions and duties of CEA is to protect, encourage and to conduct long range planning in environmental protection and management. The Authority has been further empowered by subsequent amendments of the Environmental Act to ensure pollution control by requiring any polluting industries to obtain license from the CEA to show that their emissions/ discharges are within stipulated environmental limits. The CEA also has the authority to ensure and approve Environment Impact.

Natural Resources Management and Monitoring Unit of the CEA holds the responsibility of declaring any unique or fragile ecosystems area as Environmental Protection Areas (EPAs) under the NEA and ensuring their management. Since a number of wetlands were

considered environmentally sensitive, the CEA had declared them as EPAs and had lead their management in several parts of the country, including the development of management plans, guidelines, awareness creation, and boundary demarcation with assistance of relevant national and local agencies. In 1990, a National Wetlands Steering Committee was established and it functioned as the central coordinating arm between different line ministries and agencies that have jurisdiction over wetlands and functions under the MoMDE. This committee was responsible for the formulation of National Wetlands Policy. The CEA prepared site reports for about 26 important wetland sites, and management plans are drawn up for some of them. The NWSC was subsequently re-constituted under the Ministry of Mahaweli Development and Environment and the CEA.

CEA has eight regional offices - based in Kandy, Matara, Weerawila, Ampara, Trincomalee, Kegalle, Jaffna and Anuradhapura. These Offices award Environment Protection Licenses, and monitor issues such as pollution and ensure that EIA procedures of prescribed projects are undertaken. The CEA has also positioned Environmental Officers in the Divisional Secretariats, who advise the Divisional Secretaries on environmental matters, such as awarding permits for sand mining and awarding of minor permits within the Coastal Zone on behalf of the Coast Conservation and Coastal Resource Management Department. They also carry out environmental awareness at the local level through the Environmental Pioneer Programme. School children are trained to provide leadership to the community on environmental matters. Training for the teachers and student leaders is conducted at District and Divisional levels. CEA has already declared 7 wetland areas in the country as Environmental Protected Areas

The North Western Province has instituted a Provincial Environment Authority with the responsibility of managing all environment related activities and legislature independent of the CEA, using a provision in NEA for decentralized environmental authorities.

IX. The **Department of Forest Conservation:** no activity other than research and visitations is allowed within these forests.

- **Reserved Forests:** these are the important forest areas for conservation of soil, water and biodiversity. Only non-extractive uses are allowed within such forests.
- **Village Forests:** These are the forest areas declared under the section 12 of Forest Ordinance in order to provide forest products and services for local communities.
- **Other State Forests;** Forests areas do not fall under the previous categories are included under section 20 of the Forests Ordinance as Other State Forests. After surveying and demarcation of forest boundaries these forests will eventually be declared in to one of the above categories.
- National Heritage Wilderness Areas Act has defined **National Heritage Wilderness Areas,** which are unique ecosystems of the country declared under the National Heritage Wilderness Areas Act in order to provide the maximum legal protection. Sinharaja forest is the only area declared as a national heritage wilderness area.

The Department of Forest consists of six technical divisions at its headquarters: Forestry Inventory and Management Division, Environment Management Division, Social Forestry and Extension Division, Research and Education Division, Forest Protection and Law Enforcement Division, and Planning and Monitoring Division supported by Personnel and Administration Division and Financial Division. The Department, in the past, was mostly involved in managing forest for timber. However, there has been considerable reorientation in its policy, with an increasing moving towards conserving nation's biodiversity. This is evident in many of the recent initiatives, including the creation of Conservation Forests in biodiversity rich wet zone forests, linking their management with buffer zone development, and the trend to promote assisted natural regeneration as a restoration measure in degraded dry zone forests. A four year Community Forest Program was initiated in 2012, and is being implemented in 5 districts including Kurunegala, Puttalam, Anuradhapura. The FD has also taken the responsibility of managing 20 ecologically sensitive mangrove sites, including the extensive mangrove

forests of the Puttalam district, especially the Kala Oya estuary. The Department implements its activities through its Divisional Forest Officers, Range Forest Officers, Beat Forest Officers and Field Assistants. Four regional offices have been set up to cover Southern and Sabaragamuwa, Uva and Central, North and North Central, and Western and North Western Provinces.

X. The Marine Environment Protection Authority (MEPA) is the lead agency to implement the provisions of Marine Pollution Prevention Act and associated regulations to manage, safeguard and preserve the territorial maritime water of Sri Lanka and to prevent, reduce, control and manage pollution arising out of ship based activities and shore based activities. The Marine Pollution Prevention Act No.59 of 1981 provides for the prevention, reduction and control of pollution in Sri Lankan waters. MEPA has delegated several of its functions to various agencies, such as the Ports Authority, Navy, Coast Conservation and Coastal Resource Management Department, Meteorology Department, and Local Authorities. It has one regional office in Galle.

XI. Air Resource Management and International Relations Division: This division is responsible for duties and functions related to air resource management, environmental quality management and international relations. It is to provide leadership to address national commitment to air quality, environmental quality and global environmental affairs and ensures implementation of international conventions/protocols/treaties in Sri Lanka.

XII. National Ozone Unit: The responsibility of the division is to fulfil the commitments under the Montreal Protocol on Substances that deplete the ozone layer, to protect the ozone layer by phasing out ozone depleting substances in Sri Lanka.

XIII. Legal Division: Provides the legal support to the Ministry and to the line agencies to achieve their mandate in environmental management in the country.

Government Agencies outside SME with Significant Biodiversity Conservation Roles

31. The Department of Wildlife Conservation (DWC) has the primary responsibility to manage protected areas. Recognizing the national importance of elephants, the DWC has prepared the National Policy for Conservation and Management of Sri Lankan wild Elephants in 2006. It has introduced the concept of Elephant Conservation Areas – which are defined as landscape containing both PAs and outside with a land use approach where free ranging of elephants is recognized. The DWC has a strong field presence of wildlife officers and veterinary surgeons functioning through seven regional offices to manage the wildlife reserves under its jurisdiction. As part of its new restructured approach to wildlife conservation, it has established an "Outreach Unit", whose role is to link up with communities that are peripheral to the PAs and work together not only for the benefit of conservation but also to offset the lost development opportunities of these communities resulting from being adjacent to the PAs and subject to the HEC.

32. The Coast Conservation and Coastal Resource Management Department (CCD) have the primary mandate for the conservation and management of natural coastal habitats and areas of cultural and recreational value in the coastal zone. A comprehensive policy and legislative framework exists for coastal environmental management and CCD has the primary mandate to survey and to undertake inventories of coastal resources, and to develop Coastal Zone Management Plans to regulate and control development activities in the coastal zones, under the Coast Conservation Act No. 57 of 1981. CCD has devolved its responsibilities to the coastal Divisional Secretaries (or their authorized officers) to grant minor permits for issues such as construction of homes with floor area below 161.6 m^2 and commercial structures below 37.7 m^2, and for sand mining up to 2 cubic metres. Officers of the CCD are also active in the Western, South Western, and Southern Provincial Councils to support coastal engineering for coastal protection.

33. The Urban Development Authority (UDA) is responsible for the planned development of urban centres in the country, and it is also responsible for conserving urban environment. This Authority was established under the Urban Development Act No.41 of 1978. Under the Act, the

relevant Minister may make regulations to designate any UDA area for preserving and promoting landscaping including preservation and planting of woodlands, trees and preservation of places of historical, architectural interest and scenic beauty. The UDA has six regional offices, and another tier of regional offices headed by Deputy Directors in Urban Councils. Local Authorities have been delegated limited powers by the UDA for urban land use planning and zoning, and for issuing building permits.

34. The Department of Agrarian Development (DAD) was established in 1957 and is presently governed by the Agrarian Development (amendment) Act no. 46, of 2011. This Act promoted the utilization of agricultural lands in accordance with agricultural policies. The Department supports agriculture land management, water resource management and development of farmer institutions in the areas under minor irrigation schemes. The development of the livestock sector, including research and conservation of indigenous livestock species and germplasm, is under the purview of the Department of Animal Production and Health. Management of the livestock sector is decentralized through Provincial Departments of Animal Production and Health, which are funded by the Provincial Councils.

35. The Mahaweli Authority of Sri Lanka (MASL) was established in 1979 by an Act of the Parliament with a mandate to implement the Mahaweli Development Program (MDP). The powers of 22 legislations have been vested with the MASL under this act. MDP is the largest integrated rural development multi-purpose program ever undertaken in Sri Lanka. The main objectives of the program are to increase agriculture production through expanding irrigation facilities. MASL has 12 Resident Project Managers and 17 site offices distributed in North Central, Eastern, Central and Southern Provinces. Block and Unit Managers under the Resident Project Manager assist field implementation of MASL's programmes.

36. The Department of Irrigation (DI) is a major institution for land and water management in major/medium irrigation schemes, (except for schemes under the MDP and minor tanks). Established in 1900, the DI is entrusted with integrated water resources management in major/medium schemes. Currently, there are Directors positioned in the all districts of the country, with Divisional Irrigation Engineers at divisional level to carry out irrigation related activities related to major and medium irrigation schemes.

37. The National Aquaculture Development Authority (NAQDA) Act No. 53 of 1998 set up NAQDA to develop aquaculture and inland fisheries in Sri Lanka. The National Aquatic Resources Research and Development Agency Act No. 54 of 1981 set up the NARA for research and research application work on all living and non-living aquatic resources for the development and management of fisheries and the ocean resources sector. The Department of Fisheries and Aquatic Resources is mandated with conservation and sustainable use of marine biodiversity through the Fisheries Act No. 2 of 1996. Regional District Fisheries Offices of the Department operate in 14 coastal districts.

38. The Land Use Policy Planning Department (LUPPD): LUPPD was established in 1983, as a unit under the Minister of Land, Land Development and Mahaweli Development to introduce scientific land use planning in the country and it was up graded to a Department status in year 2010. It has the responsibility for national land use planning. LUPPD has a head office and a network of 24 district offices. The Land Use Policy Planning Officers head its district offices, and there are 245 divisional level officers who are attached to the Divisional Secretariats throughout the country. The LUPPD has a cadre of trained officials and has recently embarked on systematic land use planning at DS division level.

39. The responsibilities of the LUPPD include to:

    I. Prepare a National Land Use Plan for Sri Lanka

    II. Create the legal background for implementing the National Land Use Policy

    III. Provide technical guideline for land use planning.

    IV. Make recommendation and directives for conservation and sustenance of land resource in the country.

    V. Provide training and education on scientific land use planning.

40. The LUPPD has to engage in land use planning with the support of different relevant institutions, considering the following issues in the planning process.

    I. Ensure maintaining of already protected and conserved areas
    II. Identify areas which need to be conserved and protected
    III. Introduce appropriate land uses for lands which have not been developed
    IV. Introduce efficient and environmental friendly land uses for underutilized lands
    V. Correction of inappropriate land uses
    VI. Reduce problems associated with land resources
    VII. Recommend land use changes for lands which may be harmful in future
    VIII. Identify potential areas suitable for different uses in future (Zoning plan)

41. **National Physical Planning Department:** This Department was established in 2000 under the Town and Country Planning Ordinance. The Department is responsible for broad national land use planning under the guidance of National Physical Planning Council, which is chaired by the President of Sri Lanka. The NPPD's plans are also supposed to protect environmental resources, conserve eco-sensitive areas, minimize damages caused to property and life from natural disasters, make use of unutilized land and marine resources for productive activities, and connect urban service centres and rural settlements by way of a systematic network of transport and communications infrastructure. A vision for Sri Lanka up to 2030 has been proposed by this Department and it has identified coastal areas, and the Central Highlands as particularly environmentally sensitive areas, as well as current protected areas. Regional and local plans are made by the Department, based on the national plan. The local planning process focuses on town and country planning covering infrastructure, housing and buildings.

42. Table 4 below summarizes key agencies related to land use planning in Sri Lanka.

Table 4: Key Institutions responsible for land use planning in Sri Lanka

Level of operation	**Institution Responsible for Land use Planning**	**Ministry**	**Remarks**
National	*LUPPD*	*Ministry of Lands and Land Development*	Responsible for the protection, development, management and distribution of state-owned land, including the distribution of lands under various schemes, issue of permits, grants and leases. The primary responsibility for state land is at present vested with the Land Commissioner, who exercises powers under the Land Development Ordinance and the State Lands Ordinance.
National	Survey Department	*Ministry of Lands and Land Development*	Responsible for land surveying and mapping of the country
National and provincial	National Physical Planning Department	*Ministry of Construction, Engineering Service*, Housing and Common Amenities	Town and Country Planning (Amendment) Act No 49 of 2000 This act supersedes other laws. Law provide for designation of protected areas and ESA
District and Divisional	Land Use Policy Planning Department	Ministry of Lands and Lands Development	Under the authority of Ministry of Lands and Land Development General land use planning is done systematic way. Environmental conservation is considered in planning
Area declared under Mahaweli Authority act	Mahaweli Authority of Sri Lanka	Ministry of Irrigation and Water Resources Development	Mahaweli Authority of Sri Lanka Act no 23, 1979 Sole authority lies with the MASL within the designated area. Planning of all aspects rests with the Authority. Environmental conservation is considered in planning
Designated areas under UDA act	Urban Development	Ministry of Defence and Urban Development	Urban Development Authority Law. No.41 of 1978 Focus mainly on urban planning. Environmental

	Authority		conservation is considered in planning.
Designated coastal management zones	Coast Conservation and Coastal Resource Management Department	Ministry of Defence and Urban Development	Coast Conservation Act no 57, 1981 Mainly concern on coastal resource conservation and management. Environmental conservation is considered in planning
Major plantations	Plantation companies (state plantations which are on lease)	Ministry of plantation industries	As per lease agreements and provisions under Soil Conservation act and the National Environment act Main focus is production. Inadequate priority for environmental conservation
Local government areas	Local government (LG)Institutions	Local Government and provincial councils	Town and Country Planning (Amendment) Act No 49 of 2000. Main focus is physical planning within the area allocated for LG institutions

Decentralisation of Environmental Governance

43. Sri Lanka's 13th Constitutional Amendment in 1987 led to the creation of Provincial Councils as a new level of governance between the Central Government and Local Government. Local Government thus became a devolved subject under the Provincial Councils and the powers to control and supervise local government was transferred from the Central Government to these Councils. However, powers relating to the form, structure and national policy on local government has remained with the central government.

44. Provincial Councils consist of locally elected members by voters of each province for a five-year term. A Board of Ministers headed by the Chief Minister is the key policy making body at the Provincial level. Normally four Ministers are appointed from among the elected Council members (belonging to party with the overall majority in the Council). Provincial Councils have been empowered with legislative and executive power over several areas including the environment, and for promoting and managing intra-provincial irrigation, land development, road, transport and providing agricultural services as well as for provisioning of health and education facilities. They may enact laws pertaining to the environment, provided that such Acts are in line with national laws. Based on this provision, the North Western Provincial Council has passed its own environmental statutes, and created its own environmental agency called the Wayamba Environmental Authority**.** It is administratively independent of the CEA and currently remains the only such Provincial authority in the entire country. Using the Provincial Environmental Statute No. 12 of 1990, an Environmental Protection Area (EPA) for Wild Rice species was established for the first time in Sri Lanka in Wanathawilluwa Divisional Secretariat of the North Western Province. This protected area consists of natural villus (wetlands) namely, Sethu Villuwa, Irana Villuwa, Sinna Naga Villu. The objective of the protected area is to conserve the wild rice species, namely *Oryza.nivara* (nationally Near Threatened) and *Oryza rhizomatis* (nationally Vulnerable). This conservation programme is sponsored by the Ministry of Mahaweli Development and Environment, North Western Provincial Environmental Authority, Puttalam District Secretariat & LUPPD, Plant Genetic Resources Centre of the Department of Agriculture and the Wayamba University with the private sector support from Holcim Lanka.

45. The executive power at the Provincial level, however, is vested in a Provincial Governor appointed by the President. The Governor can appoint the Chief Minister, can dissolve Provincial Council, assent to bills, and take necessary actions under emergency contexts. The Chief Secretary and his staff come under the Chief Minister, while Provincial Ministry Secretaries and their staff in charge of administration of functions coming under their respective ministries. The Chief Secretary is appointed by the President, while generally Provincial Ministry Secretaries belong to the centrally organized Sri Lanka Administrative Service (SLAS). All staff members of the Provincial Public Service are career civil servants from SLAS.

46. Locally elected local government include Municipal Councils (23 exist currently), 41 Urban Councils, 271 Pradeshiya Sabhas which are govern by three main laws

I. Municipal Councils Ordinance (1947)
II. Urban Councils Ordinance (1939)
III. Pradeshiya Sabhas Act (1987)

47. These local authorities are elected by the voters of their respective areas on the basis of the List system of Proportional Representation for a period of four years. On the recommendation of the Presidential Commission on Youth of 1990, a 40% quota for representation of youth in all local government institutions is now prevalent. Local governments are primarily responsible for:

I. Regulatory and administrative functions
II. Promoting public health and sanitation, including environmental sanitation (pollution control through waste management)
III. Managing public thoroughfares and public utility services.
IV. The Pradeshiya Sabhas are empowered to engage in development activities such as maternity and child welfare programmes, establishment of primary health centres, housing schemes, construction and maintenance of village works, employment programmes within their areas, rural women's programmes, and integrated development of selected villages, etc.

48. There is no formal/ official linkage and interaction between the different types of local governance units (i.e. between the Provincial Council and the Urban/ Municipal/ or Pradeshiya Sabhas). Their relationship is with the Ministry of Local Government of the Provincial Council (Ministry which includes local government), as well as with the Central Ministry of Local Government and Provincial Councils, which functions through Provincial Commissioners of Local Government.

49. The administration of each local authority is vested in the Secretary to the Council and his staff, all of whom belong to the Provincial Public Service. Additionally, since the supervision and administration of local authorities come under the Provincial Council, a Provincial Commissioner of Local Government has been assigned to undertake these functions.

50. Administratively, all Provinces are sub-divided into Districts, which are further divided into Divisional Secretariat Divisions (D. S. Division). The CEA has established nine Provincial Offices (POs) which are headed by a Regional Director assisted by an Assistant Director, several Senior Environmental Officers and Divisional Environmental Officers. District Offices of the CEA also exist in each district, which are headed by a Deputy/ Assistant Director. The main responsibilities of the provincial and district officers include, environmental protection, environmental management and environmental education and awareness raising. Coordination of environmental matters is carried out by the District Environmental Law Enforcement Committee. This committee's members include:

I. Provincial Director of Health Services
II. Senior Superintendent of the Police
III. District Forest Officer
IV. Provincial Commissioner of Local Government
V. District Head of the Wild Life Department
VI. Divisional Secretaries in the District
VII. Heads of Local Authorities in the District
VIII. Representative of a NGO in the District

51. The main function of the DELEC is to coordinate matters relating to the enforcement of law in respect of environmental offences, by relevant agencies such as the Police, Department of Health Services, Department of Forest and Local Authorities. Another function of the DELEC is to consider appeals received from the general public on complaints about environmental matters. These Committees are supposed to meet monthly under the chairmanship of District Secretaries. District Environment Officers serve as secretaries of such Committees. The Committee normally works on issues of waste disposal and some offences

related to land encroachment. Biodiversity conservation related issues are normally not considered by such committees.

52. The Divisional Secretariats are the primary link between government administration and local communities. These are headed by Divisional Secretaries, who are civil servants who fall under the Ministry of Public Administration. The Divisional Secretariat Divisions include a number of sub-units called Grama Niladhari Administrative Division. Land use planning is one of the responsibilities at District and Divisional Secretariats. They are undertaken through the two Committees: the District Land use Planning Committee and the Divisional Level Land Use Planning Committee.

53. **District Land use planning committee (DLUPC):** This Committees functions according to the guidance given by LUPPD and is chaired by District Secretary. The District Land Use Planning Officer acts as the Secretary of the committee. The committee usually meets once every three months or more frequently if necessary. The Committee can constitute Subcommittee consisting of relevant Committee Members to undertake special studies or analysis. The composition of such Committees is normally as follows:-

I. District Secretary/GA (Chairperson)
II. District Land Use Planning Officer (Secretary)
III. Provincial Land Commissioner/ Assistant Commissioner
IV. Deputy Director (Agriculture Extension)
V. District Forest Officer
VI. Survey Superintendent
VII. Assistant Commissioner - Agrarian Services
VIII. Deputy Director- Irrigation
IX. Assistant Commissioner Local Government
X. Assistant Director -Export Crops*
XI. Manager- Tea small Holding Authority*
XII. Deputy Director- Rubber Development Department
XIII. Divisional Manager-Coconut Cultivation Board*
XIV. Assistant Director- Central Environment Authority
XV. Divisional Secretaries (Whenever necessary)

(* only if applicable)

54. GA can nominate additional members from other departments/institutions when it is necessary.

55. Role and responsibility of the DLUPC include to:-

I. Assist and guide the establishment of land use information system at the District level.
II. Coordinate activities of the various institutions related to the Land Use
III. Identify available land and make recommendations to allocate them for various development activities in the district, such as identifying unused lands in the district, land for future development in urban and rural areas.
IV. Determine the priorities of development activities
V. Give necessary inputs to the Land Use Plans at Divisional and village levels.
VI. Review and finalize Divisional Land use plans.
VII. Monitor implementation of land use plans.
VIII. Convey the major land use issues in the district to the National Level Land Use Planning Committee.

56. **Divisional Level Land Use Planning Committee:** This Committee work under the supervision and guidance of their relevant District Level Land Use Planning Committee. The Divisional Secretary of the Division chairs the Committee and Land Use Planning Assistant (linked to the LUPPD), who is attached to the D. S. Division carries out the secretarial and coordination work of the committee.

57. Role and responsibilities of the Divisional Level Land Use Planning Committee include, to

I. Assist the preparation of divisional level land use plans and implementation process.
II. Identify priority areas of land utilization.

III. Identify land use issues, and seek guidance from the district committee if necessary.
IV. Prepare an action plan based on the land use planning recommendation for short term and long term basis. This plan should be included in the Divisional level annual plan.
V. Make recommendations to the National and district level committees as necessary.
VI. Make recommendations for land alienation and land acquisition.
VII. Provide guidelines and directions to village level land use planning committees.
VIII. Identify lands in the Division for future development activities.
IX. Provide recommendations for allocation of lands for various uses based on the land suitability.
X. Establish land data base at divisional level and link with district database.

58. Composition of the Divisional Level Land Use Planning Committee is as follows:

I. Divisional Secretary (Chairperson)
II. Land Use Planning Assistant (Secretary)
III. Land Officer/Colonization Officer
IV. Agriculture Instructor
V. Divisional Officer- Agrarian Services
VI. Range Forest Officer
VII. Assistant superintendent of survey
VIII. Extension Officer -(Tea-Coconut-Rubber)
IX. Livestock Development Instructor
X. Environment Officer
XI. Representatives of the farmer organizations
XII. Representatives from plantation sector
XIII. Representatives of relevant NGO

1.4 Baseline Projects

59. There is a strong baseline of environmental conservation activities in Sri Lanka through the Ministry of Mahaweli Development and Environment on policy and assessment work. Examples of policy work planned for 2014 include reviewing the Existing Gaps of the Environmental Legislation Related to the Ministry of Environment in Order to Make Appropriates Steps (38462 USD), assessments such as National Global Assessment of Flora and Fauna of Sri Lanka (30,769 USD); Implementation of National Green Reporting System of Sri Lanka (19,231 USD) and Pricing Biodiversity of the Island (38,462 USD). The objective of the study on pricing biodiversity of the island is to identify ecosystem goods and services values for each of the key ecosystems in the whole country and will provide information important to increase understanding of the importance of biodiversity. The Ministry is also undertaking Species Conservation and Biodiversity Hot Spot Survey Programme for Sustainable Development (38,462). This information will provide a useful basis for identifying additional critical areas for future establishment of Environmentally Sensitive Areas. Whilst these activities all have relevance to this proposed UNDP-GEF project, without the GEF support such activities may not benefit from the learning and sharing from international experiences and may not provide requisite focus on conservation and sustainable use of global biodiversity values. In addition, low inter-sectoral involvement and low support other production sectors would continue under the baseline, which would make it difficult to implement actions at national and local levels. Platforms for sharing lessons and recommendation from such studies and assessments to all relevant government sectors will continue to be non-existent and thus leading to little mainstreaming of findings and recommendations in different sectors.

60. Component 2: The Ministry of Mahaweli Development and Environment has been implementing a number of field oriented conservation actions. For example, activities planned for 2014 and their associated investments included: activities related to fishery and marine biodiversity protection such as Establishment of Green Fishery Harbour Project at Mirissa Harbour (76923 USD) and Management of Introduction of Invasive Alien Species into Sri Lankan Waters through Ship's Ballast Water (69231 USD) have also been planned. Field based projects by the Ministry include Environmental Protection area Management and Conservation Programme (38,462 USD), Pavithra Ganga (river water pollution control) (30,769 USD), Conservation and Sustainable use of Mangrove Ecosystem and its Diversity in Sri Lanka (30,769 USD) Implementation of National Tree Planting Programme (76,932 USD), Implementation of Provincial Biodiversity Profile (76,932 USD), Implementation of National Action Plan for Haritha Lanka Programme (76,923 USD), and Conversion of Pine Plantations to Native Broad Leave Species(92,308 USD). Furthermore, there is also focus on environmental education such as through School. Environmental Pioneer Programme (EPP) (Haritha Niyamu) (61,538 USD), Environmental Education for Sustainable Development (23,077 USD). Furthermore, the Department of Forests is also implementing a number of activities nationally that are directly relevant to this project. For example, they are implementing activities to increase forest cover to 35% (1,346,154 USD), maintenance of various plantations and rehabilitation of such plantations (over 1,176,923 USD), maintenance of forest boundaries (153,846 USD), establishment of new farmers woodlots (61538USD), home garden development and tree management (23,077 USD), environment management (115,385 USD) and environmental education and extension (100,000 USD). The Coast Conservation Department is investing at least 10,446,154 USD, but most of this will be spent on hard structures development and maintenance. Work on establishment of coastal shelterbelts, prevention of coastal erosion measures, and management of mangrove areas etc. will also be some components of this plan. Furthermore, they plan to spend 7692 USD in environmental education in 2014. The Department is also implementing a Participatory Coastal Zone Restoration and Sustainable Management in the Eastern Province (2,076,923 USD). The Australian Government funded Sri Lanka Community Forestry Programme implemented by the Forest. Around $ 8 million the EU funded project “Support to reconstruction and development in

selected districts in North and East Sri Lanka" will be channelled through UNDP and FAO and this will target vulnerable families in agriculture, fisheries and livestock to provide income generation and sustainable livelihoods. UNDP is also supporting the preparation of the District Development Plans and provide technical assistance in the implementation of these plans, including the biodiversity-friendly land-use planning framework that can be adapted in other districts that the project implements its activities. Further US$ 5-10 million is being invested by the Ministry of Economic Development to address human-wildlife conflict issues looking at medium to long term solutions including electric fencing of crop fields and village perimeters. Further, the Ministry of Environment also investing in water quality testing and mangrove restoration projects in several areas of the country, including target ESA pilot districts. However, the overall budget for conservation and sustainable use at the proposed pilot sites are very low. The actual baseline funding for direct protected areas management related in the proposed ESAs are quite low. The annual budget for three protected areas (Kahalla Pallekele, Bar Reef and Wilpattu) only total around 144,000 USD for activities (excluding staff costs).

61. One of the key issues with all these programmes are that they are not targeted specifically to particularly sensitive environmental areas that have been identified and agreed to by all relevant sectors. This means that different sectors will identify its own geographic areas of intervention – leading to un-strategic investment in conservation actions across the country. In addition, even when some locations have investments from multiple agencies, there is no formal mechanism to ensure coordination and synergies between multiple investments. This leads to fragmented approach, which can in some instances lead to conflicting objectives between different programmes, thereby leading to sub-optimal outcomes.

1.5 Long-term Solution and Barriers to Achieving the Solution

62. The long term solution this project is promoting is to operationalise a system for identifying and operationalizing Environmentally Sensitive Areas (ESA) as a mechanism for managing development in areas of high conservation significance, and providing a planning mechanism, and compliance system to apply higher levels of environmental/ biodiversity considerations in such areas. As most of the major threats to biodiversity in Sri Lanka relate to the ever-escalating demand for land and resources for an increasingly affluent human population, the need has been felt for a mechanism to plan and balance such needs and aspirations nationwide with biodiversity conservation, and with particular emphasis to critically important areas for biodiversity or eco-system services. In other words, mainstreaming biodiversity in development is necessary in all parts of Sri Lanka, and critically important areas for biodiversity or eco-system services in environmentally sensitive areas. Thus, this project will support to identify ESAs nationally and to pilot ESA establishment and their management at two sites in the country.

63. Two critical barriers, however, hinder the establishment and operationalization of these ESAs, which are described below.

64. **Barriers 1: Weak National Policy and capacity for cross-sectoral work to conserve biodiversity outside protected areas**

65. Current policies on mainstreaming biodiversity conservation is very general and does not identify particular areas of high sensitivity nor has national mechanisms to support inter-sectoral approach to managing important biodiversity areas outside protected areas

66. As noted earlier in the document, Sri Lanka has significant number of legislations that have direct bearing on land, water, and marine resources management – including biodiversity. Several existing national polices and laws provide for establishment of special land uses geared towards environmental protection outside protected areas – such as for soil conservation and for the protection of water streams, and catchment areas. The Environmental Act allows for the establishment of Environmental Protection Areas, and this provision has been used in the past only for conservation of wetlands. Furthermore, the "National Physical Planning Policy and

Plan (2010-2030)", approved by the National Physical Planning Council in 2011, lists "conserving environmentally sensitive areas and protecting economic values" as a dedicated programme out of 21 national programmes. However, there has been limited operationalization of the concept of managing "special" biodiversity areas/ landscape/ seascape outside protected areas with a mosaic of mixed land/marine uses differently from other production landscapes. There has not been a coherent and strategic approach to promote inter-sectoral partnership and coordination to identify or manage such areas. This has led to geographically scattered and un-strategic biodiversity mainstreaming activities in different parts of the country, with no clear entry point and lessons to be applicable nationally. Whilst a recent effort in the Northern Provinces has been made to promote such inter-sectoral work using land use planning as an entry point for an inter-sectoral partnership, unless a national policy and strategy is developed to further promote such actions, these actions are likely to remain pilot activities without national level scaling up.

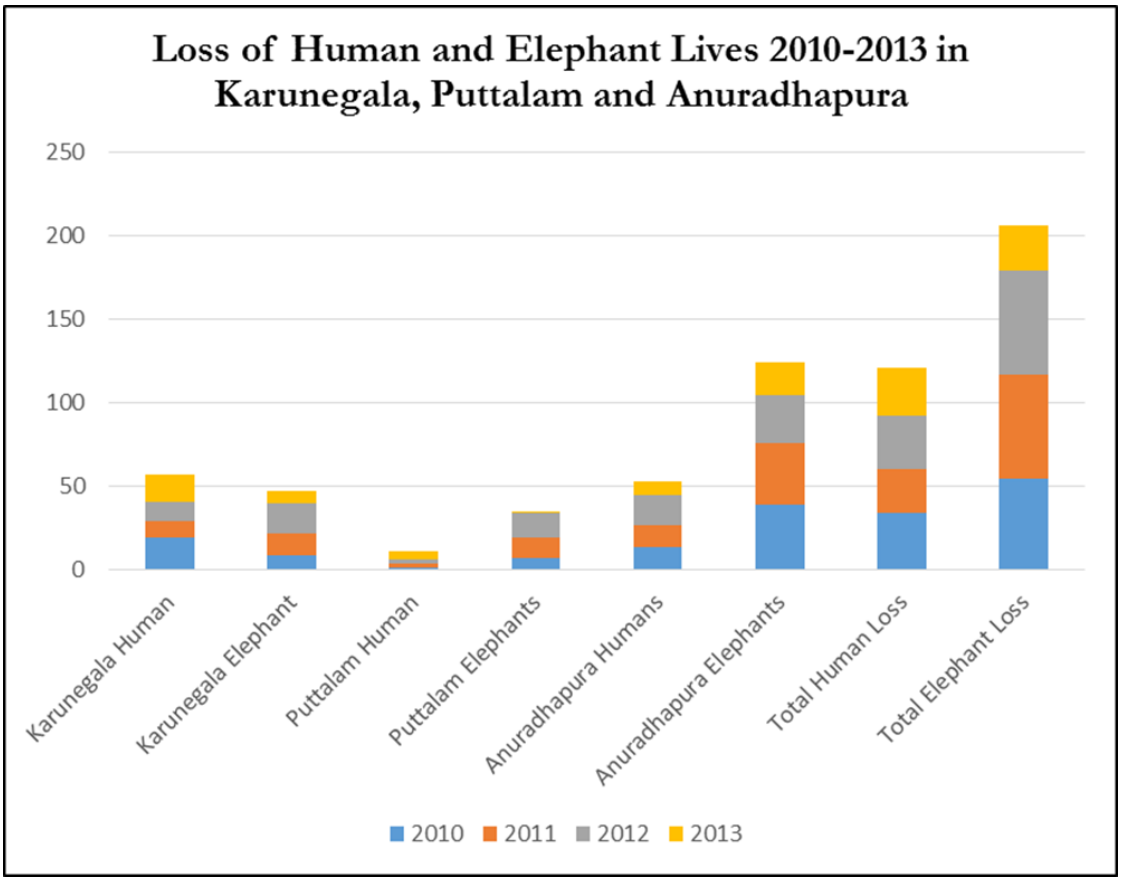
67. Concerted efforts at mainstreaming biodiversity nationwide have become even more urgent in Sri Lanka due to increasing human wildlife conflicts. A Human-wildlife conflict has increased in recent years, resulting in increased threat to target species and socio-economic loss to people affected. Lack of effective coordinated conservation and sustainable management of landscapes has also continued to exacerbate human wildlife conflicts – which have been detrimental to humans and the most predominant problem is the human-elephant conflict due to unplanned forest clearing for development, human settlements and irrigated agriculture as well as *chena* cultivation in the Dry Zone—which often have crops that attract elephants. Sri Lanka has the highest density of wild Asian elephant in the world. Its wild elephant population is currently estimated to be around 5900, and is thought to be expanding at a rate of around 700 animals per year. As elephants are the largest terrestrial herbivores, they require large amounts of forage and relatively large areas and diversity of environments to obtain such forage. It has been estimated that only around 30% of Sri Lanka's wild elephant population stay mostly within the confines of existing protected areas, with the rest moving in and out of PAs or living exclusively outside PAs, and depending on resources outside protected areas. The drastic loss of habitats and food sources for elephants and disruption of their migration routes has led to increased vulnerability of elephants to poaching and intensified problems for humans. This conflict has resulted in at least about 50 human deaths and 150 elephant deaths per year in addition to large scale damage to crops and human lives and habitations. Much of the present day elephant range extends into and overlaps with agricultural lands resulting in human and wildlife conflicts. The primary reason attributable to regular human wildlife conflict, thus, is increased human activities in areas where elephants had historically enjoyed uninterrupted access. In addition to the agricultural lands and settlements falling within the historical elephant areas, cultivation of crops that are attractive to elephants further exacerbates the human wildlife conflicts. At least 13 agricultural crops have been identified by the villagers as preferred by wild elephants, of which paddy is the most sought after crop, with others such as cassava and corn also being highly attractive to elephants. Home gardens are especially vulnerable to elephant depredations given the nutritive value of the fruits such as bananas, and palms such as coconuts. Observed patterns of elephant depredation in agricultural areas suggests that cultivated crops are indeed significant in the diet of some elephants that are chronic crop raiders. Thus, human-elephant conflicts frequently results in damages of property and crops; as well as human and elephant injuries and even deaths. Human deaths, injuries, damages to agricultural lands and loss of other properties (such as homes) due to elephant depredation cause significant additional hardship on the already poor farmers in many parts of Sri Lanka.

    In the past few years the human-monkey problem has increased. The large number of hotels and human habitations in the close proximity to forest areas encourage pilfering of garbage and crop raiding, causing harassment to people by the endemic toque macaque. Likewise, the severe fragmentation of Wet Zone forests due to plantation agriculture in the past which led to co-occurrence of purple-faced monkeys with humans in home gardens and crop plantations of the wet zone is upset by the fragmentation of home gardens and rubber plantations for housing and development. This is giving rise to escalating human-monkey conflict mainly due to the increased competition for crops. Wet Zone reserves that could serve as faunal refuges are too small, degraded and isolated to provide this service.

Reference: Fifth National Report to the Convention on Biological Diversity. MoMDE. 2014.

68. For example, nationwide data from 2007 shows that of the 183 elephants that died that year, 80 died of gunshot injuries and 7 were poisoned. In 2007 in North Western and North Central Provinces alone, at least 23 human deaths and over 19 elephant deaths could be attributed to human-elephant conflicts ((Santiapillai et.al in 2007). Further, data from the DWC shows that between 2010 and 2013, in just three districts (Karunegala, Puttalam and Anuradhapura) at least 200 elephants were killed by humans and over 100 people were killed by elephants.

Figure 1: No of Human and Elephants killed in Anuradhapura, Puttalam and Karunegala Districts (2010-2013) by human-elephant conflicts



69. Although a national policy exists to mitigate human elephant conflict (2006), its implementation has been ineffective as its adoption and promotion by different sectors has been very limited. The policy has not been seen by different sectors (such as agriculture) as a cross sectoral policy to manage such conflicts at landscape level through partnerships between all sectors. Since the formulation of the policy, many different studies have been done on human elephant conflicts, elephant behaviour studies and attempts have been made to introduce large scale electric fences to keep elephants out of agricultural lands and settlements. However, lessons from these studies and experiences have not been systematically collected nor used to refine a national approach on dealing with this ever increasing problem in the country. There are also increasing human wildlife conflicts – particularly linked to different monkey species, wild boars and peacocks that live within agro ecosystems.

70. Land use planning efforts have remained as land use mapping at best and biodiversity considerations are not reflected in such plans. No tool exists to collect, collate and share current biodiversity information widely to practitioners to enable them to use such information for land use decisions

71. The most important barrier to the operationalization of ESAs at the site level is lack of know-how and limited examples within the country of applying land use planning and regulatory

frameworks to manage different sectors' actions to secure positive biodiversity conservation outcomes. There are several landscape level initiatives such as watershed management, integrated water management and community based natural resource management. However, these practices are not specifically geared to biodiversity management, and lessons on what works have not been systematically captured and disseminated, as a result of which, such successes have not been scaled up nationally.

72. As noted earlier in this document, land use planning committees have been established at the District and D. S. Divisional levels. Although current land use planning guidelines issued by the LUPPD includes some environment consideration, such as land degradation issues, there is no particular focus on biodiversity conservation in such guidelines. Thus, land use plans developed do not prioritize biodiversity conservation. The planning does need to consider existing conservation/ protection areas so that they are maintained, and in theory they could identify additional areas that require conservation/ protection. However, most land use planning staff are junior field officers who lack the requisite training and practical guidelines to help them. The current approach has extremely limited considerations on ecosystem connectivity and on the likely impacts of their plans to surrounding areas or downstream areas beyond their D. S. Divisional boundaries. Community participation is extremely limited in such planning exercises. The plans, in general, have very limited utility except in instances when some request for land allocations are made to the District Land Use Committee, who may consult these plans in making their land allocation decisions.

73. Further, there is currently extremely limited capacity within government agencies to ensure that production sector activities comply with environmental regulations and specified land use plans. Extension services of sectoral agencies, such as agriculture or forestry, focus on "traditional" methods of extension and are unable to encourage biodiversity-friendly land use practices. The tourism sector institutions, mandated with maximizing visitor growth, for example seldom take into account impacts of unregulated tourism on biodiversity. This speaks to the need for also building capacities of sectoral staff to effectively mainstream biodiversity and environmental concerns into their plans at the local level. Unless clear mandate and guidance are provided by the respective central government agencies to mainstream biodiversity concerns into such plans, just building local capacities are unlikely to be effective.

74. Limited MoMDE mechanisms to coordinate and facilitate mainstreaming of biodiversity into other sectors

75. While Sri Lankan law allows for the establishment of ESAs through several national policies [e.g. National Physical Planning Policy and Plan (2010-2013), National Land Use Policy, and Fragile Areas Conservation Strategy (2005)], the country lacks a framework that a) defines the roles and responsibilities of key government institutions and community organizations in land use planning and management in ESAs; and b) lays out prescriptions for different categories of areas within the ESA landscape – such as no-go areas for development in highly sensitive areas; and biodiversity conservation friendly development in the adjacent areas to protect corridors and sensitive habitats where development cannot be avoided. Currently the various responsible government departments have overlapping mandates and often mutually exclusive objectives that increase conflict between development goals versus biodiversity concerns.

76. As noted earlier in this document, the task of protecting and sustainably managing the land, marine, water and biodiversity resources is shared by a number of state institutions, with MoMDE being the mandated lead institution. However, the capacity of MoMDE has been extremely limited to enable it to act as effective coordinating agency to ensure that current complex legal and institutional mechanism leading to fragmentation of responsibility among a large number of institutions can be amicably sorted. There are no formalized mechanisms for coordination between the national level agencies and the local level agencies to discuss environmental issues. Meetings and discussions for this purpose are held between the Ministries and provincial agencies on matters of interest from time to time depending on the urgency.

77. The low national capacity for mainstreaming biodiversity has also been noted in the country's National Capacity Self-Assessment completed in 2007. Of the 10 priorities for the

implementation of CBD obligations, at least three are related directly to biodiversity mainstreaming. They include:

I. Priority Area 1: Reaching sectoral and cross -sectoral support for effective national planning and coordination to mainstream biodiversity conservation and sustainable use in accordance with the ecosystem approach.

II. Priority Area 6: Implementing a multi-institutional coordinated effort to identify, design and establish a rational network of areas needing protection in accordance with the ecosystem approach.

III. Priority Area 8: Institutionalizing participatory and integrated in –situ conservation and management of ecosystems as consonant with the ecosystem approach and poverty eradication

78. Barrier 2: Limited know-how for biodiversity conservation friendly ESA management that secures the long term integrity and resilience of ESAs:

79. No effective local mechanisms to coordinate BD mainstreaming at local level land use planning, monitoring and enforcement:

80. Most of the development planning and coordination occurs at the level of D.S. Divisions, where the Divisional Secretary has the overall mandate to coordinate and ensure harmonized approach to local development planning and implementation. Most of the development plans and financing for them is provided through the central sectoral Ministries and there is often extremely limited information sharing and coordination at the local level by the different sectoral agencies. Some Ministries plan and budget for activities at a scale larger than a Division (such as the Department of Forest Conservation plans at Range level, which may encompass many DS. Divisions), or at site level (Department of Wildlife Conservation plans only for the protected areas they manage, which may overlap with several Divisions). This leads to disjointed planning and implementation of activities – and with extremely limited or no considerations for biodiversity issues. There is also no formal mechanisms to ensure coordination and collaboration between different DS Divisions for planning and implementation of activities.

81. ***Limited experience of mainstreaming biodiversity in land use planning at local levels***

82. As noted earlier in this report, the Divisional Secretariat level "land use planning" tends mostly to be a mapping exercises on current land uses that identify and recommend optimization existing uses. Such "planning" at best, is done infrequently, if at all. In such plans, mechanisms are not in place to promote integrated management across production landscapes and the stakeholders have no incentives to change their traditional roles of compartmentalized approach. The plans do not provide any guidance to balance development with conservation. There is no legal requirement for local stakeholders to adhere to such plans, and thus it has limited use and almost no enforcement. There is sub optimal participation of key resource users (local communities) and local stakeholders such as local leaders in the land use planning exercise. The government officers at the Division level mandated to lead such planning exercise are often very junior officers with extremely limited capacities. Very few practical examples exist of field implementation of effective landscape management for biodiversity conservation that can be nationally replicated. The integrated approach has thus far being carried out only through project mode, though these successes on field level work have not been widely scaled up nationally.

83. Limited understanding of local stakeholders on BD values of their lands and landscapes and limited capacities of all stakeholders to promote conservation actions

84. In addition to the low capacities of the land use planning officers at the local level, the overall capacities of all other government staff are also extremely limited on promoting biodiversity friendly production practices within their own work. There are limited government training for sectoral staff at local levels, and almost none on environmental management and/ or biodiversity conservation. Whilst the Central Environment Authority has been supporting environmental awareness programmes at schools, local school children and others have had

limited direct learning about the biodiversity status and threats in their own areas and have limited resources to implement conservation studies or actions. Though national awareness raising on biodiversity issues are done through radio, television and other print media, they are not site specific and thus do not generate strong interest at the local levels.

85. Inadequate linkages between PA and surrounding landscape/ seascapes to address conservation concerns at a wider landscape/ seascape level

86. Most protected areas in Sri Lanka, as in most parts of the world, are managed at site level and there are extremely limited resources and capacities to ensure that threats emanating to protected areas' biodiversity from outside these area – such as through water quality deterioration or loss of wildlife that roam a wider landscape (such as elephants)- are mitigated. Thus, protected areas' continued to be under threat from encroachment (especially in wildlife sanctuaries and Reserves that have lower protection status than National Parks), and biodiversity within them continued to be threatened from land use and production practices outside the protected areas, and connectivity between protected areas continue to be lost or severely compromised from land use changes adjacent or outside PAs. The capacity of the DWC to work on marine area conservation and to manage connected seascape-landscape in a coherent approach to maximize biodiversity values is also limited.

87. Limited incentives for farmers to promote effective agro-ecosystems management to strengthen livelihoods and biodiversity

Many farmers in Sri Lanka are subsistence level farmers who, in many areas, have to bear the burden of crop and property damages from wildlife –such as elephants, wild boar and monkeys. Thus, there is often limited support for conservation of wildlife in many areas, as wildlife are considered a threats to their lives, livelihoods and properties. Even for people farmers who are interested to practice practising environmentally compatible agriculture production, they have limited access to knowledge and capacities technologies to for them to changes their current practices. For the wider population, there is currently limited tangible benefits for practicing environmentally friendly interventions – and hence few incentives for them to adopt different practices. There are actually more incentives to use government subsidized inorganic fertilizers (although in recent years, the subsidy for such fertilizers has continued to decline and the despite the fact that government has a policy to promote organic fertilizers). Although there has been an increasing demand for organically grown produce and traditional varieties of rice and vegetables, many farmers are unable to benefit from this increased demand due to lack of effective marketing channels and seed supply. Although the highly diverse traditional home gardens in Sri Lanka have been noted globally for their biodiversity, in particularly newly settled agricultural areas, biodiversity of many traditional varieties of fruit and timber species'

PART II: PROJECT STRATEGY

2.1 Rationale

88. As noted in Part I of this document, Sri Lanka's land and territorial marine areas are globally noteworthy hotspots of biological diversity. Despite the nation's relatively small size, species new to science have continued to be discovered, which have further enhanced Sri Lanka's important status in the global biodiversity conservation context. In addition to the existence value of such biological wealth, there are direct use values of the nation's ecosystems and biodiversity - they provide an array of critical services from water provision, agricultural/ fisheries production to protection from natural disasters such as storm surges. Ecosystems and biodiversity continue to play significant roles in people's subsistence livelihoods as well as in wider economic development. Though Sri Lanka has instituted a national system of Protected Areas ((Pas) to safeguarded its biodiversity, many of the globally important ecosystems and habitats of globally significant species will continue to remain outside protected areas and will face accelerating threats. Since it is not possible to safeguard the nation's wide ranging biodiversity just through protected areas, strong measures are need to put development on a more conservation-friendly trajectory by mainstreaming biodiversity into production activities outside protected areas, especially under the current context of rapid urbanization and high rate of economic development in the country.

89. This project will greatly strengthen the country's ability to *safeguard biodiversity outside protected areas in especially designated Environmentally Sensitive Areas through a new land use governance framework*. Such areas will be vehicles for safeguarding globally significant biodiversity on production lands of high conservation values. The project will demonstrate ESA creation and management at Kala Oya Region, where activities to ensure that mechanisms for land use planning and allocation are configured to balance conservation and development objectives to protect major habitat blocks and ensure structural and functional connectivity across the landscape. The project will ensure that the indirect impacts of development are adequately understood and factored into decision making. Thus, the project will deliver immediate global benefits, while improving long term conservation prospects across the country.

90. The project will support the implementation of activities at the landscape level for biodiversity conservation. It will support the development of the necessary national and local policy framework to govern land uses in the identified ESA regions and put in place the appropriate cross-sectoral coordination mechanisms, compliance monitoring and enforcement system to ensure that development in the area are congruent with biodiversity conservation needs. The project envisages the development and implementation of landscape level land-use plans that will guide the development and implementation of all sectoral strategies and trigger a paradigm shift from sector-focused management to multiple use management that reduces the pressures

arising from different land uses. In parallel, the project will seek to engineer a paradigm shift towards sustainable practices and sustainable use of natural resources by production sectors and by local communities. The project will build the capacities of key national and local institutions and importantly also at the community level to implement these biodiversity measures and improved practices in order to ensure the long term integrity and resilience of the ESA regions. The successful implementation of this project will establish a replicable model for managing such critical landscapes of high biodiversity conservation value, while also contributing towards a secure and effective PA system and local livelihoods in the country.

2.2 **Policy Conformity**

91. The project has been designed to be is in full conformity with Sri Lanka's national policies, strategies and laws as outlined under an earlier section in this document. The proposed project is well aligned with several national strategies. Further, the *Gama Neguma* (Village Reawakening) Community Development and Livelihoods Improvement Programme and the *Divi Neguma* (Household Economy) Programme represent large-scale community development and livelihood improvement programmes that the proposed project will be closely align with. The project is also aligned with the National Action Plan for *Haritha* (Green) Lanka - in particular with the specific mission related to ecosystems, while all other missions are also relevant to the project. Additionally, the project is in line with the National Physical Planning Policy (NPPP) where a number of areas are identified as environmentally sensitive and should be taken note in developing physical infrastructure. Similarly the project is in line with the Coastal Zone Management Plan which addresses various issues of coastal resources management including the identification of Special Area Management at selected coastal sites. The project also will complement the activities under the National Action Program (NAP) for combatting land degradation in Sri Lanka which has been planned under the guidance of UNCCD. NAP promotes use and conservation of biodiversity as a mean of improving the degraded lands. Finally the project considers the priority actions under the slightly outdated but still widely referred NBSAP entitled Biodiversity Conservation in Sri Lanka – Framework for Action (BCAP), 1999 and its revised addendum brought out in 2007, in particular the objective to accord urgent attention and protection to bioregions that are considered high priority for conservation..

92. The project will contribute towards achievement of GEF Biodiversity Strategic Objective Two: Mainstream biodiversity, conservation and sustainable use into production landscapes, seascapes and sectors. In particular, the project will directly contribute to this Objective's Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate, and will be aligned to the core Output 2. National and sub-national land-use plans (number) that incorporate biodiversity and ecosystem services valuation.

2.3 **Country Ownership and Drivers**

93. Sri Lanka ratified the United Nations Convention on Biological Diversity in 1994 and thus this project has been designed to assist the country to fulfil its obligations under the Convention. This also makes Sri Lanka eligible to access GEF funds and this project has been designed to access funds from GEF's fifth operational cycle. As a signatory to the UNCBD, this project will also contribute to meeting Sri Lanka's obligations under the Convention – particularly to several Aichi Biodiversity Targets, including the following:

94. Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

95. Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

96. Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

97. Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

98. Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

99. Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

100. Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

101. Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

102. Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

103. Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

104. Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

105. Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

106. Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

107. In addition, the project is also fully in line with UNDP's Strategic Plan (2014-2017) Primary Outcome: Sustainable Development Pathways and UNDP Strategic Plan Secondary Outcome: Effective maintenance and protection of natural capital. The project is also fully aligned with UNDP's Biodiversity and Ecosystems Global Framework (2012-2020)'s Signature Programme 1: Integrating biodiversity and ecosystem management into development planning and production sector activities to safeguard biodiversity and maintain ecosystem services that sustain human wellbeing. This project is further aligned with the Sri Lanka's UNDAF Outcome 4: Policies, programmes and capacities to ensure environmental sustainability, address climate change mitigation and adaptation, and to reduce disaster risks in place at national, sub-national and community levels , and UNDAF Output 4.2: Government agencies, community groups and private sector are equipped with mechanisms, and practices to promote sustainable use of natural resources, biodiversity conservation and climate change adaptation.

108. In addition to the project being in full conformity with national priorities, the project has been designed in full participation of key national stakeholders and is also in conformity with the national portfolio identification exercise, which identified the need to "Piloting Conservation initiatives in critical and less explored areas". The final selection of project pilot site was guided by the Biodiversity Experts Committee and was endorsed by the country's GEF Operational Focal Point through a formal letter to UNDP. In addition, the co-finance commitment by the Sri Lankan government (see Annex 1), is a further testament to national commitment and ownership over this project. The national ownership of this project is expected to be further enhanced by its implementation through the national implementation modality and the involvement of key national stakeholders in its implementation as outlined in a later section of this document.

2.4 Design Principles and Strategic Considerations

109. In addition to conformity with national priorities, GEF strategy, UN's work globally and in Sri Lanka and national ownership, a number of other strategic considerations have played a role in this project's formulation. These include coordination with relevant initiatives, and UNDP's comparative advantages, which are discussed below. The additional considerations for cost effectiveness, sustainability and replicability are discussed later in the document.

110. The first and the most important design principle that this project is built on is the need to secure biodiversity conservation outside protected areas, particularly in some special areas that cannot be made into a formal protected area through biodiversity friendly management of such areas in order to meet Sri Lanka's national targets and international obligations on biodiversity conservation. Conservation friendly management of such landscapes are recognized as being critical for biodiversity conservation within existing protected areas as well – as there are strong linkages between production activities and their impacts on protected areas. Thus, building on international experiences and national policies, ESAs have been identified are appropriate vehicles to achieve targeted conservation impacts at a landscape level. This project is also considered timely given that the country is currently on a pathway to accelerated development and unless appropriate steps are taken, much of critical biodiversity outside protected areas may be lost.

111. Linkages to other relevant Programmes

112. The project will first and foremost build on the strong baseline- and will coordinate with all baseline initiatives. In addition the project will coordinate with the following relevant programmes:

I. The project will also align with and support the recently approved GEF-UNDP project "National Biodiversity Planning to Support the implementation of the CBD 2011-2020 Strategic Plan in Sri Lanka" which will update the BCAP according to global guidelines of CBD Strategic Plan 2011-2020

II. UNDP-GEF "Strengthening capacity to control the introduction and spread of alien invasive species in Sri Lanka". The objective of the project is to build capacity across sectors to control the introduction and spread of invasive species in Sri Lanka, in order to safeguard globally significant biodiversity. Lessons learnt under this project, for example in the process and principles in developing national regulatory frameworks and setting institutional coordination mechanisms will inform the delivery of similar results under the proposed project.

III. IUCN/DFID " Improving Natural Resource Governance for Rural Poverty Reduction"

IV. GEF-UNDP Small Grants Programme: The GEF-UNDP SGP programme has been operational in Sri Lanka since 1994 providing community level grants to address local environmental problems. The current project will make use of lessons learnt by the programme especially in mobilizing local communities for community-based natural resource management activities under the project.

V. UNEP/GEF "Mainstreaming agrobiodiversity conservation and use in Sri Lankan agro-ecosystems for livelihoods and adaptation to climate change": In particular the current project in pursuing its efforts to strengthen the extension system, will coordinate with and build on lessons and activities under the UNEP/GEF project.

113. The project will also ensure strong coordination with a number of planned and ongoing GEF financed projects involving Sri Lanka, that are listed in the Table 5.

Table 5: Coordination with Key GEF financed projects in Sri Lanka with this proposed UNDP-GEF project

Name of the project	Objectives and key expected results	Coordination with the project by this UNDP-GEF Project
I. FAO-GEF :	**This project's Objective is to** reverse and	This project will be implemented in 3 districts of the

Rehabilitation of Degraded Agricultural Lands in Kandy, Badulla and Nuwara Eliya Districts of the Central Highlands	arrest land degradation in agricultural lands in *Kandy, Nuwara Eliya and Badulla* districts in the Central Highlands of Sri Lanka. The project will establish institutional, policy and regulatory frameworks for sustainable land management; demonstrate appropriate technologies for rehabilitation of degraded lands, build capacity in both public and private sector on innovative funding mechanisms and enhance national knowledge base for sustainable land management.	Central Highlands of Sri Lanka. This area is also considered an environmentally sensitive area, and gazetted as such through the Soil Conservation Act. At the national level the project is implemented through the Natural Resources Division of the Ministry of Mahaweli Development and Environment, and the Additional Secretary will be overseeing both ESA project and the FAO project. This institutional linkage will ensure that there is sharing of knowledge between the two projects. Some of the land management approach developed by this project may also be replicable at the ESA sites, and this UNDP-GEF project will ensure that there are lessons sharing between the two projects.
II. UNDP-GEF: Ensuring Global Environmental Concerns and Best Practices Mainstreamed in the Post-Conflict Rapid Development Process of Sri Lanka Through Improved Information Management	**This project's objective is "**To improve institutional and technical capacities to meet and sustain the objectives of the three Rio Conventions and other Multilateral Environmental Agreements (MEA). Specifically, this will be carried out by targeting and training government staff at the local, regional and national levels on the specific interpretation of Rio Convention provisions as they apply to their respective roles and responsibilities to implement associated development policies." The project's Outcomes include strengthening monitoring of the implementation of the Rio Conventions; and Strengthened policy and regulatory framework for information sharing in support of Rio Conventions	The proposed project is funded by GEF cross-cutting capacity development (CCCD) to mainstream environmental data collection, interpretation and use among development actors, especially at district and provincial level. The project will support evidence-based planning and development decision-making at these levels of government. The project also contributes towards GEF Biodiversity Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate, and will be aligned to the core Output 2. National and sub-national land-use plans (number) that incorporate biodiversity and ecosystem services valuation. In that regard the CCCD project will support the district level coordinated planning for environmentally sensitive areas, by providing the information required for local decision-making. Environmental sustainability in specific areas selected on ecosystem / biodiversity values is an expected outcome of the ESA project. The GEF CCCD project will support the training of district and provincial technical staff to gather data and monitor environmental condition of land, water, forests, biodiversity, species, coastal habitats etc. This will provide information and requisite capacity for both components of the ESA project, especially in monitoring project results. Both projects are implemented by the Ministry of Mahaweli Development and Environment, and the respected Project Boards will have representation of the National Project Director and thus ensure strong coordination both through UNDP and the MoMDE.
III. UNDP-SCCF: Strengthening the Resilience of Post Conflict Recovery and Development to Climate Change Risks in Sri Lanka	**This project's Objective is to "**Increase the resilience of communities to climate change-induced hazards through integration of climate-smart policies and actions into development planning and budgeting, including in the reconstruction and rehabilitation programmes in the Northern Province and Eastern Province". Its key Outcomes include "Reconstruction and development programmes in the Northern Province and Eastern Province integrate climate risk information and adaptation measures; Design, appraisal	This SCCF-funded project does have a physical overlap with ESA Pilot site; it will be implemented in Puttlam and Kurunegala Districts. Coordination with the project will be at district level. The proposed District Coordination Committees will ensure that ESA investment is focused on the strengthening biodiversity-friendly approaches of local investments. SCCF investments will be channelled through the Ministry of Economic Development to vulnerable villages through district and divisional secretariats. So the Local ESA committees will ensure that coordination with SCCF-funded initiatives on the

	and approval processes for provincial and communal development plans integrate climate risk considerations and Investment programme defined and implemented to increase the resilience of communal development plans from climate change-induced risks.	ground.
IV. UNEP-GEF: Global: Enhancing the Conservation Effectiveness of Seagrass Ecosystems Supporting Globally Significant Populations of Dugong Across the Indian and Pacific Ocean Basins (Short Title: The Dugong and Seagrass Conservation Project)	The objective of the project is to "To enhance the effectiveness of conservation of dugongs and their seagrass ecosystems across the Indian and Pacific Ocean basins". In the project, Outcome 1. Is "Community-based stewardship of dugongs and their seagrass ecosystems at selected globally important Indo-Pacific sites enhanced; Outcome 2. Is Sustainable fisheries practices that reduce damage to dugongs and their seagrass ecosystems widely adopted through uptake of innovative incentive mechanisms and management tools; Outcome 3 includes Increased availability and access to critical knowledge needed for decision-making for effective conservation of dugongs and their seagrass ecosystems in Indian and Pacific Ocean basins and Outcome 4 is Conservation priorities and measures for dugongs and their seagrass ecosystems incorporated into relevant policy, planning and regulatory frameworks across the Indian and Pacific Ocean basins.	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. In Sri Lanka the project will work at the Gulf of Mannar, to Kalpitiya. As there will be overlap between the UNDP-GEF project site at Bar Reef and this UNEP-GEF project at Kalpitiya, strong efforts will be made to coordinate efforts between the projects. The Ministry of Mahaweli Development and Environment, is the executive agency for ESA project and Sri Lankan part of the seagrass / dugong project. Both Projects are implemented by the Biodiversity Secretariat of the MoMDE and therefore coordination will be effected through the National Project Director/ Director of the Biodiversity Secretariat.
V. UNDP-GEF: SGP Fifth Operational Phase - Implementing the Program Using STAR Resources II	In the GEF SGP Fifth Operational Phase, Approximately 36 small grants will be issued in this phase to local organisations to implement projects under Biodiversity Conservation, Sustainable Land Management, Climate Change Mitigation, Chemicals and International Waters	GEF SGP's National Coordinator and some of the key technical advisory team members have been involved in the design of the ESA project. Through GEF SGP's work in Sri Lanka in the past 15 years, a number of NGO led environmentally sensitive areas have been identified and managed with community participation. Importantly the Programme has contributed to developing the capacities of local non-governmental organisations and women's groups in natural resources management and biodiversity friendly agriculture. Therefore the ESA project design was informed by the experience and approaches of GEF SGP. The GEF SGP's Fifth Operational Phase will end in 2015. Lessons from SGP have will be included in the design of community based interventions at ESA sites under Component 2.
VI. UNEP GEF Global: Mainstreaming Biodiversity Conservation and Sustainable Use for Improved Human	This UNEP-GEF has three technical Components. Component 1 –Knowledge Base focuses on Assessments of nutritional value of agro-biodiversity and associated traditional knowledge (ATK) is carried out in three ecosystems in Brazil, Turkey and Sri Lanka and one ecosystem in Kenya and database development. Component 2 of the project is on developing cross sectoral	This UNEP/GEF project in pursuing its efforts to strengthen the extension system will coordinate with the ESA project. The MoMDE and Department of Agriculture are the project partners for Sri Lanka. ESA project also contributed to the objectives of the GEF UNEP project by promoting *biodiversity compatible production practices in the pilot sites.* Coordination will be through the National Steering

Nutrition and Well-being	Policy and Regulatory Framework and the third component deals with Awareness and Out-scaling.	Committee, or Project Board where best practices of the UNEP project can inform the agricultural interventions planned by the GEF ESA project at the pilot locations. As the same state agencies are involved in generating field research information, data and marketing options for biodiversity-friendly food, there will be a high level cross learning between the projects. Both Projects are implemented by the Biodiversity Secretariat of the MoMDE and therefore coordination will be effected through the National Project Director/ Director of the Biodiversity Secretariat.

114. In addition the project will also coordinate with the UNREDD project that is supporting to the country the necessary conditions for REDD including improving forest governance, strengthened technical capacities, and set up standards for ensuring compliance with social and environmental safeguards against possible negative impacts of REDD+ activities.

115. Focus on Gender Equity

116. In Sri Lanka, despite high level of female literacy and progress in female education, gender discrimination persists and its society is still male dominated in social, economic and political spheres. This is particularly true for rural areas of the country. In most instances, the men are considered as the formal 'head' though they may not play significant role in supporting the household. This leads to discrimination against women in terms of land rights, ownership, and inheritance and limits their access to employment, resources or loans as well as in decision making related to local development. The project will ensure that gender equity aspects are given strong consideration in all its work so that women and men participate and benefit from project activities equitably. Recognizing that women at project sites require particular attention to build their self-confidence in order for them to take leadership roles and to participate in local level decision making processes, special attention will be given on their capacity building, and alliance building with other women/ women's groups. The project's Environmental and Social Screening (Annex 8) has identified risks of low involvement of women and other marginalized groups under several proposed project activities and has suggested some approaches to ensure that equitable number of women and men are involved in project activities and that women are not further marginalized by project actions.

2.5 **Project Objective, Outcomes and Outputs**

117. The primary objective of this project is "To operationalize Environment Sensitive Areas (ESA)—as a mechanism for mainstreaming biodiversity management into development in areas of high conservation significance". In order to achieve this Objective, the project plans on achieving the two major Outcomes, and several Outputs under these. The two Outcomes are:

I. Outcome 1: National Enabling Framework Strengthened to Designate and Manage Environmentally Sensitive Areas (ESA)
II. Outcome 2: Biodiversity-friendly ESA management for long term integrity and resilience ensured at two sites in the Kala Oya Region

118. This section firstly describes the pilot sites where project will work under Outcome 2 and then presents the proposed project Outputs, expected results by the end of the project and indicative activities under these two Outcomes.

119. Summary Information on Proposed ESA sites

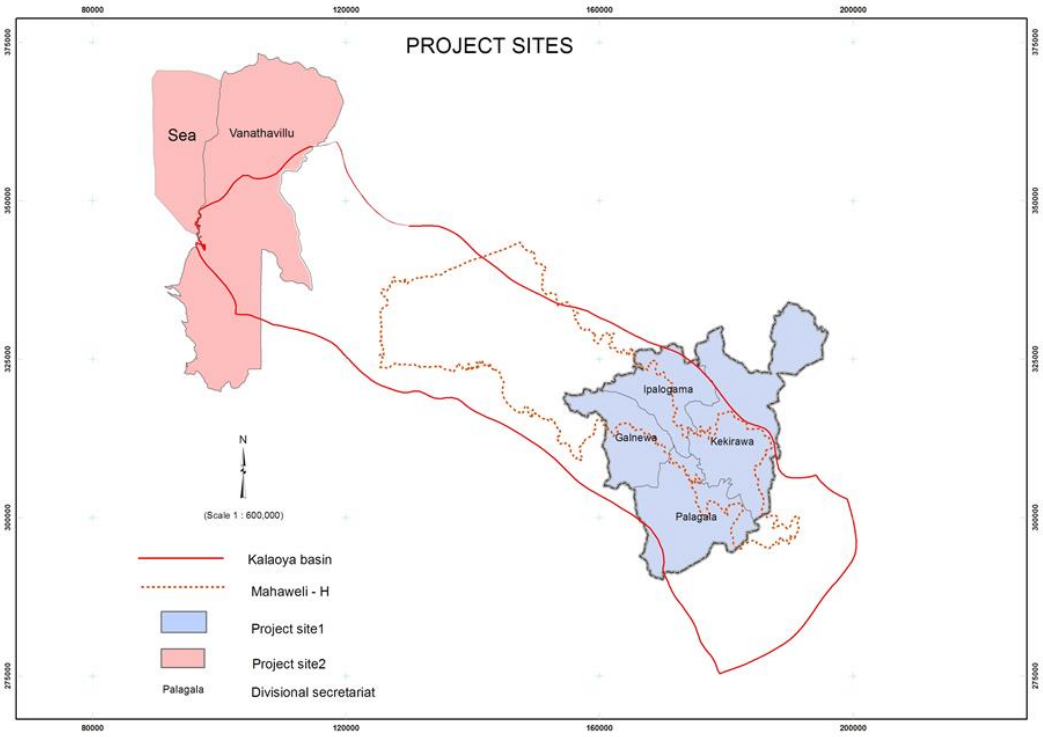
120. Under this Outcome, the project will support the operationalization of ESA concept at two sites within a wider Kala Oya Region. The Kala Oya Region (KOR) includes the Kala Oya River Basin and its surrounding area. The KOR is in the North-Central area of the country and mostly falls within the Dry Zone of the country, with some parts of the area falling in the intermediate zone. This region had been identified as one of the five potential ESA bioregions in the initial

project conceptualization phase. This area's selection was confirmed through a three-step process, which included ranking of the five regions by members of the national Biodiversity Experts Committee using criteria presented in Annex 3, and further analysis was undertaken of these regions by the project design team using additional criteria, which are also presented in the same Annex in Box I.

Figure 2: Location of Kala Oya Region

121. Within the Kala Oya Region, two sites have been identified as proposed ESAs. The first site – Kala Wewa falls towards upper reaches of the river basin and encompasses a large water body (reservoir or tank) called Kala Wewa. The second site – Wilpattu is located in lower part of the basin and encompasses marine area including the Bar Reef and the estuary of the Kala Oya River.

Figure 3: Proposed ESAs within the Kala Oya Region



122. Key information of the sites are summarized in Table 6 below.

Table 6: Summary of Key Information of two proposed ESA sites

Key Information	**Site 1: Kala Wewa Site**	**Site 2: Wilpattu Site**
Districts	Anuradhapura District	Puttalam District
Divisions	Palagala, Galnewa, Ipalogama and Kekirawa	Vanathavillu
Total number of households	47538	4894
Total population	166025	16933
Number of Samurdhi Recipient Households[14]	11637	1880
Total land area	85000 ha	73700 ha
Total marine area	0	51000ha
Key ecosystems[15]	Agro-ecosystems: Irrigated paddy fields, homesteads (agroforestry, mixed perennial crops), slash and burn (*chena*) Others: Dry and moist mixed evergreen forests , Sparse and open forest, Forest plantations, Riverine forest, Fresh water wetlands, Perennial large tanks (reservoirs), Seasonal small tanks, Rivers and streams	Agro-ecosystems: Irrigated paddy fields, homesteads (agroforestry, mixed perennial crops), slash and burn (*chena*), Coconut and cashew plantations Others Mangrove Forest; Salt Marsh; Dry Zone Riverine Forest ; Floodplains Freshwater Villus (waterholes); Brackish water Villus (waterholes); Perennial Large Tanks. Seasonal Small Tanks; Estuary - Upper and Lower; Puttalam Lagoon and Dutch Bay; Lagoon Beaches; Sea Grass Beds; Coastal Waters; Coral and Sandstone Reefs. Palaeobiodiversity sites consisting of Miocene deposits.
Protected areas falling within the site	Part of Ritigala Strict Nature Reserve, Part of Kahalla-Pallekele sanctuary	Part of Wilpattu National Park, Bar Reef Sanctuary

[14] Support is provided to the poorest households under a poverty reduction program of the government
[15] See Annex 3,4 for more details on biodiversity of different ecosystems

123. *Biodiversity Highlights*

124. This section presents the key landuse and biodiversity at the two sites.

125. Site 1. Kala Wewa

126. The major feature of Kala Wewa ESA is the Kala Wewa reservoir, which was constructed in the fifth century AD. This falls almost at the centre of the ESA. Its total area in full capacity is around 1800 ha. In addition to this reservoir, the ESA has several other smaller reservoirs (tanks) as well. In fact, most of the dry zone is dotted with several hundreds of such tanks of diverse sizes. They are normally located on relatively higher grounds, and provide water for agriculture, domestic needs and other purposes. Paddy fields are located below such tanks, and upper catchments of such tanks traditionally have protected forests. Such forests provide villagers with firewood and timber, meat and honey, as well as serve as grazing areas for domestic animals. These ancient tank systems also have significant ecological and biological importance-especially during the dry seasons when they provide water for birds and wild animals as well. Wild herds of elephants around the tanks during the dry season, and their dropping etc. maintains high levels of nutrients in the tanks – which in turn supports high levels of aquatic biodiversity.

127. Some notable ecosystems and globally important species in Kala Wewa include the following:

I. Moist Mixed Evergreen Forest (MMEF): this forest type 136 faunal and 100 floral species have been recorded. Of the floral species, 18% were endemic to such forests, and this forest type is the richest forest ecosystem in terms of flowering plant species in ESA1. Ranawe Kanda Conservation Forest (Former OSF) in Site 1 is of particular interest due to its rich plant biodiversity, especially its remarkably high population of *Mesua ferrea* (Ironwood, "Na") with Relative Denisity of 8.60% (EML, 2005). These trees grow to impressive heights of about 30m, and thus this forest has been called "Jathika Na-mal Uyana" or National Na (*Mesua*) Garden. Ranawe Kanda hill is also of unique geological importance, as significant portion of the hill is composed of Rose Quartz, which attracts numerous tourists to this spot.

II. *Dry Mixed Evergreen Forest:* ESA 1 has significant area of this forest type. Though most of such forests are secondary forests, patches of climax or steady- state forest vegetation of DMEF still survive in protected areas such as Kahalla–Pallekele Sanctuary.

128. At least 160 species found in this area are listed in IUCN Redlist of Globally Threatened Species. Notable ones include are listed below in Table 7.

Table 7: Some globally threatened species at Kala Wewa site

GROUP	*SPECIES*	COMMOM NAME	Global IUCN Redlist Status
Mammals	*Macaca sinica*	Sri Lanka toque monkey	EN
	Semnopithecus vetulus	Sri Lanka purple-faced Langur	EN
	Prionailurus viverrinus	Fishing cat	EN
	Loris tardigradus	Sri Lanka red slender loris	EN
	Melursus ursinus	Sloth bear	VU
	Rusa unicolor	Sambur	VU
	Prionailurus rubiginosus	Rusty- spotted cat	VU
Plant species	*Chloroxylon swietenia*	Satin wood, "Buruta"b	VU
	Eugenia rotundata	"Daduwa"	VU
	Glenniea unijuga	Wal mora	VU
	Mangifera zeylanica	"Etamba"	VU
	Myristica ceylanica	"Malaboda"	VU
	Psydrax dicoccos	Ceylon boxwood, "Pana karawu"	VU
	Saraca asoca	"Asoka"	VU

129. Site 2: Wilpattu ESA

130. This ESA includes both terrestrial and marine and coastal areas – including the Bar Reef area. **The site is located at the lower basin area which includes Kala Oya estuary, Puttalam lagoon, Wilpattu**

National Park (WNP), some agricultural lands and part of the sea which include Bar Reef Sanctuary.

131. Whilst the forests of Wilpattu National Park and outside the protected areas covers most of the ESA (78.3%), the marine areas constitute around 21.7% of the ESA.

132. Some notable ecosystems in this ESA include:

I. *Scrub on Floodplains:* This minor Vegetation Association was named, described and characterized for the first time in Sri Lanka (EML, 2005). So far this type has only been described from ESA2, which occur in lowland, periodically inundated and slightly saline open habitats. It is a hydrologically influenced woodland ecosystem occurring in lowlands which are prone to regular floods caused by the Kala Oya outflows during Northeast monsoon. Such scrub consists of open to close low-canopy forest (3-7 m in height), with some species that are specific to saline soils and marshes. This type of association is characterized by the presence of some special indicator species, such as *Phoenix pusilla* ("Indi"). A total of 167 faunal and 38 floral species have been recorded.

II. *Mangrove Forests* in Kala Oya estuary represents the largest mangrove patch in the island and at present it is also the least disturbed mangrove forest areas in Sri Lanka. Its relative remoteness from settlements, and most of it being located within the Wilpattu National Park, have contributed to this forest's current extent in the region. Some mangrove patches in the Kala Oya Estuary support structurally the most diverse mangrove ecosystems in Sri Lanka. These forests have the tallest mangrove trees found in the country, with 20m in height on average and more than 75 cm in stem girth. A total of 92 faunal species have been recorded from such forests.

III. *The estuarine area including the brackish water area of Kala Oya, Dutch Bay and the Puttalam Lagoon:* Puttalam Lagoon, though widely referred to as a lagoon, is technically an estuary. Being an estuary associated with highly productive ecosystems such as Mangrove Forests and Sea Grass Beds it supports high species diversity. Furthermore, this ecosystem functions as an important breeding ground for many marine species and therefore plays an important conservation role for the marine species as well. At least 13 faunal and 8 floral species have been recorded.

IV. *Coral Reef:* the Bar Reef Marine Sanctuary, declared in 1992, is considered to be one of the most diverse habitats in the Puttalam - Kalpitiya area. The reef covers an area of 307 km^2 with the nearest coral patches lying approximately 2 km west off the northern point of Kalpitiya Peninsula. This is one of the largest coral reef in Sri Lanka, and is considered one of the most pristine in the country. 258 faunal species and 3 species of algae have been recorded. Many globally threatened coral species are n be found here (see Table 8).

V. Wilpattu the sixth Ramsar Wetland in Sri Lanka, declared on 2 February 2013, also falls within this ESA. Wilpattu has a total of 205 water bodies, natural and manmade, within its perimeter. Wilpattu is home to a unique ecosystem known as the "villu," natural depressions in the land that will fill up with rainwater during the monsoon. The villus attract waterfowl and other bird species, as well as wild animals, including elephants. Elephants in this part of Sri Lanka are said to be larger in size than the average because they feed on nutrient-rich grasses growing in the villus.

VI. Being a marine deposit, Aruwakkalu within Site 2, contains a wide variety of marine fossil fauna ranging from foraminifera to mammals. Only the Miocene at Aruwakkalu contains fossils of large invertebrates and vertebrates and therefore it is of high palaeo-biodiversity value. The fossils at Aruwakkalu represents nearly 40 species consisting of gastropods, bivalves, echinoderms, marine algae, tube worms, sting rays, whales, dolphins, fish, tortoises and turtles. (Deraniyagala, 1969).

Reference: Deraniyagala, P. E. P. (1969). Some aspects of the Tertiary Period in Ceylon. Journal Royal Asiatic Society (Ceylon Branch) 2(12): 86-108.

VII. The Department of Archaeology has taken action to declare the Aruwakkalu palaeo-biodiversity site, a national archaeological site. This was the first time in the country's history a palaeo-biodiversity site had been named a site of archaeological importance (Edirisinghe, 2014).

Ref. Edirisinghe, D. 2014. Aruwakkalu paleobiodiversity area to be declared national heritage site. The Island, 26 May, 2014.

VIII. It is noteworthy that Jurassic fossils too occur in a site known as Tabbowa, in close vicinity to Site 2. Tabbowa is situated immediately south of the KOB and within Karuwalagaswewa DS Division immediately south east of Wanathavilluwa DS Division. Despite the fact that the Jurassic is popularly known as the 'Age of the dinosaurs', the evidence discovered in Sri Lanka
are mainly the Conifers. The Jurassic region is represented by fossils from Tabbowa, Andigama and Pallama (all in the North Western Province). In general, the Jurassic can be dated to 201-145 million Years. The fossils at Tabbowa consist mainly of leaves, stem fragments and shoots of coniferous trees, cycads and ferns (Pteridophyta) (SME, 2014).

Reference: Action Plan for Conservation and Sustainable Use of Palaeo-biodiversity in Sri Lanka. Biodiversity Secretariat, MoMDE. 2014

Table 8: Notable globally threatened species in Wilpattu Site

GROUP	SPECIES	COMMOM NAME	Global IUCN Redlist Status
Corals	*Acropora aculeus*		VU
	Acropora donai		VU
	Pavona decussata		VU
	Pavona venosa		VU
	Pahcyserus rugosa		VU
	Euphyllia ancora		VU
	Catalaphylla jardinei		VU
	Turbinaria peltata		VU
	Galaxea astreata		VU
Crutacea Holothuroids	*Actinipyga mauritiana*		VU
Marine fish Bony fish	*Epinephalus lanceolatus*	Giant Grouper	VU
Reptiles	*Eretmochelys imbricata*	Hawksbill turtle	CR
	Chelonia mydas	Green turtle	EN
	Lepidochelys olivacea	Olive ridley turtle	VU
	Threskiornis melanocephalus	Black-headed ibis	NT
Mammals	*Macaca sinica*	Sri Lanka toque monkey	EN
	Semnopithecus vetulus	Sri Lanka purple-faced Langur	EN
	Elephas maximus	Elephant	EN
	Prionailurus viverrinus	Fishing cat	EN
	Loris tardigradus	Sri Lanka red slender loris	EN
	Dugong dugong		VU
	Rusa unicolor	Sambur	VU
	Prionailurus rubiginosus	Rusty- spotted cat	VU
	Melursus ursinus	Sloth bear	VU
Plant species	*Chloroxylon swietenia*	Satin wood, "Buruta"b	VU

133. Outcome 1. National Enabling Framework Strengthened To Designate and Manage Environmentally Sensitive Areas (ESA)

134. Under this Outcome, three Outputs will be achieved, which are described below.

135. Output 1: Effective national policies and legal instruments on conservation and sustainable management of ESAs

136. The project will improve national and sub-national capacities for inter-sectoral governance of ESAs to effectively conserve biodiversity. In order to achieve this, it will first facilitate the emplacement of an appropriate policy and legislative mechanisms to guide the identification, gazetting, management and monitoring of ESAs that strongly integrates biodiversity conservation concerns and enables the development and use of biodiversity indicators and status assessment to monitor the management effectiveness of ESAs. The following will be achieved by the project under this Output:

I. *End of Project Result 1: National Policy and Strategy on ESA:* This strategy development will be led by the Biodiversity Secretariat with inputs from experts. Its development will be guided by the inter-sectoral National ESA Committee. It will be developed in full consultation with national level stakeholders from different sectors (including representatives from local governments, NGOs and others) and the National Experts Committee on Biodiversity Conservation. The Policy will be reviewed and endorsed by the National ESA Steering Committee. It is expected that the process of the development of this Strategy this will also strengthen cooperation and coordination among sectors. This policy will outline the institutional mechanisms for identifying, gazetting, management and monitoring of ESAs. Nationally relevant definition of ESAs will be developed, as well as the criteria for declaring ESAs. The Policy and Strategy will be built on the National Environmental Act of Sri Lanka and will be developed to ensure full compatibility with the national biodiversity strategy and action plan (currently under revision by MoMDE). The Policy will be developed under the aegis of the National Environmental Act (NEA), and will also reference other relevant legislation and will complement existing policies and strategies – including climate change related and other environment related strategies (forestry, wildlife conservation). This proposed National Policy and Strategy will be approved by the Cabinet of Ministers. In order to do this, the project will support the assessment of existing policies and legal framework from all relevant sectors. As far as possible, ESA designation and management will be promoted as a unifying concept for possible use by different sectors (to cover areas that are relevant for biodiversity conservation as well as other ecological services such as soil and water conservation etc.). The policy and strategy will also clarify that the ESAs can be formed based on their importance and irrespective of their small sizes, if necessary.

   This Policy and Strategy will also clarify the roles, responsibilities and rights of different national and sub-national authorities and actors such government agencies, local governments, communities, NGOs and the private sector. Roles of national level institutions in ESA identification and management at national and sub-national levels to promote landscape level management of biodiversity outside protected areas will be clarified – especially for cases when such ESAs fall within multiple Provinces and or Divisions. It will define ESA categorization typology for the country including different levels of protection and management prescriptions applicable to different categories of land use and establish clear monitoring and enforcement mechanisms.

   The project will ensure that the policy and strategy is based on lessons from around the world and that there is a strong focus on conserving biodiversity of global importance. The policy will also outline steps for land use planning framework developed under Output 2. The Policy and Strategy will also build on similar experiences and best practices from within Sri Lanka and globally. The Policy and Strategy will complement the updated NBSAP and its development will be led by the National Biodiversity Secretariat. Since there is a risk that focus given to ESAs may result in generating a perception that other areas or landscapes are not as important and fall on the blind spot during the process of conducting EIAs or SEAs -- potentially locating major developments in such areas beyond capacity and to also compensate for lost land area as a result of ESA designation, and thereby leading to losses in biodiversity at such sites, the policy should make sure that there are also safeguard measures to prevent this.

II. *Result 2: National ESA Scale up Plan:* The national ESA scale up plan will be based on the national policy and strategy noted above. This plan will identify potential sites for nation-wide ESA replication – and will be based on the use of tool such online integrated biodiversity assessment tool noted later in this document under Output 2. The identified potential sites will be categorised into high priority sites for the short, medium and the long term. It will also identify research needs on ESAs – including roles of different institutions to facilitate filling of any knowledge gaps. The action plan will also identify resource needs and outline mechanisms for sustainable financing of ESAs including public-private partnerships. Like the Policy and Strategy, the action plan will also be guided by the intersectoral National ESA Committee and will also ensure the strong inputs by sectoral experts, local government representatives, academics and the National Biodiversity Experts Committee. The project will ensure that the plan builds on the existing plans– such as the provincial biodiversity profiles that have already been prepared by the government – and also on the Integrated Strategic Environmental Assessment undertaken for the Northern Province. The plan development will also involve other national level institutions that are relevant for land and marine area development– such as the LUPPD, and the Ministry of Construction, Engineering Services, Housing and Common Amenities (which has produced the National Physical Plan). It is estimated that at least 5% of additional areas nationally would be identified for ESA scale up. The plan will also consider predicted climate change impacts in different parts of Sri Lanka and will also plan ESA replication such that these impacts are factored into the scale up plan. In considering the likely impacts of climate change, resilience of proposed sites to climate change impacts will also be considered so that that these sites can also provide opportunities for local communities for ecosystems based adaptation.

III. *Result 3: Updated policy to address human wildlife conflicts:* One issue of high "sensitivity" in Sri Lanka is the increasing human-wildlife conflicts in many parts of the country. As Sri Lanka's Policy on Human Elephant Conflict (HEC) dates to 2006, and as the issue is extremely relevant to the two ESA sites that this project will work at – see Outcome 2). The project proposes to use the best available knowledge and experiences from around the country and around the world to update and help operationalize the HEC policy in the country. The DWC will lead this policy updating, with analysis (including economic analysis of options for compensation, insurance etc.) and national consultations/ international knowledge sharing supported by this project. The project will ensure that the policy updating is done as an inter-sectoral effort and that it has the ownership of wider range of sectors and the local governments. The project will ensure that there is strong community consultations and also involvement of NGOs and the private sector – such as insurance companies and tourism entrepreneurs so that issues of tourism and insurance are considered even more strongly.

137. Output 2: National stakeholders' capacities to support planning, implementation and monitoring of ESAs

138. Under this Output at least five key results will be produced by the project. They include the following:

I. *Result 4: At least two ESA land use plans and annual ESA work plans approved by inter-sectoral ESA Committees, outlining joint work:* An intersectoral National ESA Committee will be established, under the Chairmanship of the Secretary of MoMDE. It will include representatives of key national agencies (please see institutional arrangements for more details). This Committee will provide the overall guidance on ESAs and will be the key forum to discuss and approve the national ESA policy, strategy and scale up plan as well as to guide project implementation at pilot ESAs (Outcome 2). The Committee will also help guide provincial and local governments to make appropriate ESA management decisions.

Committee members' capacities will be built by the project to equip them with skills to incorporate biodiversity concerns into sectoral development plans at national level, so that they can in turn also influence and guide such plans at local levels. Particular attention will be given to build their capacities to assess trade-offs of different alternative decisions and for them to promote incentive based conservation actions. It is expected that the Heads of agencies who represent their institutions in this committee will issue circular instructions to

incorporate ESA management activities to the annual action plans of the institution at the local levels and will also issue the sectoral biodiversity mainstreaming guidelines to their field officers nationally and also ensure that such guidelines are also used as training materials within their institutions. Once sectoral plans are developed at local level and sent up to their respective central offices, they in turn will incorporate the ESA activities into the agency's annual budgets, which will further ensure national support both in terms of policies and resources. It is envisaged that the mechanisms for coordination through this structure will strengthen cooperation and coordination among the sectors for implementing the ESA policy and strategy, and mitigating any inter-sectoral issues. One of the key

II. *Result 5: At least 10 annual work plans (one for each pilot ESA) approved by national ESA Committee, along with joint policy guidance for ESA management:* This result will indicate that the members of inter-sectoral National ESA Committee are working together and are supporting on-the ground collaboration and cooperation across sectors. Approval of such plans will also indicate support for sustainable financing of identified actions from the highest level of each agency and will strengthen activities under Results under Outcome 2 described later in this document.

III. *Result 6: Capacity of the Biodiversity Secretariat strengthened to act as the national lead agency to promote effective ESA implementation:* As the national focal agency for biodiversity conservation, the Biodiversity Secretariat will be the focal agency for this project. The project will also build capacities of the BD Secretariat to be able to provide relevant capacity building on ESAs to key public institutions at the national, provincial and local levels to design, review and endorse Environment Sensitive Areas. Such capacity building will be done through partnership with other relevant national institutions – including universities and training institutions. Capacity self-assessment by BDS (see Annex 2) has noted several deficiencies in their capacities. The project will assist in building capacities in those particular identified areas. Since this agency is also coordinating the National Experts Committee on Biodiversity Conservation, the Secretariat will work with this committee to identify relevant issues to develop training materials and guidelines. The Experts Committee may form sub-committees on site specific ESA or on species management issues (such as on human elephant conflict) to advise ESA management and the members of the Committee will be mobilized to provide such information. In addition, the members will also play an important role in the information provision for the online biodiversity assessment tool noted later (Result 9).

139. The following development of guidelines and tools for ESA land use planning and biodiversity conservation will also be supported, which will be available in Sinhala, Tamil and English to primarily to aid field practitioners:

IV. *Result 7: National guideline to integrate biodiversity conservation and sustainable use into land use planning*: This guideline will be jointly developed with the LUPPD, BDS and other relevant institutions and will be based on the field experiences of this project on developing biodiversity compatible land use/ seascape use at the local level at the two ESAs (see Outcome 2). Relevant expertise from the National Experts Committee on Biodiversity Conservation will also be tapped to provide technical expertise as required. The national guideline will be aimed at local level planners, focusing on steps and responsibilities to prepare landscape level land- use plan and sustainable resource management systems through community participation. The guideline will build on the existing land use planning framework, with additional considerations for mainstreaming biodiversity conservation considerations through community participation. The guidelines will include methodologies for issues such as identification of the different ecosystems; identification of different land uses/users within these ecosystems; the land uses and the relevant issues; zoning with management options to ensure connectivity, habitat/ecosystem conservation, productivity enhancement and reduced offsite effects; mitigation actions for addressing the issues - permitted and not permitted; and resource assessment. The guidelines will also refer to the online biodiversity assessment tool (see below) and other relevant resources to assist local planners. The national guideline will be aimed at local level planners, focusing on steps and responsibilities to prepare landscape level land- use plan and sustainable resource

management systems - through community participation. The guidelines will also guide planners to incorporate future scenario as far as possible – such as in changes in wildlife and human populations and likely impacts of climate change.

V. *Result 8: National guides on how to integrate biodiversity conservation into sectoral plans and actions, (agriculture, forestry, coastal development and tourism):* These guidelines will be jointly developed by a team from BDS, National Experts Committee on Biodiversity Conservation and relevant sector experts. Experiences of other countries on developing such guidelines will also be used to develop nationally appropriate guidelines. Such guidelines will be used as training materials to field level training as appropriate (under Component 2). Issues of links between climate change and ecosystem resilience, and the use of ecosystems management to increase ecosystems' resilience and to enhance ecosystem services will also be included in such guidelines. These guidelines will also consider global approaches and guidelines such as GIZ's methodology for the Integration of Ecosystem Services into Development Planning and ecosystem valuation from The Economics of Ecosystems and Biodiversity (TEEB). It is expected that these guides will be endorsed by each relevant sector and also used by them nationally.

VI. *Result 9: Online integrated biodiversity assessment tool available to identify biodiversity hotspots nationwide, building on national and international data*: The project will support the development of an online information sharing portal that will have geo-referenced biodiversity information, including existing and proposed protected areas, areas outside protected areas that have been noted as being critical for endemic, threatened and other notable species or threatened habitats. This site will be developed based on information from researchers from Universities in Sri Lanka and abroad as well as other information sources (such as the IUCN Redlist site, IBAT alliance etc.). Appropriate partnerships will be developed with national and international organizations to ensure that most up-to –date information is shared. Long term financial plan to maintain and update this site will be also developed. It is expected that the decision-making system backed by appropriate information on biodiversity status will help move harmful development investment away from ESAs. Such decision support system will build on global biodiversity conservation priority sites already identified and mapped through platforms such as the Integrated Biodiversity Assessment Tool (IBAT)16. The project will ensure that this tool is developed with strong involvement of relevant national institutions such as the National Science Foundation. The project will ensure that lessons from other relevant projects such as the GEF Cross Cutting Capacity for Natural Resources Management and Disaster Risk Management are considered whilst developing this tool.

140. Outcome 2: Biodiversity-Friendly ESA Management Operationalized For Long Term Integrity and Resilience Ensured At Two Sites in the Kala Oya Region

141. The project will work on achieving a number of results through two Outputs at both Kala Wewa and Puttalam sites. These are described below.

142. Output 3: Institutional capacities for biodiversity friendly land-use planning, implementation and compliance at Kala Wewa and Wilpattu ESAs

143. Under this Output, four key results will be achieved. These include:

VII. *Result 10: Two ESAs under management with inter-sectoral partnership and quantifiable biodiversity conservation targets:* The project will assist the Government to establish District Facilitation Committees at Anuradhapura District level to guide and facilitate activities at Site 1- Kala Wewa, and will also assist the government to establish a district level facilitation committee at Puttalam district. At the sites, local level management committees will also be established at each D.S. Division. The Forest Department's Office in Anuradhapura has been tentatively identified as the focal champion institution for Site 1: Kala Wewa and the Wildlife Office in the North Western Region has been tentatively identified as the focal "champion" institution for Site 2. The primary roles of the District Facilitation Committees will be to

[16] https://www.ibat-alliance.org/ibat-conservation/about

provide policy guidance and technical support to plan and implement site level management plans (including land use plan, sectoral plans and any community level plans) in a holistic and multi-sectoral manner. The Committee will also play an important role in facilitation and the implementation of the sustainable financing plans noted below. The District Facilitation Committee will play a special role in Site 1: Kala Wewa to ensure that the four Division level plans are brought together so that all four divisions can work as one effective ESA. In addition, the Committee will also ensure that ESA actions are not negatively impacted by other development work from around the ESA and that there is coherence between ESA actions and actions outside the ESA. Conflict mitigation will be another key role of this Committee – to ensure that they are resolved through effective dialogue, and negotiations between relevant parties (including inter-institutional issues). The Committee will also have a strong monitoring and evaluation role and will also develop mechanisms to track progress in the implementation of the ESA plans. The Committees will be represented in the National ESA Committee and will seek appropriate guidance from the National Committee and the BDS on relevant matters.

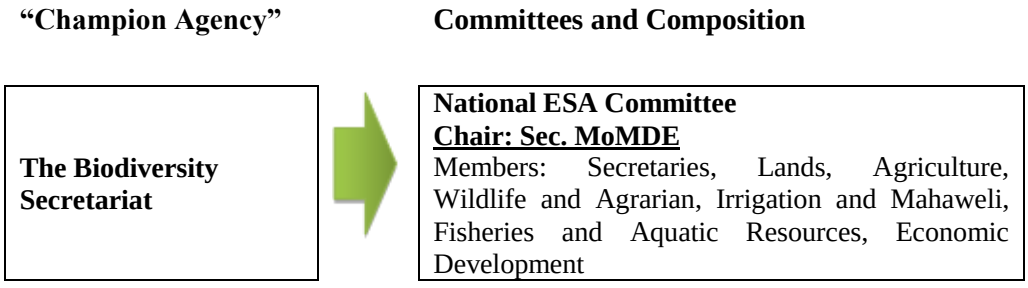
At each of the Division level, intersectoral committees will also be established to facilitate local planning and their implementation. These will be the primary committees to develop local land use plans, to ensure integration of biodiversity concerns into sectoral budgets and to develop sustainable financing plans. These committees will ensure strong community participation- including men and women – in the design and implementation of all activities.

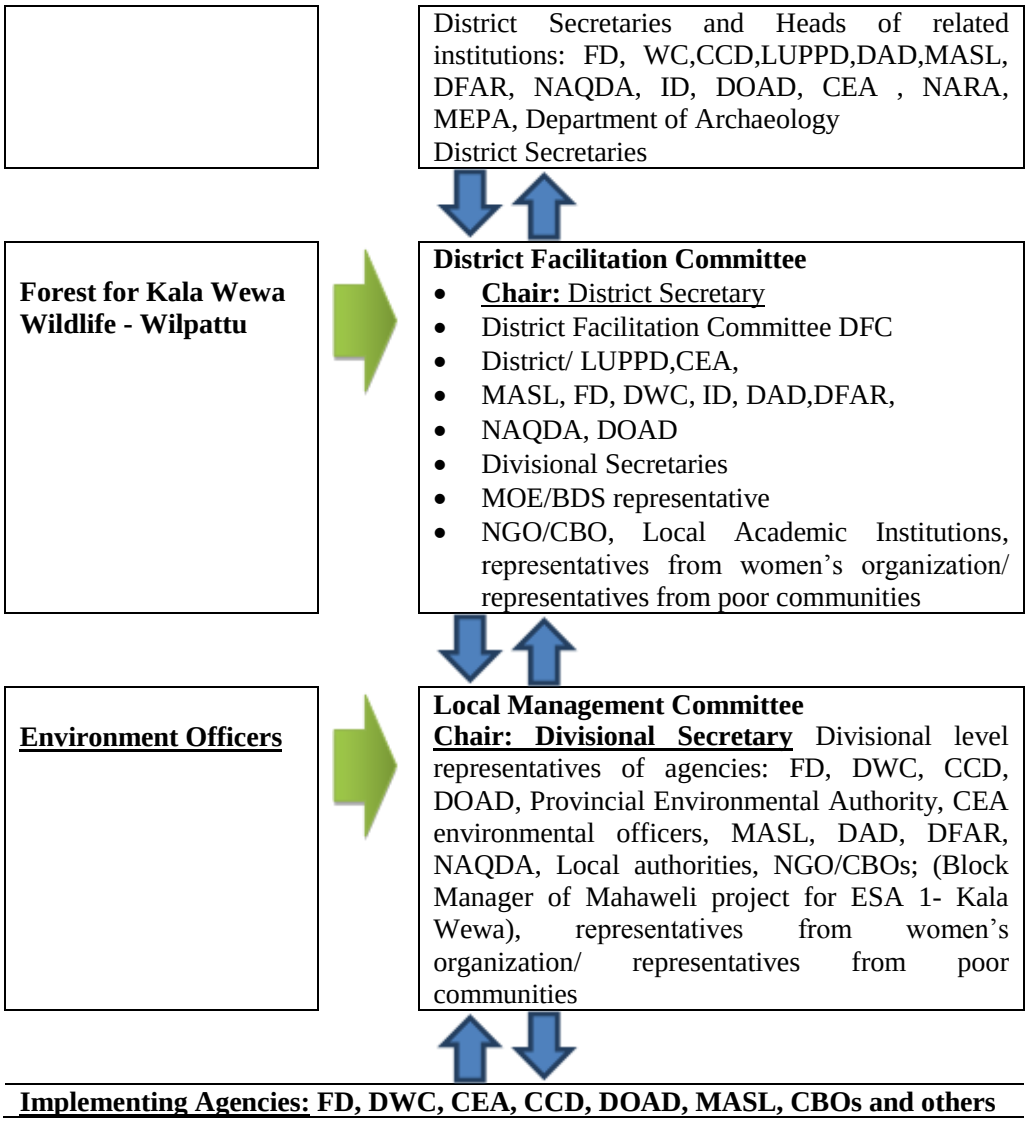
The roles of the Local Management Committees will be to:

- define priority areas for conservation and connectivity; the development of management and zoning plans according to different ecosystems with clearly defined ownership/responsibility (through the planning team);
- formulate permitted actions and the range of specific uses and management regimes appropriate to different site types; monitoring and evaluation of the ESA management actions; specify mechanisms to track, monitor , coordinate and facilitate progress (through the planning team); and
- facilitate resolving the inter-institutional issues.
- seek guidance from district, or NSC for issues that need to be resolved at that level.

144. The project will raise the awareness and capacities of all the Committee members at District and Local Committees on the biodiversity values in each ESA and their links to human wellbeing and local development and build appropriate capacities, built on capacity needs assessments. The project will also strengthen the capacities of the "champion" institutions identified at each sites to act as Secretariat for such committees and to organize regular meetings of the committees to provide appropriate guidance, and to undertake reviews and to develop and implement action plans. The capacity building activities will focus on issues of landscape level biodiversity conservation oriented land use planning, ecosystems and species management, environmental services enhancement through ecosystems management and integration of social, economic and environmental concerns (including climate change) into their plans and actions.

Figure 4: Institutional Arrangements for ESA Management from National to Local Levels





145. ESA land use plans will be prepared at Division level for biodiversity-friendly matrix of land uses and natural resource management for habitat connectivity, integrity and resilience through technical teams and endorsed by local government, communities and experts; and the district and national ESA committees. The technical teams responsible for land use planning under leadership of LUPPD will be trained on land use planning and integration of biodiversity concerns through the use of both scientific and participatory and bottom up approaches. It is expected that such landuse planning exercises will lead to management and zoning prescriptions, including : a) notification / gazettal of highly sensitive areas of significant biodiversity significance; b) management of production activities in key ecological corridors; and rehabilitation of critically degraded areas c) integration of biodiversity considerations into the operations of key economic sectors (agriculture, forestry, tourism, infrastructure); d) emplaced enforcement systems – strengthened compliance monitoring; penalties, surveillance and prosecution to deter malfeasance. Annex 4 of this document presents some recommendations on the involvement of different sectors in landuse planning, as well as some principles, guidelines and recommended steps for such planning. The project will ensure that the plans take into consideration the provincial biodiversity conservation plans being developed by the Biodiversity Secretariat. The planning exercise will be facilitated by the Local Management Committees (LMC) under the chairmanship of the Divisional Secretaries. Community participation and the other stakeholders such as local NGOs and CBOs will be promoted during landuse planning and special consideration and attention will be given to fully consult women and marginalized groups in this exercise (including separate consultations with local women). At the district level, the plans of the DS division will be integrated into one plan ensuring that the plan is in agreement with the district development plans and policies. In

addition, local officers such as Grama Niladaris, Public Health Inspectors, Samurdhi officers, Representative from Pradheeya Sabha (local political leaders), CBO, Community members, and other relevant officers will also be involved in such planning. Local biodiversity experts from Universities situation in the region will also be involved in such planning.

146. Implementation of the land use plan will be done through the Local Management Committee established for the site. Strong extension support system will be introduced to guide land users to adopt sustainable resource management practices on their lands to enhance BD benefits. Planning exercise will establish a package of incentives such as providing of planting material at subsidized rates, as appropriate, for restoration of degraded communal lands, for example. Appropriate capacity building programs will follow for communities to ensure follow up of the land use plan within the ESA (please see below). A committee comprising government officials and community members will monitor the community compliance of regulations introduced by the CEA under gazette notification declaring the ESA. These regulations will be improved through community consultation in a participatory manner during the project implementation for later enforcement. Sector-specific biodiversity-plans compatible with land use / seascape plans will also be developed leading to effective integration of biodiversity considerations into production practices, and will be reviewed by site level management committees, district committees as well as the national steering committee. Necessary capacity building and awareness programmes will have been implemented for the relevant staff to enable them to mainstream biodiversity conservation into their plans based on the site level land use plans- particularly for Agriculture, Forestry, Fisheries, and Water resources management (irrigation) sectors. The focus of such mainstreaming activities will be so that each sector's budgets and actions fully internalize the land use plans developed, and within each sector their actions or actions they promote to households locally are biodiversity friendly. The sector's extension support systems will be strengthened so that they are able to guide land users to adopt biodiversity-friendly practices, enabling farmers to implement resource management practices – through appropriate incentives/ disincentives for example, on agriculture and fisheries management. Through this result, the sectors will also be able to advocate up to District and national levels to obtain necessary technical support – such as through their own agency's biodiversity experts (e.g. agro-biodiversity experts from Ministry level) or through the Biodiversity Secretariat, involve other national experts to help, advise and guide their actions. As an integral part of such planning will be also to factor in issues such as population growth of both humans and wildlife (particularly elephants), as well as likely impacts of climate change, as well as development plans prepared at national, provincial and district levels (particularly for infrastructure programmes such as roads, irrigation etc.) so that the plans can consider these as appropriate. In this, the local land use planning units will also seek inputs and guidance from these higher levels as required. Such plans will ensure that there are no off-site negative impacts through implementation of such plans (see Annex on Environmental and Social Safeguards).

147. *Result 11: Increased stakeholders' support and capacities to implement land use/ seascape plans for conservation* The project will support the development of locally appropriate integrated training and extension modules for farmers, fisher folks, producers and local decision-makers developed and delivered in local languages to promote community level planning, implementation and monitoring of ecosystem integrity. Such training will, as far as possible, involve training of local technical staff as training of trainers, so that they are themselves able to deliver such training to local target groups. Special attention will be given to women to be trainers and to receive training. Currently 27 schools in Anuradhapura District are being supported to implement environmental awareness activities involving 1268 students in Environmental Pioneer Programme and 916 in Eco Club program. Similarly, 32 schools in Puttalam are being supported, involving 857 students in Environmental Pioneer Programme. The Environmental Pioneer Program involves children over and above Grade 6, while the eco club program is for children below Grade 5.

148. At least 2300 people will be trained, based on their training needs assessment, including:

I. At least 900 technical staff from forest, wildlife, agriculture, coast, fisheries, landuse planning- this will include training modules for extension agents, resulting in more effective

and participatory delivery of extension services and the incorporation into extension messages of biodiversity issues. The experiences of implementing these training will feed into the design of the national guidelines on integration of biodiversity into sectors noted under Outcome 1. It is expected that draft guidelines will be developed first at the national level, and used to test and train local level staff, and then further refine the national sectoral guidance.

II. 300 administrative staff from District Sec, PC/ DS/ Divisional Sec/ Local Authorities/ Grama Niladhari and other village level staff
III. 1000 local community members (500 men and 500 women) from CBOs/ local NGOs
IV. 50 local journalists on reporting on environmental issues – representing print, radio and television journalists. They will be encouraged to cover and report on stories from the ESA so as to enhance public profile of ESAs locally and nationally. The capacity building will focus on both journalists at the two ESA sites as well as from Colombo.
V. 50 School teachers linked to school eco-clubs to act as facilitators in schools – in at least 35 schools (including both sites) will be targeted to support general awareness raising and conservation actions by school children.
VI. At least 20 women's organizations will also be trained and involved in ESA management activities.

149. In addition, the project will also facilitate cross-information and lessons sharing between community representatives, local leaders and government staff between sites 1 and 2 on the planning and implementation of ESAs to foster sharing of experiences and lessons. National level policy makers from the ESA committee will be encouraged to attend such sharing workshops so that there are exchanges of ideas and experiences from local to national level as well.

The project will also support the publication of posters, pamphlets and other relevant publications in local languages to promote biodiversity values at the two ESAs.

150. *Result 12: Sustainable financing available for ESAs:* Two long term financing plans – one for each ESA will be developed to ensure sustainability of the project approach and interventions beyond project end. This will include a mix of approaches such as re-alignment and increase in existing government budgetary resources, raising additional funds from innovative approaches such as public-private partnerships, attracting CSR spending of private companies operating in or near the ESA regions); b) supporting strong business development and capacity development for local community based enterprises so that livelihood improvement efforts are sustained post project. The project will build partnerships with government poverty alleviation programmes and others from the very beginning of the project to ensure that many actions can continued to be supported through such long term programmes (please also see Sustainability under section later in this document). The project will also support identification of possible payment for ecosystems mechanisms for sustainable financing of ESAs. In addition, the project will work with the relevant sectors to ensure that their annual work plans/ budgets allow for biodiversity conservation related activities and by the end of the project, it is expected that there will be at least 25% increase in allocation of sectoral budgets towards the implementation of the ESA plans.

151. Output 4: Ecosystems Management and Restoration at ESAs

152. Under this Output, the following three results will be achieved:

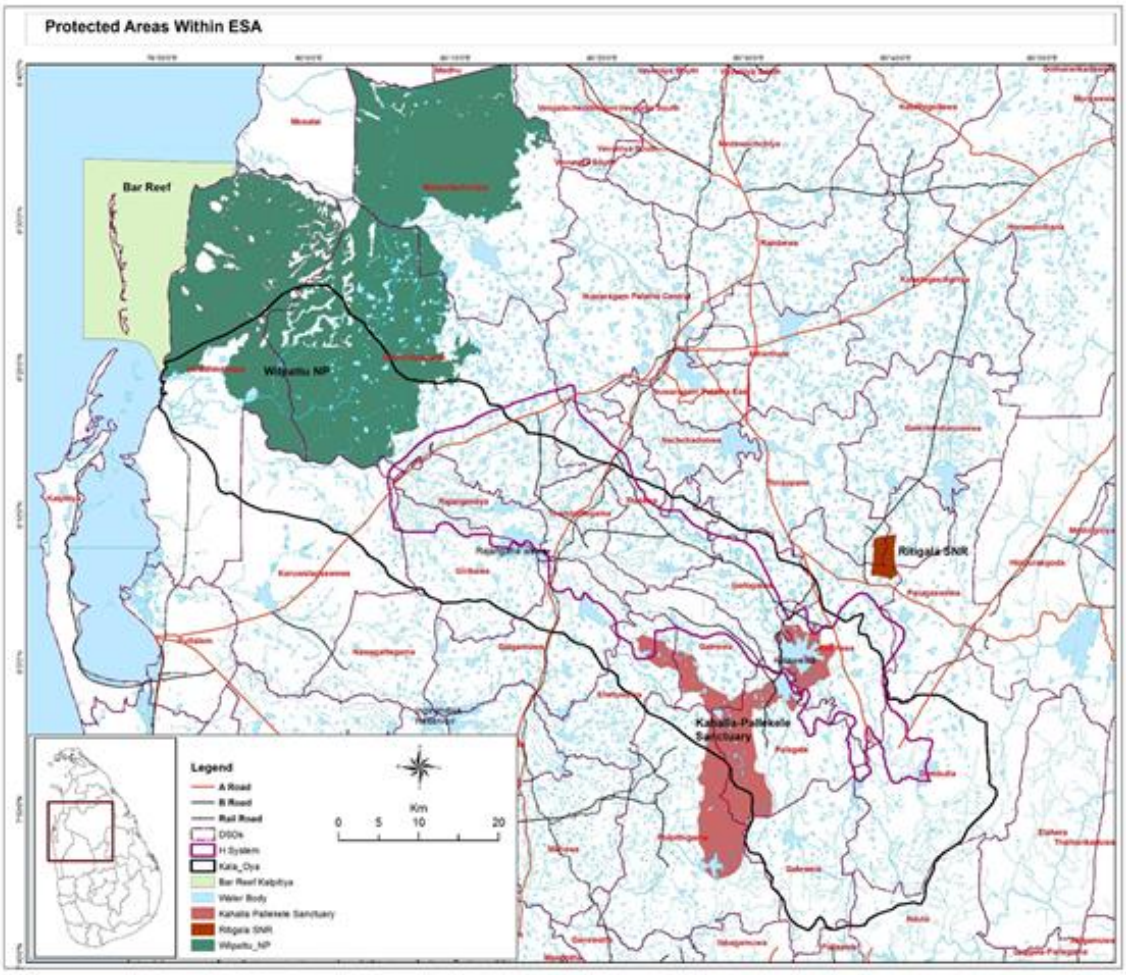
I. Result 13 protected areas management integrated with wider landscapes/ seascapes to minimize threats from outside PA and to mitigate land and resource use conflicts

The proposed ESAs include all of the Bar Reef Sanctuary (30600 ha); and significant parts of Wilpattu National Park (total area 131667 ha, and 18900 ha falling within the proposed ESA2) and Kahalla Pallekele (total area 21690 ha, and around 13900 ha falling within the proposed ESA1). ESA 1 also includes a small portion of Ritigala Strict Nature Reserve (total area 1528 ha, with approximately 820 ha falling within ESA 1). The reason only parts of some protected areas are included in the proposed ESA is that the unit for project site has been based on the

government's standard unit for development planning and coordination, which is at Division Level.

153. The project will support the DWC staff at Wilpattu NP, Kahalla-Pallekele, and the Bar Reef Sanctuaries to effectively mitigate threats emanating from outside the PA. Project support will include capacity building, creation of buffer zone (bar reef), management plan updating to include issues of human wildlife conflict and better linkages between wider landscape management and protected areas.

Figure 5: Location of protected areas within the ESA landscape/ seascape



154. One of the key focus of the project support will be to assist the DWC to upgrade the Kahalla-Pallekele Wildlife Reserve and the Bar Reef Sanctuary to National Park status. The change in the status of these two protected areas will mean that unlike now, there will be a dedicated Warden assigned to each of these sites to manage these more effectively (currently there are no site specific managers for Sanctuaries in Sri Lanka). The upgrading of the legal status of these protected areas will also mean that land use conversion and other biodiversity harming activities within these will have stronger punishments, and hence would have a better chance of their protection. The current status is that poorly regulated tourism (resulting in coral damage, oil spills), overfishing and over harvesting of aquarium fish are causing severe concerns for biodiversity at the Bar Reef, and ongoing land conversion and overharvest of trees for timber and fuelwood is a major concern for Kahalla- Pellekele. There are also plans to develop tourism in Kalpitiya Peninsula, which is close to the Bar Reef sanctuary. Unless these plans are done in a biodiversity friendly manner, the Bar Reef may come under additional threats in near future. The project will support the DWC to work with the tourism sector to promote biodiversity friendly tourism in the Bar Reef area.

155. Secondly, the project will also strengthen the capacity of DWC to effectively undertake marine conservation activities at the coastal and marine areas in ESA 2- Wilpattu. Currently, the DWC has extremely limited capacities to plan and implement marine conservation activities. This is specifically for the Bar Reef Sanctuary and the DWC (legal custodian) has to enforce this measure in coordination with the Department of Fisheries. A major focus of capacity building will be to manage the marine areas so that they are more resilient in the context of climate change.

156. Key support to strengthen protected areas management will also be to better manage water resources within the protected areas so that they can continue to provide water to wildlife during very dry seasons. There are often water shortages during the driest periods for wildlife and this is expected to be exacerbated by climate change. The DWC has embarked on de-silting old tanks to increase water availability at different parts of Wilpattu NP, for example, and the project will assist the DWC so that such sites are selected strategically and a sustainable approach of tank restoration is developed.

157. At both sites, the project will strengthen the DWC's work on mitigating human elephant conflicts in the region through updating and strengthening their regional plans so that the plan is a more participatory and inter-sectorally "owned". The project will work with particularly affected communities to develop community action plans – including inter-community early warning systems, plantation of biological fences etc. The project will further support habitat improvement activities for elephants as prescribed by the Management Plans for the PAs.

II. Result 14: Critical biodiversity habitats outside protected areas under effective management regimes within the ESA for habitat connectivity, integrity and resilience

158. As noted earlier in the document, the Forest Department has been historically set up for timber and non-timber forest products harvesting. The shift in DFC objectives from production forestry to conservation forestry started in late 1970s (1978 with the complete halt to large scale Plywood timber extraction from Sinharaja and then KDN (Kanneliya- Dediyagala – Nakiyadeniya) forest areas in the lowland rain forest areas. In 1990, moratorium on commercial logging in ALL natural forests was declared. However, this biodiversity orientation is far from optimal. Currently, the priority activities of the forestry sector is on boundary demarcation and surveillance against illegal forest product harvesting (trees, animals, minerals, plants and non-timber forest products). There is limited capacity of local staff to implement forest management actions to maximize biodiversity conservation impacts.

159. The project will support the Forest Department to work with local communities to restore degraded patches of forests in some critical areas (such as in the landscape that links Ritigala SNR with Kahalla Pallekele Sanctuary). The project will also strengthen government and local community actions to effectively conserve isolated hills that have been shown to harbour many important species – including endemic species. Management options such as community forestry etc. will be used to ensure that these results are achieved.

160. Increasing areas under riparian forests and forests in river floodplains will be a major focus of the project. Such activities will not only help maintain connectivity between currently isolated forest patches and larger protected areas, they will also be important habitats for threatened animals such as the fishing cats. In addition, vegetation in such riparian zones and floodplains have also been considered important to remove significant amounts of nitrogen and sediments from water[17], thereby reducing water pollution. Loss of important riparian tree species (such as "Kumbuk" trees – *Terminalia arjuna*) have been a concern in this region – as they have been indiscriminately felled for timber and other uses. This has also been suggested to impact birds' nesting habitats. Streams and stream reservations have been encroached in many areas in the ESA and these areas have been exploited for sand mining and brick making. The deepening of stream beds due to sand mining has caused serious negative impacts on hydrological behaviour in surrounding areas causing rapid lowering of ground water levels.

161. Sustainable management and restoration of ecosystems in the catchments of selected tanks will also be another focus of the project. The project will assist local government and communities to work to address deforestation and unsustainable agriculture around and upstream of tanks to reduce soil erosion, and loss of habitats. Key focus will be the catchment areas of Kala Wewa, and at least two smaller cascading tank systems will be selected to demonstrate micro-catchment management and restoration. Project will support rehabilitation of cascade systems by improving the "dead storage" of minor tanks in the cascades, by assisting de-silting of tanks, demarcation of tank beds and the catchment and boundary marking, an adoption of appropriate catchment conservation programmes through community participation and removal of illegal

[17] http://www.pgis.lk/watersym/docs/2013_proceedings.pdf

occupants in Minor tank cascade systems in site 1 outside the Mahaweli project area. The project will also build local capacities to restore tanks following more ecologically friendly methods without affecting bio diversity as opposed to current approach of haphazard digging out all sediments, which can not only lead to increased water percolation losses but also cause damages to important species of amphibians, fish and insects, while controlling spread of invasive species and restore appropriate tree and other plant species around tanks. These actions are expected to restore and lead to better management of at least 17500 ha of critical habitats, including:

I. At least 8000 ha of critical forest habitats and landscapes restored and/ or effectively managed to
II. At least 7000 ha of catchments and tank cascade landscapes under effective restoration and management regimes
III. At least 1000 ha of critical coastal habitats (mangroves, salt marsh, riverine/ riparian forests) outside protected areas under effective management at Wilpattu ESA
IV. At least 1500 ha of isolated hill forests in ESA 1

162. The project will build on the government's programmes on forestry, which include the following:

I. **Community forestry**: This is facilitated on allocated lands supported by FD and coordinated by CBOs (Farmer Organizations). Here the farmers are encouraged to cultivate annual crops /cash crops along with permanent tree species. The planting materials of tree species are provided by the FD with relevant advice on silvicultural practices. Recommended payments are made to the farmers to compensate their manual inputs.
II. **Enrichment Forestry:** Tank catchments and river reservations are targeted. Woodlot areas of different sizes are allocated to CBOs / farmers with financial assistance (from Rs. 5,000 – 10,000 per plot) and technical advice.
III. **Assisted Natural Regeneration:** This is implemented in areas in which the canopy cover is less than 10%. Therefore abandoned chena areas will be the most suitable to be regenerated. Farmers are required to protect and manage these **Protection Woodlots**. No tree planting is involved, but the farmers are required to do selective cleaning (thorny shrubs and vines) / weeding (invasive weeds) to encourage spontaneous growth of forest tree species. Compensations are paid to the farmers for their contribution (DFO/Anuradhapura, DFO/ Puttalam).

163. The project will ensure that these activities are planned and implemented taking into consideration climate change impacts, so that not only are the planned activities more resilient to predicted climate change impacts (such as selection of species for restoration that are more resilient to fluctuations in temperatures and water availability); but that these actions will enhance ecosystem services in the context of climate change impacts (particularly on water provision, given the likely seasonal availabilities).

III. *Result 15: At least 25,000 ha of agro-ecosystems brought under biodiversity compatible production practices within ESAs (including paddy fields, slash and burn land and homesteads/ home gardens)* – the project will work with agriculture department, MASL (site 1) and farmers' organizations to promote organic farming, integrated pest management, and to increase multi-purpose trees species (especially indigenous spices) on homesteads.This will be achieved through a two-pronged approach of making available the technical know-how and relevant skills enhancement, while also ensuring that incentives and dis-incentives applicable to these economic sectors are designed and implemented. Incentives such as promoting sustainable resource management and use through branding/ certification for environmentally sustainable/ organic production operations (organic traditional varieties of rice) b) implementation support to select activities identified especially those at the community level (e.g. ecotourism). The current project will link with such government schemes to ensure that required funding is made available to community groups and other partners for similar ventures. Thus, effective coordination and better decision-making will lead to better planning, coordination and enforcement of key strategies and

actions agreed in the ESA management action plan. The project will also ensure that activities promoted are "climate smart".

164. The project will ensure that households implement activities such as composting and compost usage for agriculture using domestic animal manure, adopt integrated pest management and water saving irrigation management practices, as opposed to being over reliant on inorganic agrochemicals and wastage of water. High amounts of pesticides, herbicides, chemical fertilizer used – particularly in paddy farming have been noted in this region. Studies on the water quality of the KOB conducted by EML (2005) showed four key water quality related problems in irrigated agriculture in the KOB: Salinity, Water infiltration rate, Ion toxicity and Excessive nutrients. Middle Kala Oya Basin is the most populated and extensively cultivated where most of water quality deterioration has been noted, and this is where ESA 1 (Kala Wewa) is located. A strong relation between the fertilizer application and the nutrient increase in water has been observed in the region – particularly phosphate and nitrate concentrations in water throughout the year across the KOB, especially in the middle basin where the Site 1 is located. High phosphorous contents have been linked to algal blooms in tanks and lagoons, which have severe negative impacts on the lagoon biodiversity.

165. The project will promote positive incentives to change farmer behaviours and actions. For example, the project will also promote a move towards organic rice farming and link the producers to the market so that they can receive an additional premium for organic rice (currently, organic rice and traditional varieties in Sri Lanka is almost twice as expensive as non-organically farmed rice). Market linkages will be fostered with national supermarket chains/ organic rice buying companies. Traditional rice varieties such as Suwandel, Kalu-heeneti, Maa-wee, Pachchaperumal, Kurulu-thuda, Rath-del, Madathawalu, Hetada-wee etc. have been rising in demand in Sri Lanka for their alleged health benefits. In home gardens and private woodlots, households will be supported to plant species in partnership with Divi Neguma and Community Forestry Projects of the government.

166. The practice of chena cultivation in the project sites have been reported to be on the decline due government's enforcement of legislations, which has prevented conversion of natural forests into chena cultivation. However, in most areas, existing open scrublands that were previously under chena have been continued to be used as chena. Currently at least 2000 households are involved in this (in both sites?). Currently estimated 12800 ha of chena lands (rain fed upland cultivation in degraded natural forests outside protected areas) in site 1 and 1300 ha in site 2. The key issues in these cultivation are that they are cropped using single species of crops, without any soil conservation practices and high usage of agro-chemicals are also reported on such lands. Use of single species of crops, without any soil conservation practices and high usage of agro-chemicals are reported to be key issues associated with such cultivation.

167. The project will support government efforts to regulate chena cultivation – ensuring prevention of chena cultivation in high biodiversity areas identified through the ESA land use plans and with agreements with local communities. The project will also ensure that government's soil conservation programmes are targeted to sites that are most relevant to biodiversity conservation and that the farmers adopt a more agroforestry type chena cultivation as opposed to current practices of wholesale land clearance. However, the conservation of traditional crop varieties and their wild relatives is of extreme importance for future utilization in crop breeding programmes. The project will also work with the District's programmes to rehabilitate degraded chena lands through community forestry (25,000 ha have been earmarked for the same purpose), so that these activities fully consider biodiversity mainstreaming. The project will develop strong partnerships with the Department of Divi Neguma Development, which is a household economy development unit of the Ministry of economic Development, and utilize their well-developed extension network at village, district and divisional levels.

168. RISK AND Mitigation strategy for risks

169. Project risks will be continually monitored throughout project implementation stages and appropriate strategies will be developed for their mitigation. During the project preparation a

series of consultation and studies were undertaken that has led to adjustments in the risk assessment (Table 9).

170. In addition, a number of risks and possible mitigation measures on environmental and social aspects have been noted in Annex 8: Environmental and Social Screening Summary.

Table 9: Risks and proposed mitigation measures

Risk	Rating	Mitigation strategy
Institutionalization of ESA will be hindered by complexity of institutional roles, and interests at national, provincial, district and local levels	Medium	The project has placed particularly high importance on ensuring that there are national, district and local mechanisms to support inter-sectoral promotion of ESAs, that build on Sri Lanka's institutional and policy context, and that they are functionally linked. As many government, community and private sector institutions will be operating at the landscape level, their cooperation and coordination will be difficult especially when the project is focusing at first at a site level conservation effort (at a PA). Unless proper legal and institutional mechanisms are in place and incentives, this may not become sustainable in the long run. Particular challenges are expected to occur at site 1, where there is a more complex mix of ecosystems and the ESA covers 4 Divisions. As most planning is done at this level, integration of the four Divisional Plans as one ESA plan will require particularly strong political and technical support. The project will ensure that the coordination mechanism is built on current processes and that there are strong local incentives to work at landscape level. In addition, ensuring strong integration of local plans – facilitated by the District Facilitation Committees, with additional help and guidance from the National ESA Committee - will be a particular focus by the project. The strong focus of the project on building appropriate institutional mechanisms from national to local level is also expected to mitigate the risk that many sectoral plans are top down and unless there are clear links between the central level to the ground level, the landscape level plans at local level may be impacted negatively unless all levels are aware of each other's' plans and ideas.
The development of policy and regulatory framework for ESA may not receive adequate support	Medium	The project will employ a highly consultative approach for development of the regulatory framework drawing on reviews and inputs from various stakeholders (government, private sector, communities, local bodies and academicians) to ensure feasibility and acceptability of the proposed strategy and policy. The proposed cross-sectoral national institutional mechanism will become the vehicle for optimizing dialogue among stakeholders. Given that Sri Lanka has a large number of laws, the project focus will be to use existing legal basis for the development of a national policy and strategy on ESA as well as a national scale up plan.
Local communities will not participate in ESA management because they fear this will lead to reduced access to use of natural resources.	Medium to high	The design, transparency and accountability through participatory management planning process will provide a means of addressing prejudices and genuine obstacles to protecting and sustainably managing natural resources. ESA sites will be identified and clear boundaries defined to provide for a variety of uses raging from strict protection of biodiversity to its sustainable use based on conservation principles. Additionally, the project will develop strategies with local communities to address human wildlife conflicts, to ensure that there are positive incentives to farmers to practice biodiversity friendly farming/ fisheries etc. by linking their environmentally produced products to be marketed nationally.
Climate change impacts may endanger project benefits	Low to medium	Climate change impacts on biodiversity as a result of rising temperature, changing patterns in the seasonal distribution of rainfall and sea level rise are relevant. Major changes in biomass and species composition have been identified as possible impacts of climate change although there has been very limited research on potential impacts of global climate change on biodiversity in the country. However, experience in other parts of the world shows that local climate change and acidification of rainwater could pose a major threat to the survival of threatened endemic species such as herpetofauna and land snails, which have a very restricted distribution. Other studies have shown the critical humidity dependence of *Philautus* eggs, rendering them extremely vulnerable to global warming. Forest dieback is also felt to be a possible result of air pollution and acid rain. Another concern is the issue of connectivity, as wet tropical forests occur in small blocks and are further isolated from each other human modified areas with a high population density. In addition climate change can increase the frequency of extreme climatic events such as tropical cyclones etc. which in turn will have adverse impacts on forests and wildlife, wetlands, coastal and marine systems and agricultural systems. With regard to the coastal areas, as an island nation, Sri Lanka is vulnerable to the risk of sea level rise and increased frequency of storms that can bring major impacts on coastal biodiversity. The many threats that these areas face as described in the earlier section can be expected to make them more potentially vulnerable to climate change. Some of possible impacts of climate change on the coastal areas include: the loss of coastal land due to sea level rise and increased coastal erosion due to more frequent and intense storm surges; adverse impacts on mangroves, coral reefs and sea grass beds which could affect marine organisms for which they form important breeding grounds; possible altered species composition and distribution, communities, and ecosystem services; changes in salinity of lagoons and estuaries, warming and ocean acidification with impacts on coral reefs, other shell forming organisms and associated species and fish stocks. The project proposes to address this risk in a number of ways: building a better understanding on the impacts of climate change on biodiversity and the functional integrity of ESAs– this will to support better understanding of the vulnerability to and the potential impacts of climate change on terrestrial and

		costal biodiversity; the project approach will secure and protect forest areas that deserve high conservation priority and ensure connectivity; and the focus on land use and sectoral planning will allow the project to insist on mainstreaming adaptation to climate change into sectoral plans especially in relation to sectors such as the coastal and agriculture sector which are most vulnerable to climate change.

1.5 EXPECTED GLOBAL, NATIONAL AND LOCAL BENEFITS

171. Though Sri Lanka's protected area system already covers some 28% of the total land area, under the baseline scenario, most of its biodiversity will continue to remain outside protected areas. Areas outside protected areas will continue to face accelerated development pressures that will not only lead to a decline in Sri Lanka's biodiversity wealth therein, but it will also negatively impact biodiversity inside protected areas – as many species regularly migrate between protected areas and the wider landscapes, and threats from outside protected areas (such as pollution) also have off-site impacts on protected areas. Whilst the need to halt the loss and degradation of biodiversity values outside protected areas has been recognized in Sri Lanka's national policies and strategies (particularly the NBSAP), under the current baseline, the country will continue to lack systematic national approach to identify particularly important landscapes outside protected areas and to plan and implement biodiversity friendly land use and other production practices through multi-sectoral approach. Actions to mainstream biodiversity in production sectors will remain sporadic, geographically scattered (without any coherent planning) and will remain poorly funded. Government institutions whose primary mandates are to promote agriculture, industries, settlements and other infrastructure management will continue to have low understanding on Sri Lanka's national policies and international conservation commitments, and will thus have low support for mainstreaming biodiversity conservation issues into their own actions.

172. Under Component 1, this project will build capacity of the Ministry of Mahaweli Development and Environment to engage with other sectors to develop policies and plans to identify particularly high priority geographic landscapes (called "Environmentally Sensitive Areas") outside protected areas and to work with multiple sectors to ensure that such areas' biodiversity are safeguarded. The project will also assist the Ministry to develop a National Policy and Strategy on ESA and a National ESA Scale up Plan and undertake additional actions to build capacities of key stakeholders at the national level to ensure strong inter-sectoral support for ESA establishment and management. Without GEF support, such actions may not be implemented with the requisite urgency or with appropriate learning from international conservation experiences and best practices.

173. The key approach this project is promoting to mainstream biodiversity at ESAs is through land use planning. Under the baseline, land use planning will continue to occur throughout Sri Lanka with limited considerations for biodiversity issues. As such plans are made for administrative areas, in most instances, they will have inadequate consideration for adjoining administrative areas – either in terms of development impacts or for biodiversity impacts. This project will build on the current system of land use planning to address these. It will support a system of reviewing, integrating and adapting such plans at a higher (district) level to ensure harmony and synergies of such plans for ecosystem services, biodiversity conservation and development impacts.

174. Under the baseline scenario, the trajectory of production activities in the pilot ESAs will likely to continue, causing significant loss and degradation of global biodiversity values. The existing planning and policy framework, as well as institutional arrangements will continue to remain inadequate for addressing biodiversity conservation issues from a landscape perspective and to ensure that community resource use and livelihoods more sustainable. Under the baseline, poor and marginalized communities will continue to have extremely limited access to and influence over land use plans. This project will ensure that there are appropriate mechanisms to ensure that they can be involved in land use decision making and any negative impacts of people's wellbeing as a result of land use plan enforcement are equitably mitigated. These will be demonstrated at two sites in Kala Oya Region under Component 2 of this project and appropriate sectoral and intersectoral knowledge and capacity building will be done both through both Components 1 and 2 of this project.

175. With GEF support, the project will ensure catalytic and sustainable mechanisms to mobilize national and local actions by production sectors and other stakeholders to overcome existing barriers and introduce new strategies and technologies that will improve the condition of natural resources and increase the stability, integrity and productivity at environmentally sensitive areas – focusing on global biodiversity conservation. It will promote participatory natural resource planning and management strategy, involving stakeholders from different government sectors, community level institutions, and the private sector in a systematic way through landuse planning. It will enhance capacities of these sectors to work with each other, as well as to integrate conservation considerations within each of their own sectors/ actions. In doing so, the project will deliver a number of global, national and local benefits -both directly and indirectly.

176. By strengthening national capacities under project's Outcome 1: Enabling Framework to Designate and Manage Environmentally Sensitive Areas, the project is expected to contribute to conservation and sustainable use of biodiversity in all critical areas of the country. It is estimated that under the scale up plan that the project will support, at least 5% of land and sea areas will be identified as potential ESAs, which will greatly enhance the status of globally important ecosystems and species found in Sri Lanka.

177. By working at the Kala Oya Region under Component 2, the project will build capacities of government, community and other institutions (such as schools) to undertake conservation action over landscape and seascape of over 102,500 ha. This is the total area of Puttalam and Anuradhapura Districts, and this influence will be made through the capacity building of District Facilitation Committees and by raising awareness and capacities of other stakeholders, as outlined under Outcome 2 of this project. Both these districts harbour ecosystems and species that are considered of global importance. Increased local awareness and support for global biodiversity conservation for the long term through the project's national and local awareness and capacity building actions (such as reduced human wildlife conflicts), will undoubtedly contribute further to global biodiversity conservation efforts.

178. The direct global environmental benefits of this project will arise from the formal establishment of two highly biodiversity rich covering total at least 200,000 ha as Environmentally Sensitive Areas and brought under conservation management, resulting in reduced threats to globally important biodiversity there, through increased ecosystem connectivity and resilience. The ESA landscapes include globally important ecosystems such as coral reefs, mangroves, and coastal areas that are important for many globally threatened migratory turtle species; and forests and wetlands that are also important for migratory birds.

179. The project's following work will have direct positive impacts on species of global significance:

    I. 160,000 ha of terrestrial areas, within which the project aims to restore 15500 ha of degraded forest and catchments, and influence production practices on at least 25000 ha of agro ecosystems. Further, the project will strengthen the management of terrestrial protected areas covering at least 50,000 ha[18]. Such actions are expected to lead to conservation of globally important ecosystems and species – such as globally endangered species such as elephants, Sri Lanka Toque Monkey, Sri Lanka purple-faced Langur, fishing cats, Sri Lanka red slender loris and several other globally threatened species. Additionally, these actions will also lead to better connectivity between forests/ protected areas in the region beyond the proposed ESA boundaries. In particular, the populations of these three globally threatened species will be used as indicators to measure conservation impacts of the project:

        - *Elephas maximus :* this species has been selected, as its population maintenance will indicate good management of wider landscape as well as effective mitigation of human wildlife conflict.

[18] This includes parts of Wilpattu National Park and parts of Kahalle Pellekele Sanctuary. The total area of Wilpattu NP is 131667 ha and Kahalle Pallekele is 21690 ha.

- *Panthera pardus:* This predator species has been selected as another indicator species as healthy population of this species will indicate that the prey species that it depends on are available, and that there is an overall effective management of habitats where this species and its prey species are found.
- *Sousa chinensis:* The species will indicate the good condition of lagoon where it occurs as well as the fact that fishermen are practicing sustainable fishery.
- *Dugong dugon:* This is the largest herbivorous mammal that is strictly marine. Sea grasses are their main feed. Sea grasses are phanerogamous plants in the families Potamogetonaceae and Hydrocharitaceae and naturally they occur in meadows in shallow sea in association with lagoons and bays. Population health of sea grasses and dugongs is interdependent and therefore dugongs are an indicator of the status of the sea grass habitats. .

II. 40,000 ha of marine areas, including effective conservation of the Bar Reef Sanctuary covering around 30,000 ha and 10,000 ha of lagoon and sea area, and further 500 ha of critical coastal habitats (mangroves, salt marsh). This is expected to lead to reduced threats to globally important coral ecosystems in the Bar Reef, which has globally threatened coral species and several globally threatened marine species. Example of globally threatened species that are found in the marine coastal areas include Critically Endangered Hawksbill turtles, Endangered Green Turtle, and several species of globally Vulnerable coral species such as *Acropora aculeus, Acropora donai, Pavona decussata, Pavona venosa, Pahcyserus rugosa, Euphyllia ancora, Catalaphylla jardinei* and *Turbinaria peltata*.

III. Mitigation of human-wildlife conflict at the project sites through its landscape level land use planning and through multi-sectoral approach to address this issue is also expected to significantly reduce mortalities of globally threatened species such as the Asian Elephants.

180. Direct national and local benefits of the projects will include:

I. Soil and water conservation: The socioeconomic benefits of this project at local level will be improved productivity of agricultural lands through better land and water management practices that are expected to halt or reduce soil degradation. The project supported activities are expected to have strong benefits to local communities through maintenance/ conservation of water sources (tanks, and rivers/ streams' banks conservation), and through better management of vegetation cover and soil management (to retain water). Furthermore, the support by the project to convert a number of farmers to organic farming and for others to better use eco-friendly agriculture (such as integrated pest management) are expected to lead to improved soil and water quality and overall increases in human and ecosystem health.

II. Increased ecosystem services and products from sustainable forest management – The project's support to effectively manage forests and restore forest areas is expected to maintain and enhance forest products that local communities depend on – including non-timber forest products (such as traditional medicinal plants) and even fuel wood. Sustainable harvesting will ensure that communities will continue to benefit from such services from the forests for the long term. The maintenance and restoration of mangroves and other coastal ecosystems are also expected to maintain breeding grounds for crabs and fish species that are economically important for fisher households as well. Restoration of tank catchments and rehabilitation of minor tanks proposed in this project will also further increase in water availability to both humans and wildlife, and ensure more climate resilient supply of water.

III. **Increased national and capacities, and better linkages between national and local levels:** The project's capacity building actions at the national level is expected to increase the capacities of over 2500 government staff, local communities, local leaders, school children, teachers on biodiversity values at their ESAs. Additionally, households from local communities will benefit from awareness raising and "learning-by-doing" on

sustainable forestry and agriculture management. The project is also supporting the market linkages of environmentally friendly products so that farmers can increase their incomes. Biodiversity friendly businesses under implementation in the two ESAs will also result in improved socio-economic situation for these households.

IV. **Mitigation of human-wildlife conflic**t at the project sites through its landscape level land use planning and through multi-sectoral approach to address this issue is also expected to significantly reduce mortalities of humans and build adequate systems of compensation for affected households thereby securing people's lives and livelihoods.

1.6 COST EFFECTIVENESS

181. Cost effectiveness of the project has been considered from a qualitative aspect as guided by the GEF Council's guidance on assessing project cost-effectiveness (Cost Effectiveness Analysis in GEF Projects, GEF/C.25/11, and April 29, 2005). The project's approach of mainstreaming biodiversity conservation at targeted landscapes by fully bringing on board a wide range of stakeholders with different sectoral objectives to work together at multiple government institutional levels (national to local) is considered more cost effective than the following alternatives:

I.Pursuing conservation activities purely through protected areas: Focusing purely on protected areas expansion and management is not considered the most cost effective approach for the kind of multi-land use sites this project is proposing to work at. Firstly, removal of existing households and farming systems in the landscape to expand protected areas or to make their primary objective as conservation would be significantly more costly (if not impractical) approach. Secondly, only focusing on protected areas has already been shown to be ineffective for conservation of large mammals like elephants in Sri Lanka, as these animals move in and out of protected areas. Thus, a purely protected area focused attempts at conservation would mean that investments would not lead to necessarily overall positive impacts on elephant populations, for example, and thus money invested could actually be a waste. Thirdly, exclusive focus on protected areas would not be able to mitigate threats to protected areas that emanate from the surrounding landscapes – such a river pollution or destruction of breeding grounds of fish and animals outside the protected areas (such as mangroves – and the coral reefs).

II.Pursuing mainstreaming objectives by only focusing on selected sectors: An alternative approach to purely protected areas focused approach would be to select a few primary production sectors and to pursue mainstreaming of biodiversity into these sectors. However, given the complex inter-linkages between different sectors, as in the case of pursuing biodiversity conservation only through protected areas, it would not be possible to mitigate threats from outside the selected sectors. For instance, if the project were to focus on only mainstreaming in agriculture sector, ongoing destruction of forests may actually undermine work on the agriculture sector – by increasing upstream erosion (which may destroy agricultural lands as well), or by reducing water availability during dry season (deforestation leading to reduced water provisioning services).

182. The project's approach of taking a multi-stakeholder approach and taking overall landuse planning as the entry point, followed by reinforcing the plan's implementation through sectoral plans of all relevant sectors at the local level with strong community involvement – in conjunction with PA management, is expected to yield more cost effectiveness as duplication of efforts and investments are avoided, and any contradictory actions by different sectors in the same landscape is also avoided. This will also allow more cross-learning from each other to avoid repeating any mistakes and to accelerate the dissemination of approaches that work for people and the environment, leading to more cost-effectiveness. This third option is considered to be the most cost-effective deployment of GEF resources because it will ensure that investments in the conservation sector are not compromised by threats emanating outside. Furthermore, the cross-sectoral approach is considered more likely to succeed in bringing competing interests to the table and beginning the dialogue necessary to conserve the biodiversity values at the sites. The project's approach of providing technical support and

extension through existing government agency structures to local households and communities is also expected to be more cost effective than developing new systems.

1.7 SUSTAINABILITY

183. The project has considered four key aspects of sustainability, which are described below:

I. **Institutional sustainability:** The project builds primarily upon existing institutional structure and mandates of the government agencies and as per expressed policies of the government. Component 1 of the project, dealing with national policies and capacities will be primarily co-funded by the government and will be utilizing existing processes and government structures. Thus, the proposed activities under this component are expected to be institutionally relevant and sustainable. Under Component 2 of the project, too, most of the project actions will be built on existing government mechanisms. Thus no extra investments are envisaged to maintain the institutional structures by the government post project completion. Securing the institutional sustainability of the project's impacts will be promoted by developing the technical capacities at relevant levels, in all the participating institutions. Capacity building is a major thrust of the project, so both short-term and long-term plans to strengthen technical expertise and capability for all involved, have been recommended.

II. **Financial sustainability:** Financial sustainability will be primarily the concern under Component 2 of the project, where the actions will focus on the selected landscapes. The project will be supporting landscape level actions to test, demonstrate and disseminate appropriate techniques. Whilst doing this, the project will ensure that such approaches are not very investment heavy so that such actions can be continued by local communities and partners with their own resources. For this, the project will develop a very clear strategy and action plan during project implementation as well as a long term plan. Every step will be taken to avoid free handing out of resources so that there are no dependencies built on external inputs amongst the local stakeholders. The financial sustainability of the project's impacts will be further assured by the project's focus on incentive-based approach to conservation that will attempt to change production practices by linking them to markets such as for sustainably produced agricultural products, ecotourism etc. The ideal situation is to develop the business aspect of the project into activities so that in the long-term, these same activities will become self-supporting and independent of external funding. The project will also be building its activities on ongoing government investments – and will be focusing on changing the investment paradigm, which should further aid financial sustainability of the project supported actions. Further, the project will also assist in the development of sustainable financing plan that will build on leveraging existing and additional resources from the government, communities, the private sector and others.

III. **Social sustainability**: The capacity building activities, networking and continuous field-level presence by the management agencies (state, private and civil society) will help achieve social sustainability of the project. The build-up of trust through dialogues and stakeholder consultations, and stakeholder mobilization through capacity building by the project will assist in achieving this long-term objective. The strong focus on building on local knowledge, capacities and incentives and ensuring gender equity are expected to lead to social sustainability. The ESSP in Annex 8 has presented analysis of potential negative social impacts of the project and has recommended potential mitigation methods. It is expected that the project implementation team will review this and incorporate appropriate measures to ensure that no negative impacts are caused on social and economic conditions of people, and especially women and other marginalized groups from the very start of the project. This will be continuously monitored and assessed throughout the project period. Focus on gender balanced/ gender equitable approach in the project's actions are also expected to strengthen social sustainability. Building conflict resolution mechanisms will be a key part of institutional strengthening of the project, as well as to mitigate human-wildlife conflicts. These are expected to strengthen social relevance and sustainability of the project supported actions.

IV. **Environmental Sustainability:** The primary purpose of this project is to achieve environmental sustainability in Sri Lanka. The project implementation will strive to achieve environmental

sustainability at the target sites but will, in addition, also ensure that there are no off-site displacement of threats (such as protecting forests at target sites displaces harvesting in non-target sites). The environmental sustainability of the project's impacts will be assured by supporting the incorporation of environmental considerations into the location and design of activities at all levels. This includes landscape-level ecological processes, the location of vulnerable globally-significant biodiversity and the ecological characteristics and regenerative capacity of the resources as well as considerations of climate change impacts.

1.8 REPLICABILITY

184. The project has been designed to ensure that its actions can be widely replicated within Sri Lanka. The cost-effectiveness, as well as institutional, social and environment sustainability mentioned above are expected to further aid the replication of the project's approaches. Component 1 has been designed in such a way that it will aid nation-wide replication of the ESA approach through a national policy and action plan as well as other outputs dealing with capacity building and communication. The project will develop a clear communication strategy to ensure that project activities, impacts and lessons learnt are recorded and disseminated widely within the country to generate a bottoms-up demand for similar activities throughout the country. The involvement of NGOs and the private sector in the project activities are also expected to lead to further replication of the project's actions in the country. This approach is expected to be nationally implemented, and thus the approach will be replicated through the national government mechanisms.

PART III: STRATEGIC RESULTS FRAMEWORK

This project will contribute to achieving the following Country Programme Outcome as defined in the CPAP for Sri Lanka (2013-2017): Outcome 4: Policies, programmes and capacities to ensure environmental sustainability, address climate change mitigation and adaptation, and to reduce disaster risks in place at national, sub-national and community
Country Programme Outcome Indicators: Number of national and sectoral policies approved by government CPAP Output: 4.2 Government agencies, community groups and private sector are equipped with mechanisms and practices to promote sustainable use of natural resources, biodiversity conservation and adaptation to climate change
Primary applicable Key Environment and Sustainable Development Key Result Area: 1. Mainstreaming environment and energy
Applicable GEF Strategic Objective and Program: Strategic Objective 2 – To mainstream biodiversity in production landscapes/ seascapes and sectors; Strategic Priority 4 – Strengthening the policy and regulatory frameworks for mainstreaming biodiversity
Applicable GEF Expected Outcomes: Conservation and sustainable use of biodiversity incorporated in the productive landscape

Project Strategy	**Indicator**	**Baseline**	End of Project Target	Means of verification	Risks and assumptions
This project will strengthen the country's ability to *safeguard biodiversity outside protected areas in especially designated Environmentally Sensitive Areas through a new land use governance framework.* Such areas will be vehicles for safeguarding globally significant biodiversity on production lands of high conservation value. The project will demonstrate two Environmentally Sensitive Area (ESA) establishment and management at Kala Oya Region, where land use planning and allocation will be configured to balance conservation and development objectives to protect major habitat blocks and ensure structural and functional connectivity across the landscape. The project will ensure that the indirect impacts of development are adequately understood and factored into land use and local development decision making.					
Objective: To operationalize Environment Sensitive Areas (ESAs) as a mechanism for mainstreaming biodiversity management into development in areas of high conservation significance	1. % of land area identified nationally for Environmentally Sensitive Area designation	0	At least 5% of Sri Lanka's land area	National Scale Up plan	Risk: Focus given to ESAs may result in generating a perception that other areas or landscapes are not important for biodiversity and may fall on the "blind spot" during the process of conducting EIAs or SEAs -- potentially locating major developments in such areas beyond capacity and to also compensate for lost land area as a result of ESA designation, thereby still causing negative impacts overall.
	2. Populations of globally threatened species within Wilpattu and Kala Wewa ESAs[19]	• *Elephas maximus (600)* • *Panthera pardus (113)* • *Sousa chinensis (TBA)* • *Dugong dugon (TBA)*	• *Elephas maximus (600)* • *Panthera pardus (113)* • *Sousa chinensis*	Project's survey reports at midterm and end of project	Climate change or other severe climatic or other impacts do not impact the sites and the species therein during the project period

[19] Please see section on global benefits for the reasons these species have been selected

			(TBAdded) • *Dugong dugon (TBA)*		
	3. Areas of critical habitats under management within Wilpattu and Kala Wewa ESAs for connectivity and resilience	Extent of: • Salt Marsh: 250 ha • Mangrove forests: 620 ha • Riverine forests: 400ha • Moist Mixed Evergreen Forest: 2000 ha • Scrub on floodplains: 100ha	100% maintenance	Project's survey reports at midterm and end of project	
OUTCOME 1. National Enabling Framework Strengthened to Designate and Manage Environmentally Sensitive Areas (ESA)	1. Appropriate Policy and legislative mechanisms developed to guide identification, declaration management, conflict mitigation and monitoring of ESAs	• Environmental Protection Act and several other Acts and policies exist that support conservation • Policy on human elephant conflict exists	1. National Policy and Strategy on ESA 2. National ESA Scale Up Plan 3. Updated policy to address human wildlife conflicts	Government notification	Policy, strategy and national scale up plan will have cross sectoral support and inputs – including provincial government support
	2. Number of inter-sectoral plans approved and financed by cross-sectoral National ESA Committee	0	4. At least two ESA land use plans 5. At least 10 annual work plans (one for each pilot ESA) approved by national ESA Committee, along with joint policy guidance for ESA management	Minutes of meetings	• Different sectoral agencies will understand the benefits of participating in the national steering committee and will send senior level staff to participate • MoMDE will continue to prioritize biodiversity conservation, in the context of several competing demands on the time of its senior policy makers • National experts will be willingly and voluntarily contribute to additional demands on their time imposed by the needs of ESA
	3. Capacity of the Biodiversity	Baseline UNDP Capacity Scorecard	6. 20% increase in capacity scorecard from baseline	Report outlining changes in scores	The Biodiversity Secretariat will be able to have effective linkages to all levels of

	Secretariat to act as the national lead agency to promote effective ESA implementation	**Strategic Area of Support** / **Initial Evaluation** 1. Capacity to conceptualize and formulate policies, legislations, strategies and programmes — 3 2. Capacity to implement policies, legislation, strategies and programmes — 16 3. Capacity to engage and build consensus among all stakeholders — 4 4. Capacity to mobilize information and knowledge — 2 5. Capacity to monitor, evaluate, report and learn — 4			at mid-term and project end	government institutions, and particularly at the provincial, district and local levels
	4. Decision Support System available to practitioners for managing multiple land uses in ESAs	None exist	7. National guideline to integrate biodiversity conservation and sustainable use into land use planning 8. Guides available in Sinhala, Tamil and English to aid field practitioners on how to integrate biodiversity conservation into sectoral plans and actions, (agriculture, forestry, coastal development and tourism) 9. Online integrated biodiversity assessment tool available to identify biodiversity hotspots nationwide, building on national and international data		Publication and their availability in hard copies and online	• Guideline use will be promoted by all relevant sectors to their field staff • Use of guidelines will not be constrained by financial and other political constraints on the ground • Universities and researchers will willingly contribute their knowledge and information to input on, and update biodiversity information on the web • The information on web will not be used by people to target unsustainable harvesting (poaching) of threatened species
OUTCOME 2: Biodiversity-friendly ESA management for	5. Area under management with inter-sectoral	0	10. 200,000 ha		Project Report	Different sectoral agencies will understand the benefits of participating in the district and local committees and

long term integrity and resilience ensured at two sites in the Kala Oya Region	partnership and quantifiable biodiversity conservation targets				will be able to effectively work with the national steering committee and the experts groups/Stakeholders see the plans as restrictive rather than enabling due to its focus on biodiversity and a precautionary approach towards normal development
	6. Stakeholders' capacities to implement ESA's land use/ seascape plans for conservation	Limited training and awareness such as through Environmental Pioneer Programme and Eco Clubs	11. General awareness amongst school children, peri urban dwellers, and local leaders increased by 100% over baseline 12. At least 2300 people trained, based on their training needs assessment[20] 13. At least 20 women's development organizations' capacities increased and involved in ESA management activities	Awareness assessments Project reports	Capacity development activities can be institutionalized locally and nationally
	7. Increase in funding available to support biodiversity friendly ESA management activities	At least 150,000 USD per annum being invested in promoting organic farming and in protected areas management	14. At least 20% increase in funding from baseline by various sectors compatible with land use / seascape plans (at least 4 sectoral plans):Agriculture, Forestry, Fisheries, Water resources management Two long term financing plans – one for each ESA endorsed by all relevant parties	Project Report	Assumption: Government will not be able to provide all required resources for ESA management in near future, necessitating for other sources of funds and resources

[20] At least 900 technical staff from forest, wildlife, agriculture, coast, fisheries, landuse planning ; 300 administrative staff from District Sec, PC/ DS/ Divisional Sec/ Local Authorities/ Grama Niladhari and other village level staff ; 1000 local community members (500 men and 500 women) from CBOs/ local NGOs; 50 local journalists; 50 School teachers linked to school ecoclubs to act as facilitators in schools

	8. Area of protected areas whose management is integrated with wider landscapes/ seascapes to minimize threats from outside PA and to mitigate land and resource use conflicts at ESAs	0	15. 160,000 ha:	Project reports	There will be high level of support from DWC for new approach to conservation at landscape beyond traditional PA boundaries
	9. Critical biodiversity habitats outside protected areas under effective management regimes within the ESA for habitat connectivity, integrity and resilience	25000 ha under community forestry	16. Additional 25500 ha of habitats under effective protection, rehabilitation and management regimes[21]	Project report	Local communities will support such actions and are able to benefit from them directly
	10. Extent of land brought under biodiversity compatible agricultural production practices	340 ha under organic farming, and IPM	17. 25,000 ha (including paddy, chena land and homesteads)	Records from sectoral agency	Biodiversity compatible land use / seascape use will not adversely affect livelihoods of local communities, and in many cases will benefit them more.

Output 1: Effective national policies on conservation and sustainable management of ESAs

Output 2: National stakeholders' capacities to support planning, implementation and monitoring of ESAs

Output 3: Institutional capacities for biodiversity friendly land-use planning, implementation and compliance at Kala Wewa and Wilpattu ESAs

Output 4: Ecosystems Management and Restoration at ESAs

[21] At least 7000 ha of critical habitats and landscapes restored and/ or effectively managed; At least 6000 ha of forests, catchments and tank cascade landscapes under effective restoration and management regimes; At least 1000 ha of critical coastal habitats (mangroves, salt marsh, riverine forests) outside protected areas under effective management at Wilpatthu ESA; At least 1500 ha of isolated hills better conserved at Site 1 that harbour globally and nationally threatened species; At least 10,000 ha of seascape managed as buffer area for marine protected area at Bar Reef

PART IV: Total Budget and Workplan

Award ID:	00079607	Project ID:	00089554
Award Title:	Environmentally Sensitive Area Conservation		
BUSINESS UNIT	LKA10		
PROJECT TITLE	**Enhancing Biodiversity Conservation and Sustenance of Ecosystem services in Environmentally Sensitive Areas**		
PIMS#	5165		
IMPLEMENTING PARTNER (EXECUTING AGENCY)	Ministry of Mahaweli Development and Environment (MoMDE)		

GEF OUTCOME/ATLAS ACTIVITY	Responsible Party/ Implementing agent	Fund ID	Donor Name	ATLAS Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
OUTCOME 1:	MOE	62000	GEF	71200	International Consultants	42000	6000	4500	4500	1500	58500	A
				71300	Local Consultants	12480	12480	12480	12480	12480	62400	B
				75700	Workshop and trainings	25000	20000	15000	13000	5000	78000	C
				71600	Travel	6600	6600	6600	6600	6600	33000	D
				74200	Audio-visual & Print Production Costs	10000	40000	30000	15000	4000	99000	E
				72100	Contractual Services		125000				125000	F
				72200	Equipment	6000		3600			9600	G
Total Budget Outcome 1						**102080**	**210080**	**72180**	**51580**	**29580**	**465500**	**465500**
OUTCOME 2:	MOE	62000	GEF	71200	International Consultants	24000	24000	48000	24000	13500	133500	H
				71300	Local Consultants	57520	57520	57520	57520	57520	287600	I
				75700	Workshop and trainings	12000	12000	12000	12000	12000	60000	J
				71600	Travel	17000	17000	17000	17000	17000	85000	K
				74200	Audio-visual & Print Production Costs	5000	5000	5000	5000	5000	25000	L
				72100	Contractual Services	286000	286000	286000	286000	286000	1430000	M
				72200	Equipment	8000	5000	4400			17400	N
	Total Budget Outcome 2					**409520**	**406520**	**429920**	**401520**	**391020**	**2038500**	
OUTCOME 3: Project Management	MOE	62000	GEF	71200	International Consultants		6000			9000	15000	O
				71300	Local Consultant	12000	14000	12000	12000	15000	65000	P

				71600	Travel	4000	7505	1500	1500	4000	18505	Q
				72100	Contractual Services	1000	1000	1000	1000	1000	5000	R
				72200	Equipment & Furniture	4500	500	500	500	500	6500	S
				74599	Cost-recovery charges-Bills	**2537**	**2537**	**2537**	**2537**	**2537**	12685	T
	Total Management					24037	31542	17537	17537	32037	122690	
	Total					**535637**	**648142**	**519637**	**470637**	**452637**	**2626690**	

Budget Notes:

See Budget Note:	Budget Notes
A	Environmental Policy and Law Expert for 12 weeks@3000 USD/ week; Biodiversity Mainstreaming Expert 7.5 weeks at 3000USD/ week
B	National Institutional Capacity Building Expert 650 USD/ week for 24 weeks ; 72 weeks of National Landscape Conservation Expert at 650 Usd/ week
C	Consultations and workshops on development of policy, strategy and scale up plan, and follow up dissemination: 16000USD (national and local throughout Sri Lanka); Workshops on updating human wildlife conflict policy and follow up dissemination workshop (12000USD); Workshops and trainings related to development of guidelines and tools preparation, testing, demonstration and dissemination workshops and training 30000USD (at national and sub-national levels); capacity building of national ESA committee members to learn from sites etc. 10,000USD and capacity needs based capacity development of BDS 10,000USD)
D	Travel and per diems for national and international consultants; travel for National ESA members/ BDS/ etc. to visit proposed ESA sites and to travel to other parts of Sri Lanka to learn about mainstreaming actions to input into national policy , strategy and action plan
E	Audiovisual and publications on national policy, strategy and scale up plan in local languages and English ; technical guidelines on mainstreaming biodiversity into sectors publication and mainstreaming guidelines in landuse planning; and posters/ pamphlets, videos production on ESA by Biodiversity Secretariat on ESA
F	To prepare online integrated biodiversity assessment tool in local languages
G	To purchase laptops and other equipment as needed to test training materials / guidelines etc.
H	International Biodiversity Mainstreaming Expert 22.5 weeks at 3000USD/ week ; international sustainable financing Expert for 6 weeks at 3000 USD/ week; international Expert on protected areas (marine) landscape management for 16 weeks@ 3000 USD per week
I	Two National experts on incentive based mainstreaming biodiversity in agro ecosystems (one for each ESA site) 480 weeks@350 per week; national landscape conservation experts for 168 weeks@650USD per week; 16 weeks of national institutional capacity building expert at 650USD per week
J	Stakeholder consultations for preparation and dissemination of ESA land use plans: 30000 USD; workshops/ consultations on sustainable financing 10000USD; workshops and trainings on mainstreaming biodiversity into different sectors 20000USD
K	Travel for consultants including international travel/ per diems/ local travel etc.
L	Publications of long term land use plans, sustainable financing plans, posters/ publications in local languages

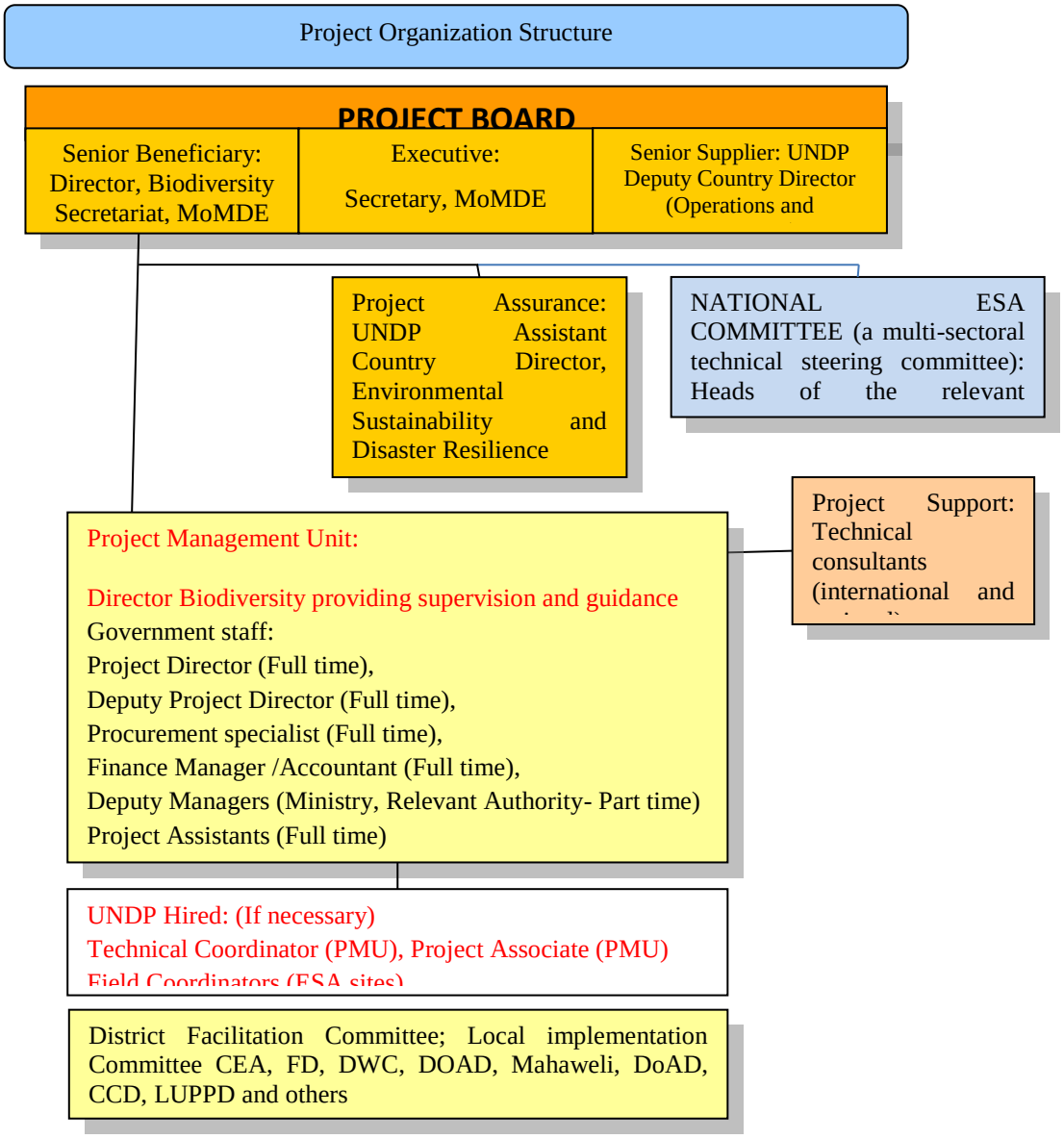
M	Contracts to implement landscape conservation actions on protected areas, on ecosystems management outside protected areas and to implement actions on agroecosystems management ; contractual services related to capacity building and awareness (Please see Annex 9 for details)
N	To support miscellaneous equipment for land use planning etc. such as GPS equipment
O	Mid term review consultant for 2 weeks @ 3000 USD per week; terminal evaluator for 3 weeks @3000 USD per week
P	Mid term and terminal review local consultants: 5 weeks at 1000 USD per week; Project assistant at 250 USD per week for 240 weeks
Q	Travel for external evaluators (including international and local + per diems)
R	External project audit
S	Laptops, and other miscellaneous office equipment
T	UNDP cross charges for procurement services (including consultants) – please see Annex 10 for details

PART V: MANAGEMENT ARRANGEMENTS

185. **Implementation modality**

186. The project will be implemented over a period of five years, starting in 2015. The project will be nationally executed under UNDP's National Implementation Modality (NIM) according to the Standard Basic Assistance Agreement between UNDP and the Government of Sri Lanka, and the Country Programme Action Plan (CPAP).

187. The lead Executing Agency for this Project will be the Ministry of Mahaweli Development and Environment, which has the governmental mandate to coordinate the formulation and implementation of land degradation policies and related programmes and strategies.



188. PROJECT BOARD

189. The Project Board (*Steering Committee*) will be established at the inception of the project. The composition of this is presented above. The Board will meet at least quarterly and it will be convened and supported logistically by the Biodiversity Secretariat. The Board may meet more frequently, if required. This will be chaired by the Secretary to the MoMDE, and will provide overall guidance for the project throughout its implementation. Specifically the Board will be responsible for: (i) achieving co-ordination among the various government agencies; (ii) guiding the program implementation process to ensure alignment with national and local statutory planning processes and sustainable resource use and conservation policies, plans and conservation strategies; (iii) ensuring that activities are fully integrated between the other relevant developmental initiatives; (iv) overseeing the work being carried out by the different agencies, monitoring progress and approving plans and reports; (v) overseeing the financial management and production of financial reports; (vi) monitor the effectiveness of project implementation; and (vii) providing guidance to district and local committees as needed.

190. The proceedings of all Project Board meetings will be recorded and shared amongst all the members and also with the District Facilitation Committees and the Local Management Committees. The Board will undertake annual project reviews (or as otherwise deemed necessary by the Project Board) – including the review of annual Project Implementation Review (PIR) sheets that the project has to submit to UNDP and the GEF. In case a consensus cannot be reached, final decision shall rest with the UNDP Resident Representative, in consultation with MoMDE. The extent to which the UNDP Programme Officer will be delegated quality assurance responsibilities will be determined during the first Project Board meeting and will be indicated in writing.

191. The **Secretary of the Ministry of Environment (MoMDE)** will serve as the **Executive** and will have ultimate responsibility for the project, supported by the Senior Beneficiary and Senior Supplier. As part of the responsibilities of the Project Board, the Executive will ensure that the project is focused, throughout the project cycle, on achieving the results noted in the project's Strategic Results Framework in the most innovative, cost effective, catalytic and replicable manner. The Board will provide strategic guidance to the project and will ensure that risks are being tracked and mitigated as effectively as possible. The Senior Executive will be responsible for approving and signing the Annual Work Plan (AWP) for the following year on behalf of the Implementing Partner as well as approving and signing the Combined Delivery Report (CDR) at the end of the year The Senior Executive will be responsible for delegating authority in writing to a Responsible Officer within the Ministry for signature of the Funding Authorization and Certificate of Expenditures (FACE) form as well as any other project related documentation.

192. The **UNDP Deputy Country Director (Programme)** will represent the interests of those designing and developing the project deliverables and providing project resources. The primary function of the Senior Supplier will be to provide guidance regarding the technical feasibility of the project. The Senior Supplier will have authority to commit or acquire supplier resources as required. As part of the responsibilities of the Project Board, Senior Supplier will advise on the selection of the strategy, design and methods to carry out project activities. Quality assurance and oversight roles include ensuring that standards defined for the project are met and used to good effect, monitoring potential changes and their impact on the quality of deliverables and monitoring and risks in project implementation. Within the context of the Project Board, the Senior Supplier will also be responsible for ensuring that progress towards outputs remains consistent, contributing the supplier's perspective and opinions on implementing any proposed changes and arbitrating on and ensuring resolution of input/resource related priorities or conflicts.

193. **The Director/Biodiversity Secretariat of the MoMDE** will serve as the Senior Beneficiary with the primary function of ensuring the realization of project results from the perspective of project beneficiaries. As part of the responsibilities for the Project Board, the Senior Beneficiary will be

responsible for ensuring that specification of the Beneficiary's needs are accurate, complete and unambiguous, implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards identified targets, impact of potential changes is evaluated from the beneficiary point of view, risks to the beneficiaries are frequently monitored, providing the opinion of beneficiaries of implementation of any proposed changes, and helping to resolve priority conflicts.

194. The Project Director will be responsible for achieving project results. To support the implementation, the **Project Board** will establish a Project Management Unit under the Biodiversity Secretariat. The Project Director, will be primarily responsible for supervision of the project team and its consultants. The PMU team will be led by a full time Technical Coordinator hired by UNDP. The Director and the Technical Coordinator is responsible for project implementation, financial management, administration, monitoring and reporting. This includes providing direction and guidance to the project implementing partners on the groups and the District and Local Committees and will be the responsible party for liaising with the Project Board and UNDP Programme Officer to monitor the direction and integrity of the project.

195. In addition, a full time Deputy Project Director, Procurement specialist, finance manager and project assistants and part time Deputy Managers will hired by government to support the PMU as needed. The PMU team will assist in planning activities, preparing annual work plans and provide logistical support to organising events and liaising with any suppliers to mobilize goods and services to support project activities; monitoring financial resources and accounting to ensure accuracy and reliability of financial reports; managing requests for the provision of financial resources using advance of funds, direct payments, or reimbursement using the FACE (Fund Authorization and Certificate of Expenditures); managing, monitoring and updating the project risks as initially identified and submitting new risks to the Project Board for consideration and decision on possible actions; managing issues and requests for change by maintaining an Issues Log; preparing the Project Quarterly Progress, Annual and Final Reports and submitting reports to the Project Board and UNDP Programme Officer and managing and facilitating transfer of project deliverables, documents, files, equipment and materials to national beneficiaries at project closure.

196. The Technical Coordinator will act as the Secretary of the Project Board and will set up meeting dates and venue in consultation with the Executive, prepare the meeting agenda in consultation with Board members, implementing agencies, and district and local committees. S/he will share the agenda with the Board members, prepare and share meeting minutes, and will also ensure that the Board members all have relevant information on time and a follow up plan on the Board's recommendations is made and is implemented. The TC will be responsible for managing the realization of project results through activities as specified in a jointly (UNDP-project) agreed annual work plan and within specified time and cost. The Technical Coordinator will be assisted by two field coordinators for the ESA Sites.

197. As delegated by the Project Board, **the designated UNDP Programme Officer, supported by the UNDP Programme Associate** will assist the Project Board in its role of **Project Assurance**. In undertaking this role, the UNDP Programme Officer will take action to address as well as alert the Project Board of issues with regard to project quality assurance such as alignment with the overall Country Programme, availability of funds, observation of UNDP rules and regulations and adherence to Project Board decisions. The UNDP Programme Officer will assist the Project Board by performing some oversight activities, such as periodic monitoring visits and "spot checks," ensuring that revisions are managed in line with the required procedures, RMG monitoring and reporting requirements and standards are maintained, Project output(s) and activities, including description and quality criteria, risks and issues are properly recorded and are regularly updated in Atlas. The UNDP Programme Officer will also assist the Project Board in ensuring that the project

follows the approved plans, meets planned targets as well as project Quarterly Progress Reports are prepared and submitted on time, and according to standards. During project closure, the UNDP Programme Officer will work to ensure that the project is operationally closed in Atlas, financial transactions are in Atlas based on final accounting of expenditures and project accounts are closed and status set in Atlas accordingly.

198. The Assurance role will support the NPSC by carrying out objective and independent project oversight and monitoring functions. During the implementation of the project, this role ensures (through periodic monitoring, assessment and evaluations) that appropriate project management milestones are managed and completed. The assurance will:

- Ensure that funds are made available to the project;
- Ensure the project is making progress towards intended outputs;
- Perform regular monitoring activities, such as periodic monitoring visits and spot checks;
- Ensure that resources entrusted to UNDP are utilized appropriately;
- Ensure that critical project information is monitored and updated
- Ensure that financial reports are submitted to UNDP on time, and that combined delivery reports are prepared and submitted to the NPSC and SPSC;
- Ensure that risks are properly identified, managed, and monitored on regular basis.

199. An independent external review may be conducted through resource persons/groups to feed into this process. The UNDP official responsible for the Project Assurance and the PM will meet on a quarterly basis to assess progress of the decisions taken in the PSC.

200. Technical assistance: Technical support to project implementation will be provided by a Project Management Committee comprised of technical staff from agencies in the Project Steering Committee. This committee will meet bi-monthly to evaluate project progress, provide technical guidance to ground level implementation issues and monitor project implementation at the pilot ESA sites. Technical guidance is also envisaged from the National expert Committee on Biodiversity, which can be called ad hoc by the Director, BDS to provide specific guidance or advice to implementation.

201. The overall short-term and long-term technical assistance requirement from the project and the terms of reference (TOR) are given in the Annex 6.

202. District Facilitation Committees

I. Assist in the implementation of the management plan of each district,
II. Assist in resolving issues, and coordination and continuous monitoring ;
III. monitoring and evaluation of the ESA management actions;
IV. specify mechanisms to track, monitor , coordinate and facilitate progress;
V. facilitate resolving the inter-institutional issues and ;
VI. seek guidance from Project Board for issues that need to be resolved at that level.

203. Local Management Committee

I. define priority areas for conservation and connectivity; the development of management and zoning plans according to different ecosystems with clearly defined ownership/responsibility;
II. formulate permitted actions and the range of specific uses and management regimes appropriate to different site types; monitoring and evaluation of the ESA management actions; specify mechanisms to track, monitor , coordinate and facilitate progress; and
III. Facilitate resolving the inter-institutional issues.
IV. Seek guidance from district, or NSC for issues that need to be resolved at that level.

204. Financial Procedures

205. Funding for this project is from **GEF** resources with co funding from UNDP and government agencies.

206. Under the Harmonized Cash Transfer system (HACT) introduced by the UN EXCOM Agencies (UNDP, UNICEF, WFP and UNFPA) as part of the UN reform commitment to reduce transaction costs on implementing partners, four modalities of payments are foreseen for nationally implemented projects. They include: 1) Prior to the start of activities against agreed work plan cash transferred (direct cash transfer) to the Treasury, Ministry of Finance and Planning, for forwarding to the Implementing Partner; 2) Reimbursements after completion of eligible activities by the Implementing Partner; 3) Direct payment to vendors or third parties for obligations incurred by the Implementing Partners on the basis of requests signed by the designated official of the Implementing Partner; 4) Direct payments to vendors or third parties for obligations incurred by UN agencies in support of activities agreed with Implementing Partners.

207. In order to receive the funds advanced by UNDP, the Implementing Partner must either: a) Open a bank account, under the name of the project, to be used only for receiving UNDP advances and to make payments of the project; or b).In agreement with UNDP's Programme Manager, identify an existing bank account under the Implementing Partner's name, that would be used solely for the purposes of receiving UNDP advances to the project and making payments with these advances. Under no circumstances will the Direct Cash Transfer Modality be used to advance funds to any individual inside or any entity or individual outside of the Implementing Partner or to any account other than the identified official project bank account. It will be the responsibility of the Project Manager to liaise with the UNDP Programme Associate to prepare a consolidated financial report, in the required format, and provide it to UNDP at regular and necessary intervals.

208. Under the project's national implementation arrangement (NIM) Government guidelines for competitive procurement of goods and services (advertising, tender bidding, evaluation, and approval) in line with international standards will apply for all project-related activities. Upon specific request of the implementing partner UNDP can in line with UNDP procurement policy provide procurement and recruitment services to the implementing partner including:

I. Identification and recruitment of project and programme personnel

II. Identification and facilitation of training activities

III. Procurement of goods and services, including contractual services to implemented agreed field activities

209. As per the letter of agreement between the Government of Sri Lanka and UNDP for the provision of support services signed on 5th July 2002, UNDP shall recover the cost of providing the support services outlined above. A cost recovery rate will be charged for the value of the amount of the contracts of the services to be procured or obtained through UNDP. Charges will also be incurred for all financial transactions processed on behalf of the project by UNDP Finance Unit. The charges will be subject to the Universal Price List used corporately by UNDP to determine costs associated with UNDP administrative services.

210. It will be the responsibility of the beneficiary line ministry or government institution to ensure the settlement of all duties/taxes/levies/Value Added Tax on imported goods and services at the point of clearing from Sri Lanka Customs as well as all VAT and other statutory levies applicable and payable on local procurement of goods and services. The UNDP bears no responsibility whatsoever in the settlement of Government of Sri Lanka duties/taxes/levies/VAT on all imported and local procurement of goods and services.

211. The Implementing Partner will be audited periodically as per the annual audit plan prepared by the government coordinating authority in consultation with the UNDP Sri Lanka. The Implementing

Partner/Ministry of Mahaweli Development and Environment will be responsible for ensuring that all audit requirements are met. Project auditing will follow UNDP Financial Regulations and Rules and applicable audit policies.

212. Agreement on the intellectual property rights and use of logo on the project's deliverables: In order to accord proper acknowledgement to MoMDE, GEF and UNDP for providing funding, logos should appear on all relevant project publications as applicable and adhere to the branding guidelines of the aforementioned agencies.

PART VI: MONITORING AND EVALUATION

213. This sections outlines the principle components of the Monitoring and Evaluation Plan (M&E) and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized in the Project's Inception Report. The Project's Results Framework Matrix, which provides *performance* and *impact* indicators for project implementation along with their corresponding *means of verification*, will be the primary basis for developing the M&E framework. This framework will be developed and finalized during the project's inception phase and will be done within the first three months of the project.

214. Project monitoring and evaluation will be conducted in accordance with established UNDP, GEF and relevant GOS requirements. Financial audit on project will follow UNDP audit policies and UNDP Financial Regulations and Rules.

215. Project Inception

Project's first 3 months will be considered inception phase. A Project Inception Workshop will be held within the first 3 months of project document signature between UNDP and GOS, with the involvement of key stakeholders as outlined in the project implementation structure detailed earlier in the document, and with additional involvement of UNDP-GEF regional/ global technical policy and programme advisors as appropriate, and other stakeholders such as the co-financiers.

216. Internal project team meetings will be organized prior to the inception workshop, as necessary, so that the team is fully aware of the project's Objective/ impacts, Outcomes and Outputs. Such meetings will (i) introduce project staff with the UNDP-GEF team which will support the project during its implementation, namely the UNDP-CO and responsible RCU staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff *vis à vis* the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Review Report (ARR), as well as mid-term and final evaluations. Equally, the Inception Workshop will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephrasing. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase.

217. A project Inception Report will be prepared within the first three months of the project, which will act as a key reference document and will be shared with the project's key stakeholders to formalize various agreements and implementation plans. Draft Inception Report, along with the first AWP, will be presented to stakeholders at an Inception Workshop.

218. The Inception Workshop is crucial to building ownership for the project results and to plan the project's first Annual Work Plan. A fundamental objective of this Inception Workshop will be share the project's first Annual Work Plan (AWP) based on the project's results framework, with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project with wider project stakeholders.

219. The workshop's objectives will include to

I. Ensure full understanding of the project's Results Framework, and the roles, support services and complementary responsibilities of key stakeholders – including the roles, functions, and responsibilities within the project's decision-making structures, reporting and communication lines, and conflict resolution mechanisms.

II. Finalize the full first Annual Work Plan - based on the project results framework and the relevant GEF Tracking Tools, including the indicators, targets and their means of verification, and the assumptions and risks and to outline general work plan for the overall project duration.

III. Finalize Monitoring and Evaluation work plan for the whole project duration – including the budget and schedules of M&E events (and responsible parties)
IV. Finalize financial reporting procedures and obligations, and arrangements for annual audits.
V. Finalize the Schedule of Project Board meetings. Roles and responsibilities of all project organisation structures will be clarified as well. The first Project Board meeting should be held immediately after the Project Inception Workshop.

220. Monitoring responsibilities and events

221. Day-to-day monitoring of implementation progress will be the responsibility of the Project Manager, based on the annual and quarterly work plans, with overall guidance from the Project Director. Project Team members will inform the Project Director and UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

222. **Project Board Meetings:** the Project Board Meetings (PBM) will be the highest policy-level meeting of the parties directly involved in the implementation of a project. At least two PBMs will be organized annually, and more as required. The first such meeting will be held within a week of the Inception Workshop in order to review and approve the first Annual Work Plan. The terminal PBM will be held three months prior to full project end. The terminal PBM will ensure appropriate management responses to Terminal Evaluation and will guide additional issues to ensure sustainability of project actions beyond its formal end. It will guide necessary actions to ensure sustainability of project results, and to ensure lessons learnt are captured and are available for wide dissemination.

223. **Tripartite Review (TPR)** will be an additional tool for annual monitoring of the project and for providing oversight to project and will consist of UNDP, the Project Director and the GEF Operational Focal Point for Sri Lanka. The project will be subject to TPR at least once every year or more frequently if needed. The TPR has the authority to suspend disbursement of funds if project performance benchmarks are not met, based on delivery rates and qualitative assessments of achievements of outputs and will play special role to mitigate any issues arising in project implementation.

224. Reports

225. **Inception Report (IR)**

A Project Inception Report will be finalized immediately following the Inception Workshop. It will include a detailed First Year AWP divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan will include the dates of specific field visits, support missions from the UNDP-CO or the RCU or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the AWP, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months' time-frame. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized, the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document. The final draft version is to be circulated to all stakeholders at least two weeks before the IW. The agreed final project IR will be sent to stakeholders no later than two weeks after the national Inception Workshop. The report will also include indicative work plan for rest of the project period.

226. **Annual work plan:**

227. In addition to the first Annual work plan, which will be prepared as a part of the Inception Report, such plans will be the main management instruments governing the implementation of the project. The project will prepare an AWP with well-defined result indicators, using the standard format for UNDP-supported projects. AWPs will be appraised and endorsed by the PD and UNDP. Quarterly work plans will also be prepared, consistent with the AWPs. Upon approval, the annual and quarterly work plans will be an instrument of authorization to the PC for implementation of the project. Human resources mobilization and procurement plans will be added to the AWP as annexes and be subject to review and endorsement by the PD and UNDP.

228. **Annual Project Review/Project Implementation Reports (APR/PIR):** This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements. The APR/PIR will include, but is not limited to, reporting on the following:

I. Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
II. Project outputs delivered per project outcome (annual).
III. Lesson learned/good practice.
IV. AWP and other expenditure reports
V. Risk and adaptive management
VI. ATLAS QPR
VII. Portfolio level indicators (i.e. GEF focal area tracking tools) as appropriate (especially after mid-term review and terminal evaluation)

229. The Project Manager (PM) in consultations with UNDP-CO and UNDP-GEF RCU will prepare a UNDP/GEF Project Implementation Review (PIR) and submit it to PB members at least two weeks prior to the PBM for review and comments. The PIR will be used as one of the basic documents for discussions in the PB meeting. The Project Manager will present the PIR to the Project Board, highlighting policy issues and recommendations for the decision of the PBM participants. The Project Manager also informs the participants of any agreement reached by stakeholders during the PIR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary. The Project Board has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

230. The GEF M&E Unit provides the scope and content of the PIR. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the project team and circulated to the GEF OFP, UNDP-CO and the UNDP/GEF Regional Coordination Unit for their evaluation comments. Appropriate tracking tools must be updated and submitted along with the PIRs at mid-term and at the end of the project.

231. **Annual Project Report (APR)**

232. The APR is a UNDP requirement and part of UNDP-CO's central overseeing, monitoring, and project management. It is a self-assessment report by project management to the CO and provides input to the CO reporting process, as well as forming a key input to the TR. An APR will be prepared on an annual basis to reflect progress achieved in meeting the project's AWP and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The format of the APR is flexible, but should include the following:

I. An analysis of project performance over the reporting period, including achievement , results against stated outputs, outcome
II. The constraints experienced in the progress towards results and the reasons for these;
III. AWP, Country Assistance Evaluation, and other expenditure reports generated;
IV. Assessment of whether the lessons learnt, good practices were being widely published on MNRE project websites and ALM websites and/or being reported at CCA meetings nationally and regionally;
V. Clear recommendations for future orientation in addressing key problems.

233. As minimum requirement, the Annual Review Report (ARR) shall consist of the ATLAS standard format for the Project Progress Report (PPR) covering the whole year with updated information for each element of the PPR as well as a summary of results achieved against pre-defined annual targets at the project level. As such, it can be readily used to spur dialogue with the Project Board and partners. An ARR will be prepared on an annual basis prior to the Project Board meeting to reflect progress achieved in meeting the project's AWP and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The ARR should consist of the following sections: (i) project risks and issues; (ii) project progress against pre-defined indicators and targets and (iii) outcome performance.

234. **Quarterly Progress Reports**

235. Quarterly monitoring of implementation progress will be undertaken jointly by the PC and UNDP-CO through quarterly progress and financial reports. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP-CO and the UNDP RCU in Bangkok. Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.

236. Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

237. Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.

238. Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

239. UNDP ATLAS Monitoring Reports: A Combined Delivery Report (CDR) summarizing all project expenditures, is mandatory and should be issued quarterly. The Project Manager should send it to the Project Board for review and the Implementing Partner should certify it. The following logs should be prepared: (i) The Issues Log is used to capture and track the status of all project issues throughout the implementation of the project. It will be the responsibility of the Project Manager to track, capture and assign issues, and to ensure that all project issues are appropriately addressed; (ii) the Risk Log is maintained throughout the project to capture potential risks to the project and associated measures to manage risks. It will be the responsibility of the Project Manager to maintain and update the Risk Log, using ATLAS; and (iii) the Lessons Learned Log is maintained throughout the project to capture insights and lessons based on good and bad experiences and behaviours. It is the responsibility of the Project Manager to maintain and update the Lessons Learned Log.

240. **Periodic Thematic Reports**

241. As and when called for by UNDP, UNDP RCU or project financing partners, the project will prepare specific

thematic reports, focusing on specific issues or areas of activity. The request for a thematic report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. The resulting reports can be used as a form of lessons learnt exercise, specific overseeing in key areas, or as troubleshooting studies to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for thematic reports and, when such are necessary, will allow reasonable timeframes for their preparation by the Project Team.

242. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent ARRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

243. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

244. **Project Terminal Report (PTR)**

245. During the last three months of the project the Project Team will prepare the PTR. This comprehensive report will summarize all activities, achievements, progress against stated project impact, outcomes and outputs lessons learnt, good practices , structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lie out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities. With support of the PC, the PD is responsible for preparing the PTR Report and submitting it to UNDP-CO and UNDP-GEF RCU. It shall be prepared in draft at least one month in advance of the TTR, in order to allow review, and will serve as the basis for discussions in the PTR. The PTR also considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured, to feed into other projects under implementation or formulation.

246. **Periodic Monitoring through site visits:**

247. UNDP Country Offices and UNDP-GEF RCU as appropriate, will conduct yearly visits to project sites based on an agreed upon schedule to be detailed in the project's Inception Report/Annual Work Plan to assess first hand project progress. Any other member of the Project Board can also accompany. A Field Visit Report/BTOR will be prepared by the CO and UNDP-GEF RCU and circulated no less than one month after the visit to the project team, all Project Board members, and UNDP-GEF.

248. **Independent Review and Evaluations**

249. The project will be subjected to the following independent external review/ evaluations as follows:

I. An independent Mid-Term Review will be undertaken at the mid-point of the project lifetime or earlier, if deemed necessary. The Mid-Term Review will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the relevance, effectiveness, efficiency, sustainability and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term review will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term review will be prepared by the UNDP CO based on guidance from the UNDP-GEF RCU. The MTR will also be an opportune time to review and fine tune indicators based on the sector plans and micro plans that would have by then been developed and under implementation. The organization, terms of reference and timing of the mid-term review will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term review will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The GEF Tracking Tool will also be completed during the mid-term evaluation cycle.

II. An independent Final (Terminal) Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at relevance, efficiency, effectiveness, impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/ goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to UNDP-GEF's Project Information Management System (PIMS) and to the UNDP Evaluation Office Evaluation Resource Centre (ERC). The GEF SO-2 Tracking Tool will also be completed during the final evaluation.

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

251. **Learning and knowledge sharing:**

252. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP/GEF RCU has established an electronic platform for sharing lessons between the Project Managers. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analysing lessons learned is an on- going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned.

253. The project monitoring and evaluation plan and the budget are given in Table below.

254. **Monitoring and Evaluation Work Plan and Budget**

255. The following sections outline the principal components of the M&E Plan. Indicative cost estimates related to M&E activities are shown in Table 10 below.

Table 10: Indicative Monitoring and Evaluation Work Plan and Corresponding Budget

Type of M&E activity	Responsible Parties	Budget US$ excluding project team staff time	Timeframe
Inception Workshop (IW)	Project Director/ Manager UNDP CO and RCU	3,000	Within first two months of the appointment of PD and APD
Inception Report	Project Director (PD) and Project Manager/ UNDP CO International and National Experts	5,000	Within four months of project document signing
Measurement of Means of Verification for Project Objective Indicators	Project team and to be verified by independent evaluators at mid-term and terminal evaluators	As a part of mid-term and terminal evaluations	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	Project team and verification by Project Board Spot checks by UNDP Verification at midterm and terminal evaluation teams	Mid-term and terminal evaluations and annual project review workshops;	Annually prior to Annual Project Report and Project Implementation Review and upon completion of the implementation of the annual work plans
Annual Project Report (APR) and Project Implementation Review (PIR)	UNDP-CO UNDP-GEF Project experts	15,000	Annually
Tripartite Review (TR) and Terminal Tripartite Review (TTR) Reports	GEF Operational Focal Point UNDP-CO PC	None	Every year, upon receipt of APR
PB Meetings	PC PB Members UNDP-CO	None	Following Project IW and subsequently every quarter
Annual status reports /seminar /workshop	PC and NSC staff	15,000	
Technical reports/ knowledge and advocacy material/ Lessons learnt and shared at international level		110,000	
Mid-term External Review	PC and Project Administrative Team staff UNDP-CO, UNDP-GEF RCU, External Consultants (i.e. evaluation team)	20725	At the mid-point of project implementation.
Final External Evaluation	PC and Project Administrative Team members UNDP-CO UNDP-GEF RCU External Consultants (i.e. evaluation team)	21250	At the end of project implementation
Financial Audits	MoF and UNDP	5,000	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	UNDP-CO UNDP-GEF RCU (as appropriate) NSC Members	10,000	Yearly
TOTAL INDICATIVE COST Excluding project team staff time and UNDP staff and travel expenses		204957	For 5 years

256. **Communications and visibility requirements:**

257. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml. Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

PART VII: LEGAL CONTEXT

258. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA) [or other appropriate governing agreement] and all CPAP provisions apply to this document.

259. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

260. The implementing partner shall:

I. Put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

II. Assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

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

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

263. The UNDP Deputy Resident Representative in the Sri Lanka is authorized to effect in writing the following types of revisions to this Project Document, provided that s/he has verified the agreement thereto by the UNDP Regional Coordinating Unit and is assured that other signatories to the Project Document have no objections to the proposed changes:

I. Revision of, or addition to, any of the Annexes to the Project Document;

II. Revision which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;

III. Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

264. Inclusion of additional attachments only as set out here in the Project Document

PART IX: PROJECT ANNEXES

Annex 1: Co finance commitment letters

Annex 2: UNDP Capacity Score Card for BDS

Annex 3: Criteria used for selecting pilot sites

Annex 4: Additional Biodiversity Information for the Sites

Annex 5: Some guidelines on land use planning

Annex 6.1: GEF SO1 Tracking Tool (please refer to the Excel sheet)

Annex 7: Indicative TORs for technical assistance

Annex 8: Environmental and Social Screening Summary

Annex 9: Contractual Services: Potential actions and agencies for contractual services identified under ESA Project

Annex 10: Standard Letter of Agreement between UNDP and the government for the provision of support services

Annex 1: Co –financing commitment letters (please see separate files)

Annex 2: UNDP Capacity Scorecard Assessment of BDS

The Capacity Assessment Score card of the implementing partner was completed through a rapid assessment process by the Director/Biodiversity Secretariat of the Ministry of Mahaweli Development and Environment

Strategic Area of Support	Issue	Scorecard	Initial Evaluation	Evaluative Comments
1. Capacity to conceptualize and formulate policies, legislations, strategies and programmes	There is a strong and clear legal mandate for the establishment and management of environmentally sensitive areas (ESAs)	0 -- There is essentially no environmentally sensitive areas (ESA) agenda; 1 -- There are some persons or institutions actively pursuing an environmentally sensitive areas agenda but they have little effect or influence; 2 -- There are a number of ESA champions that drive the environmentally sensitive areas agenda, but more is needed; 3 -- There are an adequate number of able "champions" and "leaders" effectively driving forward the environmentally sensitive areas agenda	1	Capacity building in the institutions within the Ministry of Mahaweli Development and Environment (MoMDE), the Biodiversity Secretariat and in the key agencies such as Department of Wildlife Conservation, Forest Department, Central Environmental Authority and other local actors is an urgent requirement.
	The ESA agenda is being effectively championed / driven forward	0 -- There is no legal framework for environmentally sensitive areas; 1 -- There is a partial legal framework for environmentally sensitive areas but it has many inadequacies; 2 – There is a reasonable legal framework for environmentally sensitive areas but it has a few weaknesses and gaps; 3 -- There is a strong and clear legal mandate for the establishment and management of environmentally sensitive areas	1	The Central Environmental Authority, based on the National Environmental Act has defined and declared environmental protection areas, especially sensitive wetlands and watersheds. The National Physical Plan identifies environmentally sensitive areas however the legal provision for implementing this is unclear. The Soil Conservation Act under the Department of Agriculture has also declared areas highly prone to erosion as priority conservation areas.
	There is an institution or institutions responsible for able to strategize and plan for future ESAs	0 -- ESA institutions have no plans or strategies; 1 -- ESA institutions do have strategies and plans, but these are old and no longer up to date or were prepared in a totally top-down fashion; 2 -- ESA institutions have some sort of mechanism to update their strategies and plans, but this is irregular or is done in a largely top-down fashion without proper consultation; 3 – ESA institutions have relevant, participatory and regularly updated strategies and plans	1	• CEA has declared environmental protection areas but many of these areas face severe development threats due to lack of coordination and long-term plans
2. Capacity to implement policies, legislation, strategies and programmes	There are adequate skills for ESA planning and management	0 -- There is a general lack of planning and management skills; 1-- Some skills exist but in largely insufficient quantities to guarantee effective planning and management; 2 -- Necessary skills for effective environmentally sensitive areas management and planning do exist but are stretched and not easily available; 3 -- Adequate quantities of the full range of skills necessary for effective environmentally sensitive areas planning and management are easily available	2	• Short-term planning has been done for isolated ecosystems. • Full range of skills development among all stakeholders is a necessity
	There is a fully transparent oversight authority (there are fully transparent	0 -- There is no oversight at all of ESA institutions; 1 -- There is some oversight, but only indirectly and in a non-transparent manner; 2 -- There is a reasonable oversight mechanism in place providing for regular review but	1	

Strategic Area of Support	Issue	Scorecard	Initial Evaluation	Evaluative Comments
	oversight authorities) for the local ESA institutions	lacks in transparency (e.g. is not independent, or is internalized) ; 3 -- There is a fully transparent oversight authority for the environmentally sensitive areas institutions		
	ESA management institutions at local level are effectively led	0 -- Environmentally sensitive areas institutions have a total lack of leadership; 1 -- Environmentally sensitive areas institutions exist but leadership is weak and provides little guidance; 2 -- Some environmentally sensitive areas institutions have reasonably strong leadership but there is still need for improvement; 3 -- Environmentally sensitive areas institutions are effectively led	2	• Weak coordination exists. • Institutions have vaguely identified environmental activities in their annual agenda • There is no institutional coordination mechanism
	Human resources for ESA management are well qualified and motivated	0 -- Human resources are poorly qualified and unmotivated; 1 -- Human resources qualification is spotty, with some well qualified, but many only poorly and in general unmotivated; 2 -- HR in general reasonably qualified, but many lack in motivation, or those that are motivated are not sufficiently qualified; 3 -- Human resources are well qualified and motivated.	2	
	ESA institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their mandate	0 -- Environmentally sensitive areas institutions typically are severely underfunded and have no capacity to mobilize sufficient resources; 1 -- Environmentally sensitive areas institutions have some funding and are able to mobilize some human and material resources but not enough to effectively implement their mandate; 2 -- Environmentally sensitive areas institutions have reasonable capacity to mobilize funding or other resources but not always in sufficient quantities for fully effective implementation of their mandate; 3 -- Environmentally sensitive areas institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their mandate	1	• The 30 year long ethnic conflict has adversely affected resource mobilization • Few institutions are mobilizing funds and resources in an ad hoc basis
	ESA institutions are effectively managed, efficiently deploying their human, financial and other resources to the best effect	0 -- While the environmentally sensitive areas institution exists it has no management; 1 -- Institutional management is largely ineffective and does not deploy efficiently the resources at its disposal; 2 -- The institution(s) is (are) reasonably managed, but not always in a fully effective manner and at times does not deploy its resources in the most efficient way; 3 -- The environmentally sensitive areas institution is effectively managed, efficiently deploying its human, financial and other resources to the best effect	0	As there is no formal ESA mechanism that brings together multi-agency and multi-sector coordination there is a gap in management of ESA
	ESA institutions are highly transparent, fully audited, and publicly accountable	0 -- Environmentally sensitive areas institutions totally non-transparent, not being held accountable and not audited; 1 – Environmentally sensitive areas institutions are not transparent but are occasionally	2	The institutions that will be mandated with the responsibility of ESA management at local and national level are fully transparent with strong financial systems in place.

Strategic Area of Support	Issue	Scorecard	Initial Evaluation	Evaluative Comments
		audited without being held publicly accountable; 2 -- Environmentally sensitive areas institutions are regularly audited and there is a fair degree of public accountability but the system is not fully transparent; 3 -- The Environmentally sensitive areas institutions are highly transparent, fully audited, and publicly accountable		
	There are legally designated ESA institutions with the authority to carry out their mandate	0 -- There is no lead institution or agency with a clear mandate or responsibility for environmentally sensitive areas; 1 -- There are one or more institutions or agencies dealing with environmentally sensitive areas but roles and responsibilities are unclear and there are gaps and overlaps in the arrangements; 2 -- There are one or more institutions or agencies dealing with environmentally sensitive areas, the responsibilities of each are fairly clearly defined, but there are still some gaps and overlaps; 3 -- Environmentally sensitive areas institutions have clear legal and institutional mandates and the necessary authority to carry this out	0	• No lead agency exists for ESA in Sri Lanka
	Legal mechanisms on ESA	0 -- No enforcement of regulations is taking place; 1 -- Some enforcement of regulations but largely ineffective and external threats remain active; 2 -- Environmentally sensitive areas regulations are regularly enforced but are not fully effective and external threats are reduced but not eliminated; 3 -- Environmentally sensitive areas regulations are highly effectively enforced and all external threats are negated	0	• The National Environmental Act and a number of other legislation give force to declaring and managing ESAs, but in piecemeal fashion and there are no overall regulations
	Individuals are able to advance and develop professionally	0 -- No career tracks are developed and no training opportunities are provided; 1 -- Career tracks are weak and training possibilities are few and not managed transparently; 2 -- Clear career tracks developed and training available; HR management however has inadequate performance measurement system; 3 -- Individuals are able to advance and develop professionally	1	• There is a weak implementation of institutional level policies • Shortage of finances for capacity building • Training programs developed in country are inadequate and have a narrow scope
	Individuals are appropriately skilled for their jobs	0 -- Skills of individuals do not match job requirements; 1 -- Individuals have some or poor skills for their jobs; 2 -- Individuals are reasonably skilled but could further improve for optimum match with job requirement; 3 -- Individuals are appropriately skilled for their jobs	2	Shortage of individuals with training in diverse fields
	Individuals are highly	0 -- No motivation at all;	1	

Strategic Area of Support	Issue	Scorecard	Initial Evaluation	Evaluative Comments
	motivated	1 -- Motivation uneven, some are but most are not; 2 -- Many individuals are motivated but not all; 3 -- Individuals are highly motivated		
	There are appropriate systems of training, mentoring, and learning in place to maintain a continuous flow of new staff	0 -- No mechanisms exist; 1 -- Some mechanisms exist but unable to develop enough and unable to provide the full range of skills needed; 2 -- Mechanisms generally exist to develop skilled professionals, but either not enough of them or unable to cover the full range of skills required; 3 -- There are mechanisms for developing adequate numbers of the full range of highly skilled environmentally sensitive areas professionals	2	• Training for cooperative management of an ESA is not addressed through the technical training programmes of individual departments
3. Capacity to engage and build consensus among all stakeholders	ESA Establishment and management has the political commitment	0 -- There is no political will at all, or worse, the prevailing political will runs counter to the interests of environmentally sensitive areas; 1 -- Some political will exists, but is not strong enough to make a difference; 2 -- Reasonable political will exists, but is not always strong enough to fully support environmentally sensitive areas; 3 -- There are very high levels of political will to support environmentally sensitive areas	1	• Higher commitment at district /provincial level. •
	ESA management has the public support they require	0 -- The public has little interest in environmentally sensitive areas and there is no significant lobby for environmentally sensitive areas; 1 -- There is limited support for environmentally sensitive areas; 2 -- There is general public support for environmentally sensitive areas and there are various lobby groups such as environmental NGO's strongly pushing them; 3 -- There is tremendous public support in the country for environmentally sensitive areas	1	• Communities need to be reached effectively in terms of awareness building (an effective communication strategy is absent)
	ESA management institutions are mission oriented	0 -- Institutional mission not defined; 1 -- Institutional mission poorly defined and generally not known and internalized at all levels; 2 -- Institutional mission well defined and internalized but not fully embraced; 3 – Institutional missions are fully internalized and embraced	0	• There is no national and local institutional mechanism established yet

Strategic Area of Support	Issue	Scorecard	Initial Evaluation	Evaluative Comments
	ESA management institution can establish the partnerships needed to achieve their objectives	0 -- Environmentally sensitive areas institutions operate in isolation; 1 -- Some partnerships in place but significant gaps and existing partnerships achieve little; 2 -- Many partnerships in place with a wide range of agencies, NGOs etc, but there are some gaps, partnerships are not always effective and do not always enable efficient achievement of objectives; 3 -- Environmentally sensitive areas institutions establish effective partnerships with other agencies and institutions, including provincial and local governments, NGO's and the private sector to enable achievement of objectives in an efficient and effective manner	1	ESA management institutions require greater support to develop strong implementing partnerships with public and private sector in the field
	Individuals carry appropriate values, integrity and attitudes	0 -- Individuals carry negative attitude; 1 -- Some individuals have notion of appropriate attitudes and display integrity, but most don't; 2 -- Many individuals carry appropriate values and integrity, but not all; 3 -- Individuals carry appropriate values, integrity and attitudes	2	
4. Capacity to mobilize information and knowledge	ESA management institutions have the information they need to develop and monitor strategies and action plans for the management of the environmentally sensitive areas system	0 -- Information is virtually lacking; 1 -- Some information exists, but is of poor quality, is of limited usefulness, or is very difficult to access; 2 -- Much information is easily available and mostly of good quality, but there remain some gaps in quality, coverage and availability; 3 -- Environmentally sensitive areas institutions have the information they need to develop and monitor strategies and action plans for the management of the environmentally sensitive areas system	1	Information is available in many different technical units and government agencies making collecting at national and district level a challenge
	ESA management institutions have the information needed to do their work	0 -- Information is virtually lacking; 1 -- Some information exists, but is of poor quality and of limited usefulness and difficult to access; 2 -- Much information is readily available, mostly of good quality, but there remain some gaps both in quality and quantity; 3 -- Adequate quantities of high quality up to date information for environmentally sensitive areas planning, management and monitoring is widely and easily available	1	Information is available in many different technical units and government agencies making collecting at national and district level a challenge
5. Capacity to monitor, evaluate, report and learn	ESA policy is continually reviewed and updated	0 -- There is no policy or it is old and not reviewed regularly; 1 -- Policy is only reviewed at irregular intervals; 2 -- Policy is reviewed regularly but not annually; 3 -- National environmentally sensitive areas policy is reviewed annually	0	There is no policy

Strategic Area of Support	Issue	Scorecard	Initial Evaluation	Evaluative Comments
	Society monitors the state of ESA	0 -- There is no dialogue at all; 1 -- There is some dialogue going on, but not in the wider public and restricted to specialized circles; 2 -- There is a reasonably open public dialogue going on but certain issues remain taboo; 3 -- There is an open and transparent public dialogue about the state of the environmentally sensitive areas	0	There has not been any real dialogue on the subject
	Institutions are highly adaptive, responding effectively and immediately to change	0 -- Institutions resist change; 1 -- Institutions do change but only very slowly; 2 -- Institutions tend to adapt in response to change but not always very effectively or with some delay; 3 -- Institutions are highly adaptive, responding effectively and immediately to change	1	
	Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning	0 -- There are no mechanisms for monitoring, evaluation, reporting or learning; 1 -- There are some mechanisms for monitoring, evaluation, reporting and learning but they are limited and weak; 2 -- Reasonable mechanisms for monitoring, evaluation, reporting and learning are in place but are not as strong or comprehensive as they could be; 3 -- Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning	1	Capacity building is an urgent need
	Individuals are adaptive and continue to learn	0 -- There is no measurement of performance or adaptive feedback; 1 -- Performance is irregularly and poorly measured and there is little use of feedback; 2 -- There is significant measurement of performance and some feedback but this is not as thorough or comprehensive as it might be; 3 -- Performance is effectively measured and adaptive feedback utilized	2	There is no reward mechanism for improved performances except for the annual salary increment.

Annex 3: Information on pilot ESA sites

Information on project sites

The project "**Enhancing Biodiversity Conservation and Sustenance of Ecosystem services in Environmentally Sensitive Areas**" will support the operationalization of ESA concept at two sites within a wider Kala Oya Region. The Kala Oya Region (KOR) includes the Kala Oya River Basin and its surrounding area. The KOR is in the North-Central area of the country and mostly falls within the Dry Zone of the country, with some parts of the area falling in the intermediate zone. This region had been identified as one of the five potential ESA bioregions in the initial project conceptualization phase. This area's selection was confirmed through a three-step process, which included ranking of the five regions by members of the national Biodiversity Experts Committee using criteria, and further analysis was undertaken of these regions by the project design team using additional criteria.

The process and reasons for these site selection are presented in the Box I below:

Box I: Site selection process and considerations

During the full project proposal development, further consultations with government staff and biodiversity experts were held to discuss the pilot ESA sites for finalization. There was a broad agreement that whilst the sites proposed at the PIF stage was a good biodiversity site, further discussions, based on clear criteria should be used to finalize the sites.

Therefore, consultations were held on 24 July 2014 with around 38 of biodiversity experts, where they assessed the five regions originally listed as an annex to the PIF in terms of their:

1. Recognition as an ESA site / region based in PIF's annex
2. Must have Global BD significance - Information readily available
3. Total area equal to or more than in PIF
4. Significant baseline investments

The group further tasked the project design team to use these additional criteria to finalize the pilot ESA region/

1. Site specific actions must be able to be done within funding available (Not more than 2 sites)
2. No / or limited past GEF investment
3. Replicable to wider context of Sri Lanka as possible
4. Ideally has landscape and seascape connection

The list of 5 regions proposed under the PIF as possible ESA regions included:

1. *Region 1: The area covering the Kalaoya basin (down stream of Kalawewa) and up to Gulf of Mannar along the coastal belt and the terrestrial/aquatic landscape*.
2. *Region 2: The area covering from Nilaweli beach up to Chundikulam and in the coastal belt and inland linking Kilinochchi, Mankulam, Vavunia, Horawupathana and Nilaweli.*
3. *Region 3: The area covering Galoya basin and towards south eastern part to reach the Kubukkan oya basin and including this basin.*
4. *Region 4: The area North-East of Sinharaja World Heritage (SWH) site, including the Rakwana hills, area South-West of SWH site covering Hiniduma, Deniyaya and Neluwa and lower reaches of Peak wilderness Sanctuary.*
5. *Region 5: The North-Eastern region of the Knuckles Range of Mountains upto Hettipola, Laggala, Pallegama and Raththota and Rock/Hill Forests of the eastern region*

Based on these, the Kala Oya Region was recommended as the final pilot ESA region. This was also presented at a Validation Workshop held on 1st Sept 2014 with about 44 persons.

The key reasons for the selection of Kala Oya include:

1. The best landscape / seascape integration (with many ecosystems involved) in Sri Lanka. Special 3emphasis was given to this aspect in previous studies, Gap Analysis (2006), EML (2005).
2. High ecosystem heterogeneity with 26 ecosystems (10 terrestrial + 16 aquatic & wetland). Contains special and important ecosystems, e.g. Mangrove Forests, Salt Marsh, Coral & sand reefs, Sea grass

beds etc.

3. Some ecosystems, e.g. Scrub on Floodplains, Scrub on Sand, were recently described and characterized. Some others are yet to be further studied and described.
4. Uniqueness in being rich in palaeo-biodiversity
5. High levels of environmental impacts – needing improved / increased conservation inputs / management
6. High economic / cultural importance: Agriculture, fisheries, tourism; situated within cultural triangle

MASL having considerable management responsibility over a large area of the Site

The Kala Oya is a perennial river, but its water has been augmented by inter-basin transfer of water from the Mahaweli River through diversion tunnels and canals, primarily to irrigate agricultural land in the area. This was done in from the late 1970s. The Kala Oya Region falls under Anuradhapura, and Puttalam Districts, in the North Central Dry and Intermediate Zones and North Western Dry zone of the country.

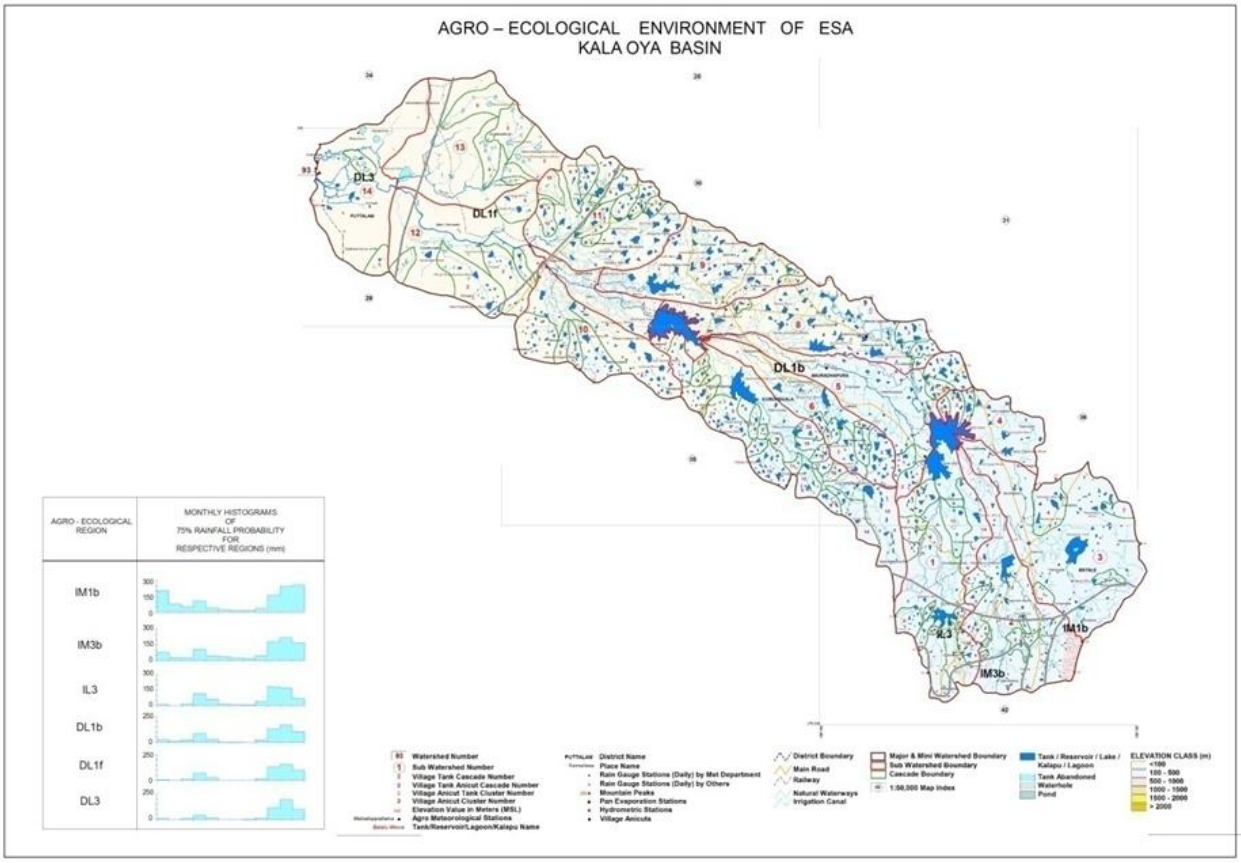
Figure A: Location of Kala Oya Region

The elevation in the region generally varies from sea level to 600 m above mean sea level at the head waters of the Kala Oya. The land gradient varies from between 8 to 15% at the upper reaches of the river to undulating topography of around 4 – 8% and finally towards the end of the river basin, the land is almost flat coastal plains. The annual rainfall of the basin varies between 700 mm to 2000mm but protracted dry period can cause severe water shortages for both drinking and agricultural purposes annually. The Basin is generally dry for most part of the year with the rainfall ranging from less than 50 millimetres (mm) to about 3000 mm. The average rainfall in this region is 1450 mm per year[22]. The average diurnal temperature in this region is around 27 degrees centigrade. Most of the rainfall occurs during the months of October and November, and the driest months are February, March, June, July, and August.

Proposed ESA Sites

Within the Kala Oya Region, two sites have been identified as proposed ESAs. The first site – Kala Wewa falls towards upper reaches of the river basin and encompasses a large water body (reservoir or tank) called Kala Wewa. The second site – Wilpattu is located in lower part of the basin and encompasses marine area including the Bar Reef and the estuary of the Kala Oya River.

Figure B: Proposed ESAs within the Kala Oya Region



General Socioeconomic Context of the Proposed ESAs

Many communities living in Kala Oya basin have lived here for generations, and some households have been resettled here from the 1980s as a part of the Mahaweli Development Programme. Those resettled here include people from inundated area of Kotmale reservoir and other areas such as Kandy and Nuwara Eliya Districts as they were affected by landslides; households from within the Mahaweli area, who had to be resettled as they had lost their lands due to construction activities of Mahaweli programme and 100 families per electorate selected from different parts of the country on the basis of their poverty status. The region is mostly rural, with significant number of households living in

[22] https://portals.iucn.org/library/efiles/html/2005-047/section6.html

small settlements. However, peri-urban and urban population is rapidly increasing in the area, as with rest of the country. Majority of the people here are Sinhala people while there are a few villages of Tamil and Muslims.

Most of the household's livelihoods are derived from agriculture. The average farm size of a household is only about one hectare in areas under major irrigation, and less than half a hectare in areas under minor irrigation schemes. In the Basin, 27% of the population owns only the homestead and 11% of the population are landless.

The Mahaweli Development Programme is the largest irrigation and settlement programme in Sri Lanka. Kala Oya was the first of thirteen irrigation and settlement programmes proposed under the Programme. Almost half of Kala Wewa area, for example, falls within System H of the Mahaweli Development Programme. System H covers over 40,000 ha of new irrigated land, whose water is derived from the Kala Wewa tank that is replenished by trans-basin diversion of water from Mahaweli River.

In Kala Wewa (ESA1), 26% of the land is paddy fields. In the *Maha (wet)* season, with 93.0% of the total cultivated land extent being used for just this one crop. In the *Yala (dry)* season, the extent of paddy cultivation is nearly half of the *Maha* season (46.5%). Only limited number of households are estimated to be engaged in any substantial animal husbandry activities in this region: with 17% rearing few buffaloes or cows on a small scale mostly for domestic agricultural purposes. Only about 10% households are involved in poultry farming. In ESA 2- Wilpattu, paddy cultivation is not as important as in Kala Wewa area. Here, coconut plantations are more important, with nearly 4.5% of the total land under such plantations, and paddy only constitutes 0.4% of the land use. Coconut plantations here are of fairly large scale, and many are owned by private companies. Many local people are employed in these and various other coconut products related industries. Cashew, vegetable farming and fishing are the other sectors where people are engaged. Many people are also employed as labourers in Puttalam Cement factory. At least 700 people from site 2 are directly engaged in fishing in the lagoons and sea as their primary livelihood. People at both sites supplement food by fishing and by harvesting wild plants and animals.

Overall, there is significant underemployment and unemployment in the region. The incidence of poverty remains substantial in the region. As shown by the table above, 24.5% of the households in Site 1 and 38% of people in Site 2 fall below the official poverty line of Rs. 1,423 or approximately US$14 per capita/month and thus depend on government support through the poverty alleviation programme (Samurdhi).

As in most parts of Sri Lanka, there is considerable disparity in access to decision making and resources between men and women in the area. Women in the region have extremely limited roles in local development policy making and have extremely limited access to employment. There are also significant numbers of windows and women headed households in the area (see Table II below). The government has encouraged formation of women's organization and a number of such organizations exist at each D. S. Division. However, the involvement of such organizations in natural resources management or conservation has been extremely limited till date.

Table II: Number of female headed households and women's organizations at the proposed ESA sites

Name of D.S. Division	Number of female headed households (including widows)	No of Women Development Organizations
Ipalogama (Site 1)	1181	23
Palagala (Site 1)	1800	24
Kekirawa (Site 1)	2911	42
Galnewa (Site 1)	1968	27
Vanathavilluwa (Site2)	800	16

Climate change and impacts on proposed sites

Impacts of climate change are expected to cause steadily rising temperature and more erratic and unpredictable seasonal rainfall in most parts of the Sri Lanka. The number of warm days and warm nights has already shown to have increased in all districts of the country. An analysis of rainfall pattern over the past decade suggests that although the total annual rainfall in the three climatic zones has remained unchanged, intra-annual variability of rainfall has altered dramatically, which has affected seasonal cropping patterns, irrigation and hydropower generation. In terms of future scenario, some parts of the Dry and Intermediate Zones are expected to receive 30% less rainfall, if the prevailing climate changes trends continue. Reduction of rainfall in the wetter parts of Sri Lanka, especially the mountainous central parts of the country, is expected to compound drought effects in the Intermediate and Dry zones due to reduced water availability for trans-basin transfers.

BOX 1: Impacts of Climate Change on Weather Patterns in Sri Lanka

Increasing temperature

- Average air temperature in Sri Lanka has increased by 0.64°C over the past 40 years and 0.97°C over the last 72 years, which reveals a trend of 0.14°C per decade. However an assessment of a more recent time band has shown a 0.45°C increase over 22 years, suggesting a rate of 0.2°C per decade
-Consecutive dry days are increasing in the Dry and Intermediate Zones (please see agro-ecological zones of Sri Lanka)
-Ambient mean minimum and mean maximum temperatures have increased
-The number of warm days and warm nights has increased, while the number of cold days and cold nights has decreased

Rainfall Variability

-Precipitation patterns have changed but conclusive trends are difficult to establish
-A trend indicating decreased overall rainfall has been observed over the past 30-40 years, but the change is not statistically significant
-There is an increasing trend of one-day heavy rainfall events across the country
-An increase in the frequency of extreme rainfall events is anticipated, leading to more droughts, floods and landslides

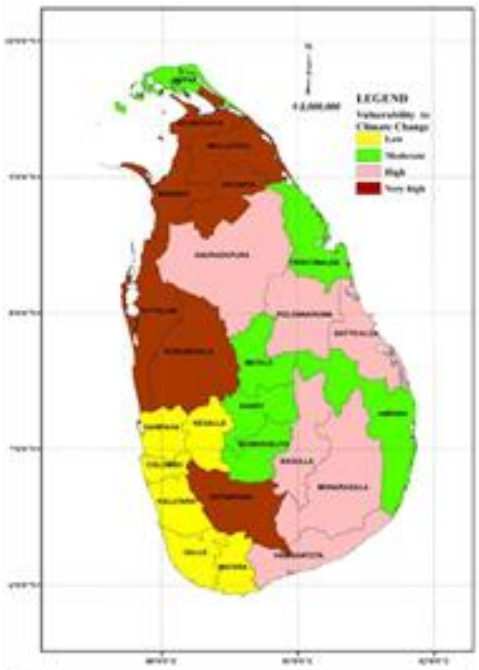
Drought and dry periods

-Increased frequency of dry periods caused by consecutive dry days and droughts are expected
The general warming trend is expected to increase the frequency of extreme hot days

Source: Department of Meteorology/ Adapted from the National Adaptation Strategy 2011-2016

265. The districts where the proposed ESAs are located have also been noted to be very highly vulnerable to climate change impacts. Puttalam District has been identified as having very high degree of vulnerability to climate change, while Anuradhapura District, where the first site is locate, has been identified having high vulnerability to climate change impacts. This study by Punyawardane et.al (2013) assessed 22 socio economic and environmental parameters.

Figure C: Vulnerability of Different Districts of Sri Lanka to Climate Change Impacts



266. ***Land use and Biodiversity Highlights***

267. This section presents the key landuse and biodiversity at the two sites.

Site 1. Kala Wewa

The major feature of Kala Wewa ESA is the Kala Wewa reservoir, which was constructed in the fifth century AD. This falls almost at the centre of the ESA. Its total area in full capacity is around 1800 ha. In addition to this reservoir, the ESA

has several other smaller reservoirs (tanks) as well. In fact, most of the dry zone is dotted with several hundreds of such tanks of diverse sizes. They are normally located on relatively higher grounds, and provide water for agriculture, domestic needs and other purposes. Paddy fields are located below such tanks, and upper catchments of such tanks traditionally have protected forests. Such forests provide villagers with firewood and timber, meat and honey, as well as serve as grazing areas for domestic animals. A part of the forest also traditionally used to grow vegetables and grains. Many such tanks have been constructed on natural rivers and streams thus form a series of interconnected cascading tanks. Such cascade tanks are an important feature of many small catchments of the dry zone. Normally, the flow of water between tanks are regulated from one tank to another downstream, to minimize the risk to tank bund breaching. These ancient tank systems also have significant ecological and biological importance-especially during the dry seasons when they provide water for birds and wild animals as well. Wild herds of elephants around the tanks during the dry season, and their dropping etc. maintains high levels of nutrients in the tanks – which in turn supports high levels of aquatic biodiversity.

Overall lands use of the ESA is presented in Table III below and the diagram also presents the land use at this site

Figure D: Land Use at Kala Wewa ESA

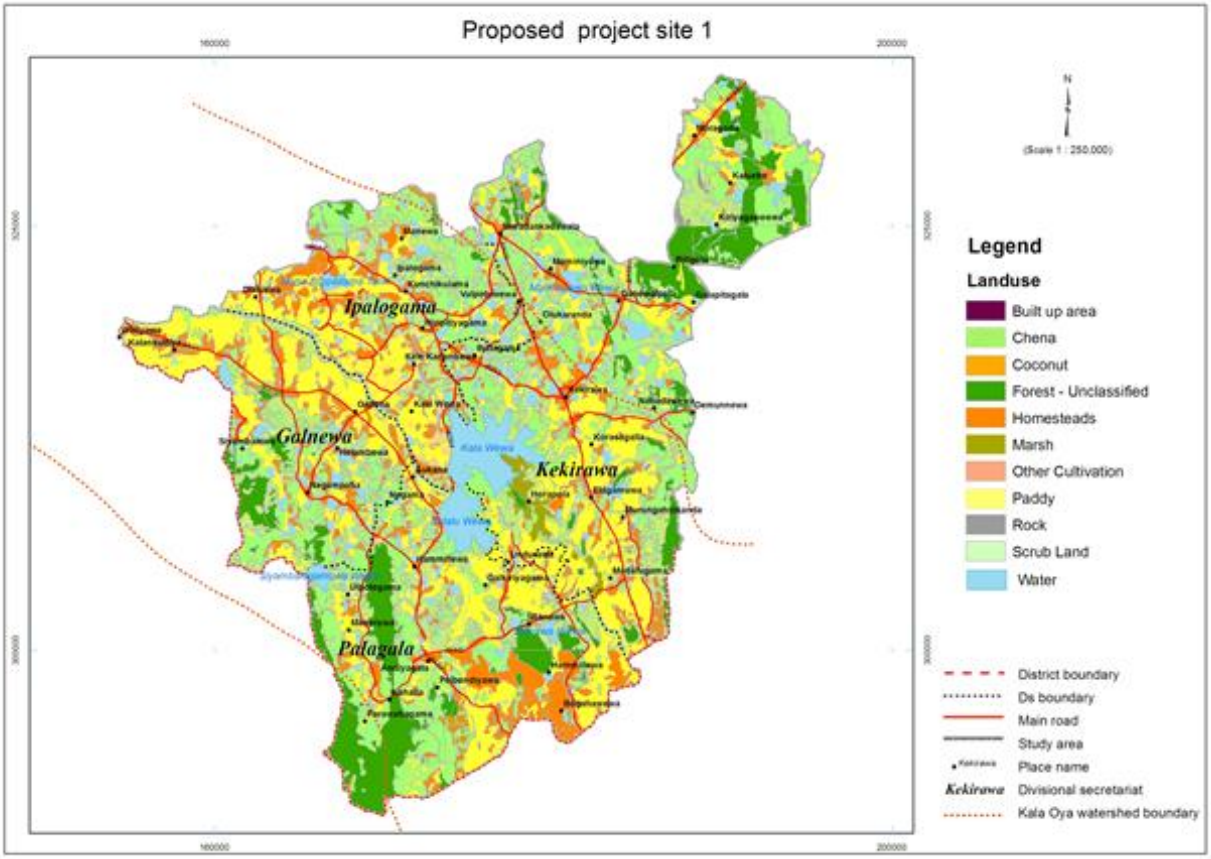


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Table III: Land Use at Kala Wewa ESA

Land use	EXTENT (Ha)				Total	% of Total
	Palagala DS	Kekirawa	Galnewa	Ipalogama		
Paddy	5324	7730	4801	3993	21848	26
Scrub Land	5343	8753	2675	2896	19668	23.11
Chena	2651	5427	2414	2376	12868	15.12
Homesteads	3455	3325	2273	2951	12004	14.10
Forest - Unclassified	4035	4524	984	164	9707	11.40
Water	1618	3550	873	1309	7350	8.63
Marsh	5	626	0	0	631	0.74

Coconut	13	0	3	432	449	0.53
Rock	64	202	0	58	324	0.00
Other Cultivation	190	0	0	63	252	0.30
Built up area		21			21	0.02
Total	17373	34158	9222	10250	85122	100

The diversity of ecosystems in Kala Wewa has been presented earlier in this Annex. In addition to ecosystem diversity, the area also has some notable ecosystems and globally important species, which are noted below:

III. Moist Mixed Evergreen Forest (MMEF): this forest type 136 faunal and 100 floral species have been recorded. Of the floral species, 18% were endemic to such forests, and this forest type is the richest forest ecosystem in terms of flowering plant species in ESA1. Ranawe Kanda Conservation Forest (Former OSF) in Site 1 is of particular interest due to its rich plant biodiversity, especially its remarkably high population of *Mesua ferrea* (Ironwood, "Na") with Relative Denisity of 8.60% (EML, 2005). These trees grow to impressive heights of about 30m, and thus this forest has been called "Jathika Na-mal Uyana"or National Na (*Mesua*) Garden. Ranawe Kanda hill is also of unique geological importance, as significant portion of the hill is composed of Rose Quartz, which attracts numerous tourists to this spot.

The Manawe Kanda OSF, also within the Site 1 and falling in Ipalogama DS Division, is an isolated hill forest consisting of 325 ha. The upper parts of this hill forest represent MMEF. The endemic canopy tree species *Dialium ovoideum* (Fabaceae) is restricted to MMEF and it can be considered as a good indicator of this vegetation type. Endemic tree species *Glenniea unijuga* (Sapindaceae) has also been found here in high density (356 individuals/ha). Another endemic plant, Euo*nymus walkeri* (Celastraceae) which is a shrub or a small tree, is normally found in the Wet Zone. It is very rare in Intermediate and Dry Zones, and the record from Manawe Kanda is apparently the only record in the Anuradhapura District.

The Manawe Kanda was also found to host a number of endemic animal species, including a butterfly species, *Troides darsius* (Sri Lanka Bird Wing, national butterfly of Sri Lanka), two reptile species, *Otocryptis wiegmanni* (Wiegmann's forest lizard), *Chrysopelea taprobanica* (Sri Lanka flying snake), one bird species, *Gallus lafayettii* (Sri Lanka Jungle fowl) and mammal species such as *Macaca sinica* (Toque monkey), and *Tragulus meminna* (Mouse Deer). Three endemic bird species were recorded from the base of the hill include Gallus lafayettii (Sri Lanka Jungle fowl), *Ocyceros gingalensis* (Sri Lanka Grey Hornbill), and *Megalaima rubricapilla* (Crimson-fronted Barbet).

It is therefore clear that isolated hills forests such as Ranawe Kanda and Manawe Kanda support unique ecosystems that serve as refugia for many rare species of plants and animals.

IV. *Dry Mixed Evergreen Forest:* ESA 1 has significant area of this forest type. Though most of such forests are secondary forests, patches of climax or steady- state forest vegetation of DMEF still survive in protected areas such as Kahalla–Pallekele Sanctuary.

268. At least 160 species found in this area are listed in IUCN's Redlist of Globally Threatened Species. Notable ones include are listed below in Table IV.

Table IV: Some globally threatened species at Kala Wewa site

GROUP	*SPECIES*	COMMOM NAME	Global IUCN Redlist Status
Freshwater fish	*Ompok bimaculatus*	Butter cat fish	NT
	Wallago attu	Shark catfish	NT
	Melanochelys trijuga	Black turtle	LR/nt
Reptiles	*Python molurus*	Indian python	LR/nt
	Geochelone elegans	Indian star tortoise	LR/lc
Birds	*Ichthyophago ichthyaetus*	Grey-headed fish eagle	NT
	Anhinga melanogaster	Oriental darter	NT
	Anthracoceros coronatus	Malabar pied hornbill	NT
	Mycteria leucocephala	Painted Stork	NT
	Pelecanus philippensis	Spot-billed pelican	NT
	Threskiornis melanocephalus	Black-headed ibis	NT
Mammals	*Macaca sinica*	Sri Lanka toque monkey	EN
	Semnopithecus priam	Grey langur	NT
	Semnopithecus vetulus	Sri Lanka purple-faced Langur	EN
	Rusa unicolor	Sambur	VU
	Panthera pardus	Leopard	NT

	Prionailurus rubiginosus	Rusty- spotted cat	VU
	Prionailurus viverrinus	Fishing cat	EN
	Loris tardigradus	Sri Lanka red slender loris	EN
	Manis crassicaudata	Pangolin	NT
	Lutra lutra	Otter	NT
	Ratufa macroura	Giant squirrel	NT
	Melursus ursinus	Sloth bear	VU
Plants	*Chloroxylon swietenia*	Satin wood, "Buruta"b	VU
	Eugenia rotundata	"Daduwa"	VU
	Glenniea unijuga	Wal mora	VU
	Mangifera zeylanica	"Etamba"	VU
	Myristica ceylanica	"Malaboda"	VU
	Psydrax dicoccos	Ceylon boxwood, "Pana karawu"	VU
	Saraca asoca	"Asoka"	VU

Site 2: Wilpattu ESA

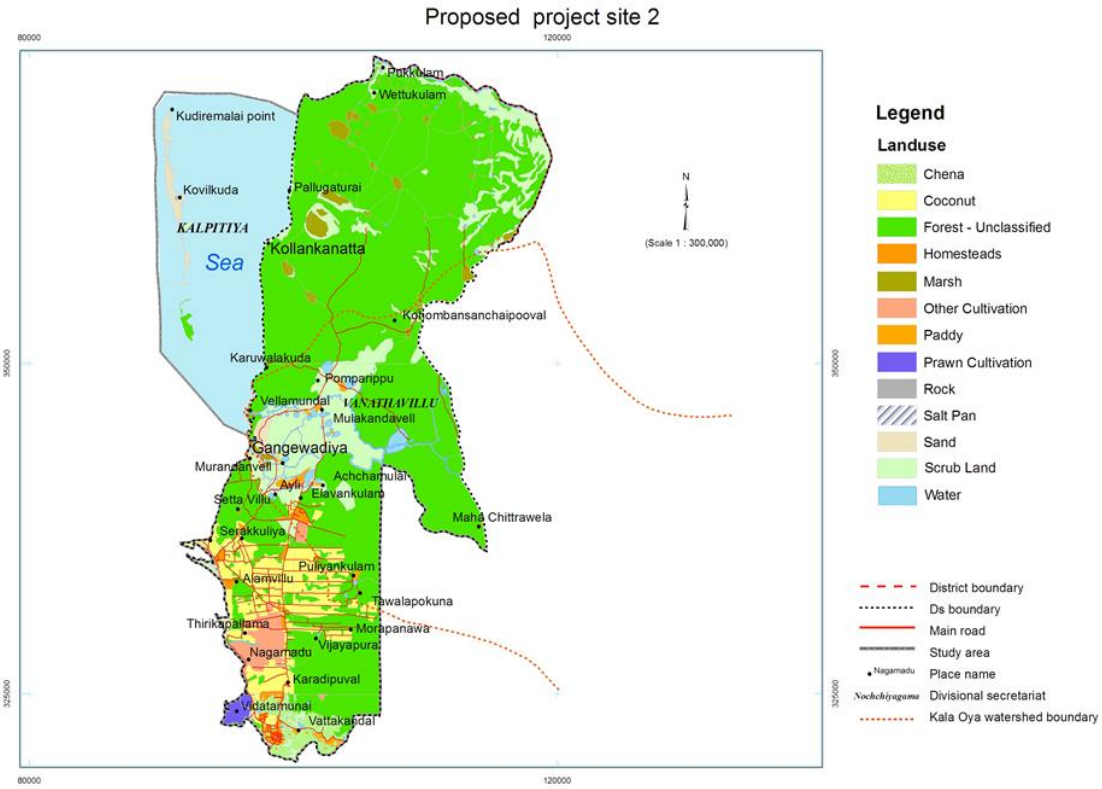
This ESA includes both terrestrial and marine and coastal areas – including the Bar Reef area. **The site is located at the lower basin area which includes Kala Oya estuary, Puttalam lagoon, Wilpattu National Park (WNP), some agricultural lands and part of the sea which include Bar Reef Sanctuary.**

Whilst the forests of Wilpattu National Park and outside the protected areas covers most of the ESA (78.3%), the marine areas constitute around 21.7% of the ESA (see Table V below and the Figure E below).

Table V: Land use in Wilpattu ESA

Landuse	**EXTENT (ha)**	**% of total**
Forest - Unclassified	51418.4	41.2
Scrub Land	9012.5	7.2
Coconut	5358.9	4.3
Inland water	1655.5	1.3
Marsh	1502.9	1.2
Chena	1382.8	1.1
Other Cultivation	1310.1	1.1
Homesteads	682.9	0.5
Sand	515.8	0.4
Paddy	495.1	0.4
Prawn Cultivation	345.2	0.3
Salt Pan	16	0.0
Pond	1.4	0.0
Land	73697.5	59.1
Marine	51000	40.9
TOTAL	124697.5	100

Figure E: Land Use Map of Wilpattu ES



Some notable ecosystems in this ESA include:

IX. *Scrub on Floodplains:* This minor Vegetation Association was named, described and characterized for the first time in Sri Lanka (EML, 2005). So far this type has only been described from ESA2, which occur in lowland, periodically inundated and slightly saline open habitats. It is a hydrologically influenced woodland ecosystem occurring in lowlands which are prone to regular floods caused by the Kala Oya outflows during Northeast monsoon. Such scrub consists of open to close low-canopy forest (3-7 m in height), with some species that are specific to saline soils and marshes. This type of association is characterized by the presence of some special indicator species, such as *Phoenix pusilla* ("Indi"). A total of 167 faunal and 38 floral species have been recorded.

X. *Mangrove Forests* in Kala Oya estuary represents the largest mangrove patch in the island and at present it is also the least disturbed mangrove forest areas in Sri Lanka. Its relative remoteness from settlements, and most of it being located within the Wilpattu National Park, have contributed to this forest's current extent in the region. Some mangrove patches in the Kala Oya Estuary support structurally the most diverse mangrove ecosystems in Sri Lanka. These forests have the tallest mangrove trees found in the country, with 20m in height on average and more than 75 cm in stem girth. A total of 92 faunal species have been recorded from such forests. In combination with Salt Marsh vegetation, Mangroves contained 32 floral species. *Scyphiphora hydrophyllacea* that occurs in a small patch (comprising of 5-6 plants) is a very rare mangrove species that is only found in Puttalam Lagoon. Another rare species that occurs in these mangrove areas is *Xylocarpus granatum*, which shows restricted distribution along the west coast of Sri Lanka.

XI. *The estuarine area including the brackish water area of Kala Oya, Dutch Bay and the Puttalam Lagoon:* Puttalam Lagoon, though widely referred to as a lagoon, is technically an estuary. Being an estuary associated with highly productive ecosystems such as Mangrove Forests and Sea Grass Beds it supports high species diversity. Furthermore, this ecosystem functions as an important breeding ground for many marine species and therefore plays an important conservation role for the marine species as well. At least 13 faunal and 8 floral species have been recorded.

XII. *Coral Reef:* the Bar Reef Marine Sanctuary, declared in 1992, is considered to be one of the most diverse habitats in the Puttalam - Kalpitiya area. The reef covers an area of 307 km^2 with the nearest coral patches lying approximately 2 km west off the northern point of Kalpitiya Peninsula. This is one of the largest coral reef in Sri Lanka, and is considered one of the most pristine in the country. 258 faunal species and 3 species of algae have been recorded. Many globally threatened coral species are n be found here.

XIII. Wilpattu the sixth Ramsar Wetland in Sri Lanka, declared on 2 February 2013, also falls within this ESA. Wilpattu has a total of 205 water bodies, natural and manmade, within its perimeter. Wilpattu is home to a

unique ecosystem known as the "villu," natural depressions in the land that will fill up with rainwater during the monsoon. The villus attract waterfowl and other bird species, as well as wild animals, including elephants. Elephants in this part of Sri Lanka are said to be larger in size than the average because they feed on nutrient-rich grasses growing in the villus.

XIV. The ESA also includes an important palaeo-biodiversity site called "Aruwakkalu". This area contains a wide variety of marine fossil fauna ranging from foraminifera to mammals from the Miocene era, which is currently the only site in Sri Lanka to contain such diverse fossils. These fossils represents nearly 40 species consisting of gastropods, bivalves, echinoderms, marine algae, tube worms, sting rays, whales, dolphins, fish, tortoises and turtles and thus have high palaeo-biodiversity values. There have also been some initial reports of finding a pre-historic human settlement in the area and further research is being planned to investigate this.

Like in Site 1, studies of small areas of the site have shown astonishing biodiversity. A study of just 8 hectares of forest area in Puttalam district at a limestone quarry site, using a rapid assessment method, discovered 41 floral species and 220 faunal species, belonging to 74 families and 178 genera. They comprised 164 species of vertebrates, 51 butterflies and 5 of other invertebrates. Many endemic species were also noted - including one endemic tree, an endemic theraposid spider and 20 endemic vertebrates (of which 9 vertebrate species listed as nationally threatened)[23]. Table I below highlights some key globally threatened species found at Wilpattu site.

Table I: Notable globally threatened species in Wilpattu Site

GROUP	SPECIES	COMMOM NAME	Global IUCN Redlist Status
Corals	*Acropora aculeus*		VU
	Acropora donai		VU
	Pavona decussata		VU
	Pavona venosa		VU
	Pahcyserus rugosa		VU
	Euphyllia ancora		VU
	Catalaphylla jardinei		VU
	Turbinaria peltata		VU
	Galaxea astreata		VU
Crutacea Holothuroids	*Actinipyga mauritiana*		VU
Marine fish Bony fish	*Epinephalus lanceolatus*	Giant Grouper	VU
Freshwater Fish	*Ompok bimaculatus*	Butter cat fish	NT
	Wallago attu	Shark catfish	NT
Reptiles	*Melanochelys trijuga*	Black turtle	LR/nt
	Eretmochelys imbricata	Hawksbill turtle	CR
	Lepidochelys olivacea	Olive ridley turtle	VU
	Chelonia mydas	Green turtle	EN
	Crocodylus palustris	Marsh crocodile	
	Crocodylus porosus	Estuarine crocodile	LR/lc
	Python molurus	Indian python Pimbura	LR/nt
	Geochelone elegans	Indian star tortoise	LR/lc
Birds	*Ichthyophago ichthyaetus*	Grey-headed fish eagle	NT
	Anhinga melanogaster	Oriental darter	NT
	Anthracoceros coronatus	Malabar pied hornbill	NT
	Mycteria leucocephala	Painted Stork	NT
	Pelecanus philippensis	Spot-billed pelican	NT
	Threskiornis melanocephalus	Black-headed ibis	NT

[23]**An attempt to reduce impacts of limestone quarries through** biodiversity assessment and translocation: A case study at the Holcim Limestone Quarry Site in Puttalam, Sri Lanka, A. Kumarasinghe1, W.A.A.D.G. Pradeep1, P.I.K. Peabotuwage1, R.G.A.T.S. Wickramaarachchi1, S. Somarathne2, B.N.H. Perera1, U.T.I. Abeyawardane1, M.R. Wijesinghe3 and D.M.S.S. Karunarathna4* *Asian Journal of Conservation Biology*, July 2013. Vol. 2 No. 1, pp. 3–20 AJCB: FP0016, ISSN 2278-7666 ©*TCRP* 2013

Mammals	*Macaca sinica*	Sri Lanka toque monkey	EN
	Semnopithecus priam	Grey langur	NT
	Semnopithecus vetulus	Sri Lanka purple-faced Langur	EN
	Rusa unicolor	Sambur	VU
	Sousa chinensis	Indo-pacific hump-back Dolphin	NT
	Dugong dugon		VU
	Elephas maximus	Elephant	EN
	Panthera pardus	Leopard	NT
	Prionailurus rubiginosus	Rusty- spotted cat	VU
	Prionailurus viverrinus	Fishing cat	EN
	Loris tardigradus	Sri Lanka red slender loris	EN
	Manis crassicaudata	Pangolin	NT
	Lutra lutra	Otter	NT
	Ratufa macroura	Giant squirrel	NT
	Melursus ursinus	Sloth bear	VU
Plant species	*Chloroxylon swietenia*	Satin wood, “Buruta”	VU

Annex 4: Additional Biodiversity Information by land use types at both sites

Terrestrial ecosystems:
natural forest and scrub

Dry Mixed Evergreen Forests DMEF (Both sites)

Faunal species: A total of 192 species were recorded: land snails (6 spp.), butterflies (30 spp), a dragon fly (1 spp), frogs (6 spp), reptiles (17 spp), birds (103 spp) and mammals (29 spp).

- Endemic faunal species = 10
- Nationally Threatened faunal species = 7, including 3 species of migrant birds

Plant species: A total of 75 species in 63 genera and 28 families. Life forms include 40 tree species, 24 shrub or scandent shrubs species, 6 liana species and 2 herbaceous vines.

- Endemic plant species = 6
- Nationally Threatened plant species = 1 (*Salacia oblonga)*
- Globally Threatened plant species: *Chloroxylon swietenia* (Rutaceae); *Psydrax dicoccus* (Rubiaceae)

. A recent finding of *Rhynchosia velutina* (Fabaceae) was recorded recently from Lower KOB in DMEF /SPOF interphase. It is very rare and a Critically Endangered species that is also a crop wild relative. This was only known from two previous collections from the SE coast of Sri Lanka and the present record is the only record gathered from the West coast (Jayasuriya, 2014).

Threats: Deforestation by timber poaching, encroachment and agriculture (chena), seasonal fires, collection of firewood, bees honey, medicinal plants, hunting, sand mining from streams, gravel mining, grazing

Moist Mixed Evergreen Forest MMEF (site 1)

Faunal species: Total = 136 species - (Land snails = 4 spp.; Crabs = 1 spp.; Butterflies = 18 spp; Dragon flies = 1 sp; Frogs = 1 sp; Reptiles = 13 spp.; Birds = 75 spp.; Mammals = 23 spp)

- Endemic faunal species. = 14
- Nationally Threatened faunal species. = 10
- Migrant bird species. =3

Plant species: Total = 100 species in 80 genera and 41 families. Life forms include 44 tree species, 41 shrub or scandent shrubs species, 7 liana species and 5 herbs and herbaceous vines.

- Endemic plant species. = 18
- Nationally Threatened plant species= 6
- Medicinal plant species = 31

Richest ecosystem in KOB, in terms of forest stature and important plant species. Some species were restricted to MMEF, indicating its uniqueness. The density of some of the best timber species has seriously dwindled. MMEF is also relatively high in Nationally Threatened Species (6).
Threats: Deforestation by timber poaching and encroachment, forest firing for hunting, collection of firewood, bees honey, medicinal plants, hunting,

Sparse and Open Forest SPOF (both)

Faunal species: Total = 210 spp. .- (Land snails = 14 spp; Crabs = 1 sp.; Butterflies = 29 spp.; Frogs = 4 spp.; Reptiles = 15 spp.; Birds 117 spp.; Mammals = 29 spp.)

- Endemic faunal species. = 8
- Nationally Threatened faunal species. = 6
- Migrant birds species. = 15

Plant species: Total. = 105 species in 87 genera and 40 families. Life forms include 34 tree species, 40 shrub or

scandent shrubs species, 4 liana species and 10 herbaceous vines and 12 herbs

- Endemic plant species. = 2; Nationally Threatened plant species = 1 .; the richest ecosystem in terms of medicinal plants with a record of 59 species (56%)

Covers a very large area. Exists in a state of degradation or progressive succession.
Threats: Deforestation by encroachment, agriculture (chena) seasonal fires, collection of firewood, medicinal plants, hunting, sand mining from streams, gravel mining and grazing etc.

Scrub on Floodplains SCFP (site 2)

Faunal species: Total = 79 spp. - (Butterflies = 6 spp.; Frogs = 4 spp.; Reptiles = 4 spp.; Birds 55 spp.; Mammals = 10 spp.

- Endemic faunal species. = 8
- Nationally Threatened faunal species = 10
- Migrant bird species = 3 .
- Charismatic species = Marsh crocodile (*Crocodylus palustris*).

Plant species.: Total = 38 species in 37 genera and 25 families. Species indicating SCFP ecosystem: *Phoenix pusilla* (Indi), *Acrostichum aureum* {Keran-koku}, P*ongamia pinnata* (Karanda), *Fimbristylis ferruginea*; Medicinal plants = 22 species

- Nationally Threatened plant species = 1

SCFP is named, described and characterized for the first time in Sri Lanka (EML, 2005). Apparently SCFP exists elsewhere in Sri Lanka, but has not been named and described previously.
Issues: Encroachment for agriculture, collection of firewood.

Scrub on Sand SCSA (site 2)

Faunal species: Total = 167 spp. (Land snails = 5 spp; Crabs = 1 sp.; Butterflies = 21 spp.; Dragon flies = 1 sp.; Frogs = 4 spp.; Reptiles = 12 spp.; Birds 84 spp.; Mammals = 32 spp.)

- Endemic faunal species. = 2
- Nationally Threatened faunal species = 2
- Migrant bird species = 3

Plant species: Total = 34 species in 30 genera and 21 families (Life forms include 16 tree species, 13 shrub or scandent shrubs species.

Endemic plant species =. 2
Medicinal plant species = 14

Species indicating SCSA ecosystem: *Diospyros malabarica* (Timbiri), *Hydnocarpus venenata* (Ma-kulu), *Connarus monocarpus* (Radaliya).

SCSA is named, described and characterized for the first time in Sri Lanka. It is not known elsewhere in Sri Lanka (EML, 2005)

Terrestrial Ecosystems: Anthropogenic Types

Chena and chena regrowth (both sites)

Faunal species: Total = 104 - (Land snails = 2 spp; Butterflies = 13 spp.; Dragon flies = 1 sp.; Reptiles = 3 spp.; Birds 71 spp.; Mammals = 15 spp.)

- Endemic faunal species. = 5
- Nationally Threatened faunal species = 2
- Migrant bird species = 8

Plant species in chena (agro-biodiversity) = Total = 27

Plant species in Chena Regrowth: Total = 73. Life forms include 2 tree species, 31 shrub or scandent shrubs species, 10 herbaceous vines, 29 herbs; Medicinal plants = 29 spp.)

- Endemic plant species. = 1

Issues: Soil erosion, fertility reduction, loss of traditional crop varieties, seasonal fires in chena regrowth.

Home gardens and Homesteads (both sites)

Faunal species: Total = 162 - (Land snails = 6 spp; Crabs = 6 spp.; Butterflies = 23 spp.; Dragon flies = 3 sp; Freshwater fish = 25 spp; Frogs = 4 spp..; Reptiles = 5 spp.; Birds = 81 spp.; Mammals = 13 spp.

- Endemic spies = 8
- Nationally Threatened species = 5
- Migrant bird species = 9

Plant species: Total = 33 in 8 utility classes: (Fruit and nuts = 13; Medicinal = 2; Ornamental = 1; Other industrial products=1; Root and tuber = 1; Spices and condiments = 3; Timber = 9; Vegetables = 3.

This ecosystem helps in increasing the national tree cover considerably, thus increasing the carbon fixing which will be beneficial at global scale.
Tree cover acts as biological or genetic corridors for plant and animal populations between forest patches
Issues: Negligence by farmers, soil erosion and degradation of agro-biodiversity

Forest plantation (mainly site 1)

Faunal species = Total = 100 - Butterflies = 21 spp.; Reptiles = 3 spp.; Birds 54 spp.; Mammals = 22 spp.

- Endemic faunal species = 4
- Nationally Threatened faunal species = 3
- Migrant bird species = 3

Plant species : Total = 17 species of timber and other industrial wood

Issues: Lack of proper silvicultural practices, Soil erosion, seasonal fires, damage by elephants

Wetland/ Aquatic Ecosystems

Mangrove Forest (only site 2)

Faunal species: Total = 95 - Crabs = 8 spp., Butterflies = 5 spp.; Aquatic snails = 3 spp; Fish = 12 spp.; Frogs = 1 sp.; Reptiles = 3 spp.; Birds 53 spp.; Mammals = 10 spp.)

- Endemic faunal species = 4
- Nationally Threatened faunal species = 3

Plant species: Total = 27.

This is the largest mangrove patch currently existing in Sri Lanka. All remaining mangrove forests have been recommended to be conserved by GAP Analysis (2006). *Scyphiphora hydrophyllacea* (Rubiaceae) is a very rare mangrove /coastal species previously recorded from lagoons of Jaffna (Jaffna District). The record of a very small population of this species in the mangroves in the Lower KOB is a recent record. This population still survives in good condition.
Issues: Pollution of estuary, river and lagoon by the use of boats, unregulated local tourism.

Salt Marsh (site2 only)

Faunal species: Total = 83 - Aquatic snails = 1; Land snail; = 1; Crabs = 1; Butterflies = 11 ; Birds = 56; Mammals = 23

Plant species: Total = 9

.

Issues: Impending threats by shrimp farming

Dry Zone Riverine Forest (both sites)

Faunal species: Total = 49 - Land snails = 6 spp; Crabs = 2 spp.; Butterflies = 5 spp.; Dragon flies = 3 spp.; Freshwater fish = 7 spp.; Frogs = 4 spp.; Reptiles = 1 sp.; Birds 7= 21 spp.; Mammals = 1 sp.)

- Endemic faunal species = 7
- Nationally Threatened faunal species = 4

Pant species: Total = 45 species in 38 genera and 23 families. Life forms include 29 tree species, 14 shrub or scandent shrubs species and 2 lianas

- Endemic plant species = 2
- Nationally Threatened plant species =2

Terminalia arjuna (Kumbuk) is a charismatic and also the most important indicator species.

Issues: Illicit felling of timber, encroachment for agriculture (paddy and chena), sand mining and roadways for the transport of sand, soil erosion

Flood Plains (site 2)

Faunal species: Total = 67 - Aquatic snails = 3 spp.; Land snails = 2 spp; Crabs = 1 sp.; Butterflies = 21 spp.; Dragon flies = 1 sp.; Freshwater fish = 7 spp.; Frogs = 4 spp.; Reptiles = 12 spp.; Birds = 83 spp.; Mammals = 32 spp.

- Endemic faunal species = 8
- Nationally Threatened faunal species = 9
- Migrant bird species = 7

Plant species: Total = 144

- Endemic plant species = 2
- Nationally Threatened plant species = 1

Issues: Encroachment for agriculture, unregulated local tourism in the Lower Basin area and associated pollution and hunting etc.

Fresh water Villus (Waterholes) (site 2)

Faunal spies: Total = 121 - Aquatic snails = 5 spp.; Shrimps = 1 spp.; Butterflies = 15 spp.; Freshwater fish = 9 spp.; Frogs = 5 spp.; Reptiles = 5 spp.; Birds = 63 spp.; Mammals = 12 ssp.

- Endemic faunal species. = 3
- Nationally Threatened faunal species = 3
- Migrant bird species = 2

Plant species: Total = 24

- Nationally Threatened plant species =1

Brackish villus (Water holes) (site 2)

Faunal species: Total = 60 - Aquatic snails = 1 sp.; Butterflies = 12 spp.; Freshwater fish = 4 spp.; Birds = 32 spp.; Mammals = 11 ssp.

- Endemic faunal species. = 1

- Nationally Threatened faunal species= 1
- Migrant birds = 3

Plant species: Total = 6

Perennial Large Tanks (site 1)

Faunal species: Total = 85 - Aquatic snails = 6 spp.; Crabs = 1 sp.; Butterflies = 12 spp.; Freshwater fish = 27 spp.; Frogs = 2 spp.; Reptile s= 3 spp.; Birds = 42 spp.; Mammals = 3 spp.)

- Endemic faunal species = 4
- Nationally Threatened faunal species = 2
- Migrant bird species = 8

Plant species: Total = 164
- Endemic plant species = 3

Issues: Siltation, deterioration of water quality during low storage during dry periods (increase of N, P content); agriculture (for short-term crops) in the draw-down areas

Seasonal Small Seasonal (both sites)

Faunal species: Total = 85 - Aquatic snails = 7 spp.; Aquatic bivalves = 2 spp.; Land Snails = 1sp.; Crabs = 1 sp.; Aquatic beetles = 1 sp.; Butterflies = 34 spp.; Dragonflies/Damselflies = 3 spp.; Freshwater fish = 37 spp.; Frogs / Toads = 7 spp.; Reptiles = 18 spp.; Birds = 136 spp.; Mammals = 32 spp.

- Endemic faunal spp. = 10 spp.
- Nationally Threatened faunal spp = 7 spp.
- Migrant birds = 16 spp.

Plant species: Total = 252
- Endemic plant species = 4
- Nationally Threatened plant species =1
- Exotic plant species = 34

Issues: Siltation, loss of dead storage, deterioration of catchments, encroachments of catchments for agriculture, deterioration of water quality, destruction to traditional conservation and cascade systems, spread of invasive plants

Marsh and swamps

River and Streams (both sites)

Faunal species : Total = 54 - Aquatic snails = 1 sp.; Aquatic bivalves = 2 sp.; Land Snails = 1 sp.; Shrimps / Crabs = 1 sp.; Butterflies = 6 spp.; Freshwater fish = 10 spp.; Frogs = 3 spp.; Reptiles = 1 spp.; Birds = 23 spp.; Mammals = 6 spp.

- Endemic faunal spp. = 4
- Nationally Threatened faunal spp = 3 spp.
- Migrant birds = 1 spp.

Plant species: Total = 22

- Endemic plant species = 1
- Nationally Threatened plant species = 1
- Exotic plant species = 2

Issues: Sand mining; solid waste dumping near townships.

Paddy fields (both sites)

Faunal species: Total = 220 - Aquatic snails = 5 spp.; Aquatic bivalves = 2 spp; Land Snails = 3 spp; Crabs = 1 sp.; Aquatic beetles = 1 sp.; Butterflies = 29 spp.; Dragonflies/Damselflies = 3spp. ; Freshwater fish = 28 spp.; Frogs and Toads = 7 spp.; Reptiles= 17 spp.; Birds = 103 spp.; Mammals = 21 spp.

- Endemic faunal species. = 6
- Nationally threatened faunal species = 5
- Migrant bird species = 6
- Exotic faunal species = 6

Plant Species: Rice (*Oryza sativa*) – main crop and many weedy species

Issues: Over-use of agro-chemicals (pesticides and herbicides), mono crop cultivation, fertility decline, salinity development, complete removal of natural vegetation, inappropriate crops and cropping systems, burning of paddy straw, over irrigation; appearance of invasive species.

Estuary – Upper and Lower (site 2)
Faunal species: Total = 13 - Crabs = 1 sp.; Molluscs = 1 sp.; Fish = 1spp.

Issues: Pollution by fishing boats, over fishing

Lagoon (lagoon border) (site 2)

Faunal species: Total = 86 spp. - Prawns/Shrimps = 5 spp; Crabs = 3 spp.; Molluscs = 12 spp.; Fish = 66spp.

Plant species: Total Sea grass = 8

Issues: Pollution by fishing boats, effluents from shrimp farms; undesirable fishing methods

Sand or beach – site 2

Open coastal waters (site 2)

Faunal species: Total = 66 - Prawns/Shrimps = 4 spp.; Lobsters = 2 spp.; Molluscs = 4 spp, ; Fish = 56 spp.

Plant species: Several algae spp.

Coral Reefs (site 2)

Faunal species: Total = 233 - Coral = 122 spp.; Prawns = 3 spp.; Lobsters = 2 sp.; Molluscs = 4 sp.; Holothuroids = 8 spp.; Bony fish = 86 spp.; Reptiles (Turtles) = 3 spp.; Mammals = 5 spp.

Plant species: Several algae spp..

Annex 5: Land use planning – some guidelines

Land use planning at the two sites should involve a number different institutions listed in the Table below.

Table A: List of Key Institutions to be involved In Land Use Planning at the Two Sites

	Institution	Responsibility	Kalawewa site	Wipattuwa site
1	MASL (Mahaweli Authority of Sri Lanka)	Management and administration of all lands and all development activities in designated area for the MASL	YES	No
2	DS (Divisional Secretariat)	Administrations of lands falling under DS's jurisdiction	Yes	Yes
3	FD (Forest Department)	Administration and management of lands belong to FD	Yes	Yes
4	DWC (Department of wild Life)	Administration and management of lands belong to DWC	Yes	Yes
5	PS (Pradesheeya Sabha)	Administration and management of lands allocated for PS	Yes	Yes
6	AD (Archaeology Department)	Administration and management of lands belong to AD	Yes	Yes
7	PDA (Provincial Department of Agriculture)	Provision of Extension service to agricultural lands	Yes	Yes
8	ID (Irrigation Department)	Administration and management of irrigation canals, reservoirs and reservations attached to them	Yes	No
9	DAD(Department of Agrarian Development)	Administration of paddy lands in minor Irrigation schemes and management of minor tanks and irrigation canal system	Yes	Yes
10	RDA (Road Development Authority)	Administration and management of roads and road reservations belong to RDA	Yes	Yes
11	Coast Conservation and Coastal Resource Management Department	Administration and management of lands falling under Coastal resource management plans.	No	Yes
12	Marine environment protection Authority (MEPA)	Prevent, control, and manages the pollution of Sri Lanka's Marine Environment	No	Yes
13	LUPPD	Land use planning in the Divisions	Yes	Yes
14	CEA	Enforcement of environmental laws related to land use	Yes	Yes
15	Farmer organizations	Making decisions of crop, land and water management. They involve in making decisions in seasonal stakeholder meetings	Yes	Yes
16	NW Provincial Environment Authority (PEA) established under Provincial Environment	Management and protection of natural resources; administers EIA's relating to shrimp farms etc. as the approving authority	No	Yes

	Statue			
17	Department of fisheries and aquatic resources	Administration, development, regulation and monitoring of fishery and aquatic resources	No	Yes
18	National Aquatic Research Authority	Conduct research in aquatic resources and dissemination of information	No	Yes
19	Fishermen societies	Make decisions on catching fish	Yes	Yes

Planning procedure

Land use planning of the ESA will have inputs at 4 levels (Table 2). Detail planning will be done at the DS division level.

Table B: Land use planning responsibility for ESA at different levels

Planning Level	**Responsible committee**	**Responsibility**
Divisional level	Local Management Committee	Making a detailed land use plan for the DS division.
District level	District Facilitation Committee	Integration of plans of individual DS division and ensure plans are compatible with district policies and development plans.
Provincial Level	Provincial Facilitation committee	Ensure that the plans are compatible with the policies and development plans of the province.
National Level	National Steering Committee	Ensure that the plans are compatible with national policies and development plans.

The contents of the land use plans

The land use plans should consider the following issues:

1. Introduction to the DS division
    i. Location, topography, population
    ii. Existing land use in the division
    iii. Existing land use map
    iv. Agro-ecology
    v. Natural Resources of the division
2. Issues related to following aspects with special reference to BD
    i. Ecosystems
    ii. Conserved/ protected areas
    iii. Lands under various uses
    iv. Lands encroached
    v. Lands inappropriately used
    vi. Underutilized lands
    vii. Biodiversity in the division

Support by a map showing the areas

3. Prioritized issues in order of importance. Propose recommendations for development of the area streamlining BDC and addressing the land use issues. Give details such as extents, locations, ownership, and activities, proposed implementing agency, and time frame, cost estimate

4. Proposed land use plan and map

Proposed map will include various zones as shown below.

I. Already conserved/ protected areas
II. Proposed areas for conservation/ protection (habitats, corridors, areas for connectivity etc.)
III. Areas for Agriculture

IV. Areas for residential purposes
V. Areas for industry
VI. Areas where land use changes are required
VII. Wetlands, tanks, streams and their reservations
VIII. Areas where no major land use changes are required

5. A description of various activities proposed indicating specific methodology

Principles used in the planning

Planning will be based on the principles given in the Box 1 in order to assure streamlining of BDC. Each principle is discussed below according to their applicability in site 1 and site 2.

- **Consider mapping out plans for the area:** Lands have been allocated for various purposes under mapping out processes under the LDO of 1935 and MASL act of 1979. It is very advisable to use these maps in planning exercise. The purposes for which lands were allocated under the LDO is given in annex1. Lands have been allocated in these maps in a systematic manner and planning based on these maps may resolve many problems.
- **Consider property rights of the private and alienated lands:** Both sites consist of private and state lands which are alienated under the LDO and the State lands ordinance of 1947. Private lands and alienated lands are regulated by different property rights. In planning land uses take these rights in to consideration. The property rights of these two types of lands are given in the annex 2.
- **Consider legal provisions given in various legislations:** There are many legislation which control land uses in the country. A list of these legislations is given in annex 3. Consider the provisions given under these legislation. Find out whether there are any conflicting rules under them and brought to the notice of the relevant authorities if any.
- **Use participatory and bottom up approach:** Top down approaches in land use planning have been not very successful and at present bottom up approaches are used in many parts of the world. In this project planning is done at DS level and these plans are integrated at District and National level. As there are many stakeholders involved, planning is done with the involvement of all stakeholders including community using participatory tools and approaches. Gender aspect is looked after in planning sessions.
- **Consider mainstreaming of biodiversity conservation:** Priority will be placed on mainstreaming of biodiversity in the planning exercise.
- **Examine the impacts of land use decision made for the site in a regional context:** Land use effects have very high off site effects on BD. The effects may be in adjacent areas or miles away. In Kala oya basin effects of land uses in the basin have very high implications on the Kala oya estuary and the Puttalam lagoon. The planning will aim at minimizing these effects.
- **Plan for long-term change and unexpected events such as possible climate change effects:** Consider droughts and flood incidents of long term recurrence periods. As climate change effects are already evident consider them in planning.
- **Preserve rare landscape elements and associated fauna and flora species and archaeological sites:** Rare landscape elements may support special faunal and floral species or they may have aesthetic value. There are several hill forest with rare biodiversity in the site 1. (e.g. Manewa Kanda). They have to be preserved. Also in the area lots of archaeological sites which need attention. Yoda ela (Giant canal) which flows through Ipalogama DS division (site 1) is a historical monument which get degraded under the modern development efforts. There are also archaeological sites in both sites which need attention.
- **Avoid land uses that may affect the natural resource base of the site and in broader area.** The development should not degrade natural resources such as water, soil, forest and other resources of the area. Consider effects sand and clay mining and over extraction of ground water in site 1
- **Retain large contiguous or connected areas that contain critical habitats to maintain connectivity:** For habitat conservation large forest areas or forest patches which can maintain connectivity among those patches are very important. Such patches are available in stream reservations along streams, archaeological reservation, and tank catchments. They need to be retained and conserved. In site 1, this is very important to create elephant corridors.
- **Minimize the introduction and spread of exotic species and promote native species:** The exotic species dominate over the local species and reduce biodiversity. Both sites are frequented by several exotic species such as *Lantana camara*, *Pistia stratiotes* and *salvinia molesta*.
- **Minimize effects of development on ecological processes:** At present development processes greatly affect the ecological process such as rain water infiltration, water purification and ground water recharge by wetlands, pollination in plants, and harmonizing ambient temperatures etc. Land use planning should be aimed at minimizing these effects.
- **Implement land-use and management practices that are compatible with land suitability:** It is very important to introduce land use practices which are based on the suitability of the lands in order to improve the land productivity. In this case some land use conversions may require detailed soil studies.

- **Be compatible with Proposed National physical plan of the country:** Sri Lanka has recently announced a National Physical plan. The planning has to be incompatible with this plan.

Box1. Land Use Planning Principles for the sites:

1. Consider mapping out plans of the area.
2. Consider property rights of the private and alienated lands.
3. Consider legal provisions given in various legislations
4. Use participatory and bottom up approach
5. Consider mainstreaming of biodiversity conservation
6. Examine the impacts of land use decision made for the site in a regional context
7. Plan for long-term change and unexpected events such as possible climate change effects
8. Preserve rare landscape elements and associated fauna and flora species
9. Avoid land uses that may adversely affect the natural resource base of the site and elsewhere
10. Retain large contiguous or connected areas that contain critical habitats to maintain connectivity
11. Minimize the introduction and spread of exotic species and promote native species
12. Minimize adverse effects of development on ecological processes.
13. Implement land-use and management practices that are compatible with land capability
14. Be compatible with Proposed National physical plan of the country.

Site level planning process

For successful planning, a team of knowledgeable people have to be engaged in the exercise. Therefore, at the outset the project will ensure that the planning team is trained on new concepts of land use planning to ensure mainstreaming BD conservation in the development activities. Also the team will be equipped with knowledge on the BD of the area, ecosystems and ecological functions. This will be done jointly for the two teams of the two sites. Team of site 2 will need special training on marine ecosystems. BDS will identify a team of trainers including land use planning specialist, BD specialist, PRA specialist and a natural resource specialist for this activity. Mobilization of community is an important aspect in participatory planning in order to get effective community participation. Raising awareness on current issues and how the project is planning to address them will be done through community meetings. The project will also provide additional biodiversity expertise, to the planning team if required either from the national biodiversity experts group or from the expertise from the universities and other responsible agencies such as BDS and Plant Genetic Resource Centre (PGRC).

The planning unit will be the area of the jurisdiction under the divisional secretariat as mentioned before. However, initially planning will be done at Grama Niladari Division (GND) level in order to involve more community in the planning and address local issues. These GND plans will be later integrated to make one plan for the DS division. The divisional planning team with the assistance of the District Land use Planning officer conduct the planning. The team will collect all relevant data and information from all available sources to identify the issues and support the planning exercise. Planning team will use Participatory Rural Appraisal (PRA) tool such as, Focus group discussions, Transect walk, Resource map, and Gender roles and responsibilities to collect information.

The team will collect following information at GN level.

- Information on natural resources focusing on issues.
    a. Land- Area, Land use types

b. Agro-ecology
c. Soil- type and distribution
d. Water- Tanks, wells, springs
e. Wetlands- Ponds, Estuary, Lagoon, Sea
f. Aquatic resources –Fishery, Reed, food items
g. Minerals – Sand , Gravel, Clay

- Information on BD-
  a. Specific species for the site,
  b. Ecosystems
  c. Protected areas
- Information on Socioeconomic and cultural aspects
  a. Population
  b. Employment
  c. Poverty status
  d. Health issues
  e. Historical and archaeological sites
  f. Culturally important sites
- Information on environment
  a. Drought incidence
  b. Flood incidence
  c. Solid waste disposal

The information will be analysed to identify the issues related to natural resource use, BDC, livelihood and development of the area. The Issues will then be prioritized. The present land use will be mapped first, according to different ecosystems, protected areas, cultivated areas, under used lands, built up areas, and infrastructure etc. Remote sensing data will be used for the mapping exercise along with field verification. The land use types, ecological units of local and national significance within these map units will be identified with their issues. Landscape level land use plans addressing the issues, will then be defined with priority areas for conservation, connectivity, protection, production, infrastructure and identify range of specific uses and management regimes appropriate for different areas based on reliable, standardized information collected. GIS technology will be used for land use analysis and mapping exercises. Different zones will be identified, demarcated and mapped including the sensitive areas. Detailed planning guidelines are provided in the Box 2 for use in the planning process. The planning process is outlined in fig.1. The planning process is iterative so that if the team feels necessary it can go back to any previous step. A land use plan including a maps showing different areas and activities will be prepared. The plan will be approved at a meeting of all stakeholders.

Box 2: Guidelines on land use planning for streamline biodiversity conservation

Preparatory work

1. Select the planning team; ensure wider participation in planning including community.
2. Organize and provide training on biodiversity of the area and planning methodology for planning team.
3. Establish goals of the planning exercise and ground rules. Specify the terms of reference for the planning team.

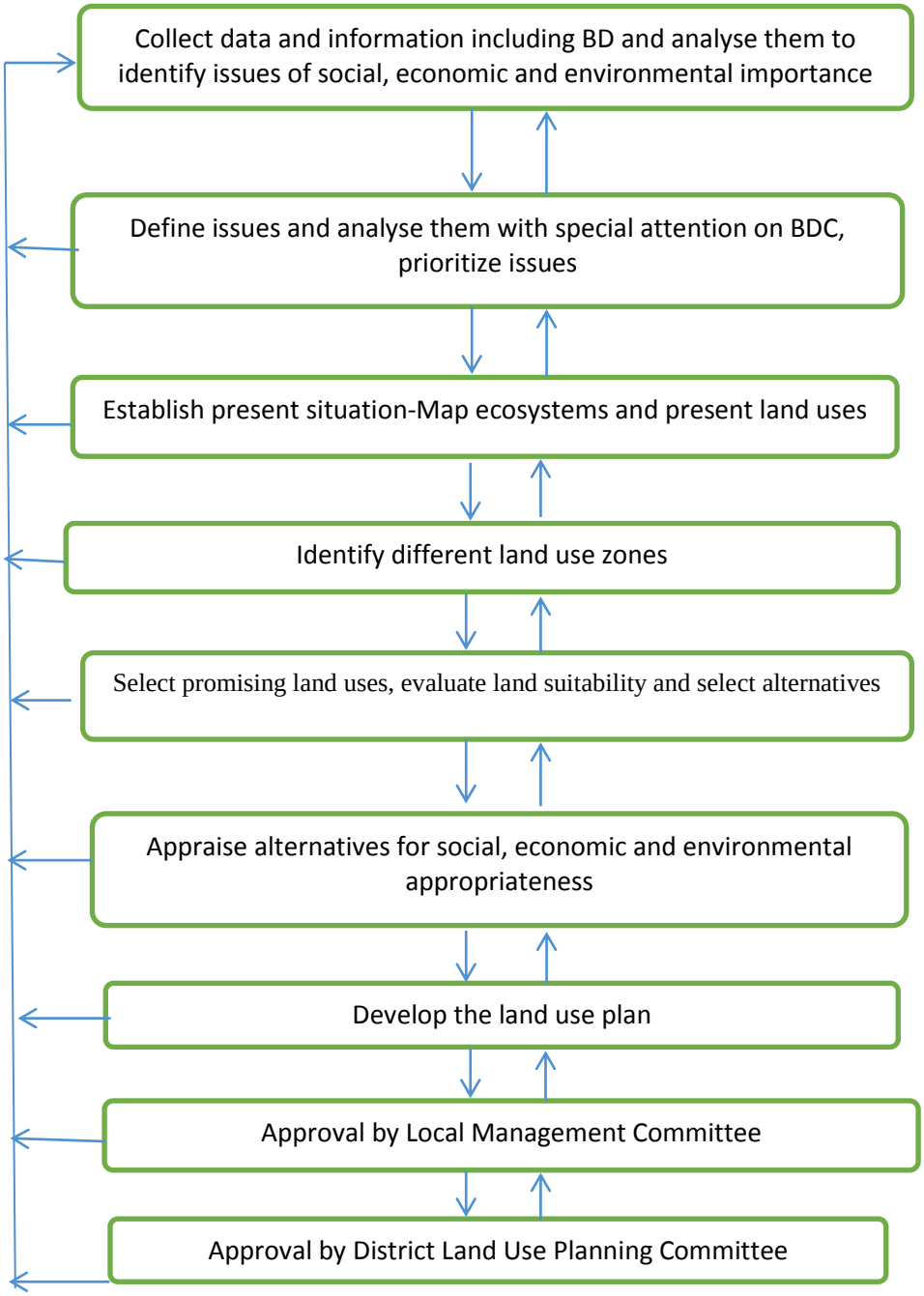
Planning

4. Prepare Base maps (at National level, provincial and district level at 1: 50,000 and 1:10, 000 scales).
5. Establish the present situation. Collect information on BD, socioeconomic status, issues of land use, crop yields etc.
6. Identify land uses, ecosystems, special habitats, species, and monuments, landscapes that need conservation / protection and issues associated.
7. Map out ecosystems, protected areas, cultivated areas, under used lands, built up areas, infrastructure etc. Use GIS tools for mapping and analysis of spatial data.
8. Analyze the situation, identify and map different zones such as conservation areas, protected areas, areas for connectivity, areas for development etc.
9. Select promising land uses to address the issues. Identify /design a range of land use types that may help to achieve the goals.
10. Evaluate land suitability for each promising land use type, establish its land requirements and match these with land qualities.
11. Appraise these alternatives. For each physically suitable combination of land use and land, assess its environmental, economic and social impact and choose the best achievable land use.
12. Ensure compatibility with existing laws and regulations under various legislations. Consider the provisions in legislations given in the annex 1.
13. Draw up a land use plan, allocating land uses to land and making provision for appropriate management including a cost estimate. Identify implementation strategies such as incentive/ disincentives, training needs, capacity building etc.

Approving the plan

14. Present the plan to Divisional Management Committee for approval.
15. Submit plan to District Land Use Committee (DLUC) for determining compatibility with plans of other DS divisions, integration and approval.
16. Adjust plans to accommodate with comments of DLUC and inform stakeholders and community.
17. Submit final plans to Provincial and National Management committees for their observations and check compatibility with provincial and national policies.

Fig. 1. Outline of iterative land use planning process



Annex 6: GEF SO1 Tracking Tool (please refer to the Excel sheet)

Annex 7: Indicative TORs for technical assistance

The proposed technical assistance in the project includes 7 international technical experts, and 6 national experts including:

International experts

1. Environmental Policy and Law Expert
2. Biodiversity Mainstreaming Expert
3. Sustainable Financing Expert
4. Marine Protected Areas Management Expert
5. Lead mid-term review consultant
6. Lead terminal evaluation consultant

National experts

1. National landscape conservation expert
2. Two National experts on incentive based mainstreaming biodiversity in agro ecosystems
3. National mid-term review consultant
4. National terminal evaluation consultant

Indicative TORs for these positions are provided below.

1. International Environmental Policy and Law Expert

The primary task of this consultant is to provide inputs on best practice examples from around the globe on legal and policy mechanisms on mainstreaming biodiversity so that the following planned project results can be based on such examples and that they also have strong focus on conservation and sustainable use of globally important biodiversity:

1. National Policy and Strategy on national ESA promotion
2. National ESA Plan for Scale Up
3. Updated policy on addressing human wildlife conflict

As Sri Lanka has a complex legal system that impact biodiversity conservation (as noted in the project document), it is considered important to have "external/ international" assessments recommend some innovative ideas and approaches to deal with such complexities as well.

In particular, the international expert's inputs on addressing human wildlife conflicts will be critical. Though there is a policy on mitigating human elephant conflicts in Sri Lanka, there may be merit in expanding the scope of such policy to include other human wildlife conflict issues – such as with primates. Many monkey species in Sri Lanka are of globally threatened status and there is increasing conflicts with monkeys and humans. The Expert will also examine such wider issues of human wildlife conflicts and propose possible mechanisms on mitigating such issues through a comprehensive approach.

The Expert will also recommend ways to include policy and legal issues into the development of sectoral guidelines planned under Result 2: Guidelines and tools for ESA land use planning and biodiversity conservation, so that there are links between the national laws, policies and sectoral guidelines.

Despite plethora of laws in Sri Lanka, their effective implementation remains a challenge. The international Expert, based on international experiences and building on Sri Lankan experiences, also recommend strategies to ensure that policy and strategies can be implemented effectively.

The Expert is expected to work closely with legal experts in different relevant Ministries and their agencies, as well as with other stakeholders to develop appropriate recommendations.

Qualifications

Key qualifications of the consultant will include at least 15 years' experience in supporting development and review of policies, strategies and action plans on mainstreaming biodiversity, with particular expertise on addressing human wildlife conflicts. Such experience must include from around the world with particular experiences in working in developing countries – and specific experiences from Asia would be an asset. The consultant must be an effective communicator – with excellent writing and presentation skills in the English language.

3. International Biodiversity Mainstreaming Expert

The biodiversity mainstreaming Expert will provide part-time long term support through the first four years of the project. The Expert is expected to facilitate adaptive management for innovation during the project implementation. S/he will render technical advice and inputs to the National Project Director, The BDS State and other government departments (particularly forestry, fishery and agriculture), and will provide technical oversight to Local Technical Experts, international and national consultants to ensure a consistent approach at national, provincial and site levels. H/She will timely communicate with UNDP Programme Manager for important issues during the programme implementation. H/She will take the lead for technical clearance for reporting, Monitoring and Evaluation (Tracking Tools and Score Cards), Mid-Term Review (MTR) and Terminal Evaluation (TE) documentation.

The Expert will play a strong role in continuous capacity building of the BDS under the following result:

1. Capacity of the Biodiversity Secretariat to act as the national lead agency to promote effective ESA implementation

   S/he will also play a strong role in the following results:

2. Guidelines and tools for ESA land use planning and biodiversity conservation- particularly to achieve the following:

   - Guides available in Sinhala, Tamil and English to aid field practitioners on how to integrate biodiversity conservation into sectoral plans and actions, (agriculture, forestry, coastal development and tourism)
   - Updated online integrated biodiversity assessment tool available identifying biodiversity hotspots nationwide, building on national and international data

The Expert will also, further, have strong guiding role for the following results at the field level:

3. Additional area of critical biodiversity habitats under effective management regimes within the ESA for habitat connectivity, integrity and resilience (outside of agricultural lands)
4. Extent of land brought under biodiversity compatible agricultural production practices
5. Increased awareness on biodiversity values within the ESA and capacities to support ESA land use/ seascape use plans' implementation

H/she will perform technical tasks as follows:

- Advise the BDS and other partner agencies on key strategic and policy issues related to biodiversity mainstreaming strategy and protected area planning in support of ESA management
- Be responsible for quality assurance of biodiversity conservation analysis and related conservation and sustainable development studies, and draft synthetic reports and documents to support the decision making process;
- Provide technical inputs for preparing ToRs and developing methodology in the execution of various technical studies to be carried out through the three projects, as well as assuring quality of technical reports compiled by consultants;
- Ensure the technical quality of annual progress reports, Project Implementation Review (PIR), and quality inputs into mid-term review self-assessment reports, and terminal evaluation self-assessment reports;

- Produce policy briefing papers and project technical and periodic reports for advocacy and knowledge management as appropriate;
- Ensure that sound conservation principles are adhered to during project intervention and be responsible for monitoring that intended biodiversity conservation outcomes of the project are attained;
- Assist the BDS and district/ local agencies through related policy and strategy development processes, as well as any internal streamlining processes to ensure that adequate human and financial resources are properly budgeted for and included for effective biodiversity conservation outcomes and effective mainstreaming;
- Ensure that the BDS and local agencies institute effective and sustainable biodiversity monitoring and evaluation mechanisms at both local and national levels,
- Facilitate and provide training courses to strengthen capacity in the biodiversity conservation assurance BDS and others as necessary;
- Act as a champion in important domestic and international events for promoting the programme impacts and policy advocacy, including interaction with media when delegated by NPD;
- Contribute to the project's quarterly newsletter, website and other information materials;
- Assist in promoting inter-institutional cooperation within the conservation and related sectors around areas of mutual interest and concern;
- Perform other duties relevant to the project and his/her expertise.

Required Skills and Experience

- An advanced degree in conservation, natural resources management, environmental science or related fields, preferably in landscape conservation/ management.

Experience

- At least 15 years of professional experience in the field of ecosystems and biodiversity management, in particular experience;
- Extensive experience with project development, implementation and management (experience in multilateral and government-funded conservation projects is preferable);
- Working experience with international organizations or having worked as a technical Expert or consultant is an advantage, preferably with knowledge of GEF, UNDP policies, procedures and practices;
- Experience in working in the relevant fields in Sri Lanka and its government, experiences working in international organizations in Sri Lanka or abroad is a strong asset.

Language

- Fluency in written and spoken English is required;

4. International sustainable financing Expert

This technical Expert will work with national stakeholders to assess and recommend sustainable financing mechanisms to ensure that project supported activities are funded and sustained beyond project end. The key result this Expert will produce is:

- Sustainable financing plans for ESAs

The sustainable financing part will address both the protected areas related activities as well as mainstreaming activities. As noted in the project document, such financing plans will include mechanisms to increase funding from government sources, from public –private partnerships as well as from other possible mechanisms on

payment for environmental services. The work will also assess the potential for linking tourism income to conservation actions.

In addition to site level possibilities and mechanisms, the consultant will also assess feasibility of developing wider national mechanisms / and or building on existing mechanisms such as national funding mechanism for wildlife conservation that is implemented by DWC.

The consultant will also work closely with Business and Biodiversity Platform[24] to identify specific ideas and programmes to involve the private sector into biodiversity conservation at existing and potential future ESAs.

Required skills and qualifications

The Expert will have proven background (at least 10 years of his/ her background) on developing sustainable financing mechanisms for conservation –including the development of trust funds, use of biodiversity offsets, ecotourism and linking business and biodiversity in developing countries (international). Past experience of working in Asia and particularly in Sri Lanka would be an added asset.

5. International Expert on protected areas landscape management - Marine

One of the key results the project is aiming to achieve is "Increased effectiveness of protected areas management to minimize threats from outside Pas". Although there is considerable capacity within Sri Lanka on management planning and implementation of protected areas actions on the ground, the fact that the DWC has limited capacities in particularly planning and implementing marine protected areas has been identified as an area of concern. Therefore, the role of this international Expert will be to build capacities of the DWC so that they can effectively plan and implement conservation actions at the Bar Reef Sanctuary – including the creation of a buffer zone around the sanctuary. The Expert will work with DWC and local stakeholders to detail roles and responsibilities on the Reef management (particularly with the tourism sector). The Expert will also help develop baselines and means of monitoring biodiversity status and threats for the Bar Reef.

In addition, the Expert will also strengthen management of the wider marine areas between the Wilpattu National Park and the Bar Reef. Specific attention will be given to strengthen WNP's management plan to account for coastal biodiversity conservation, including mangrove management.

The Expert will further strengthen overall capacities of other PA within the landscape as well – particularly the Kahalla Pallekele.

Required skills and qualifications

On the ground protected areas management for at least 15 years, including at least 8 years in marine protected area management. Proven background on development and implementation of biodiversity monitoring systems, capacity building and the use of international best practice guidelines on marine protected area management planning.

A. **International and National Consultants, Mid-Term Review (MTR)**

The objective of the MTR is to gain an independent analysis of the project's progress in its implementation and to recommend any mitigation measures on potential project design and or implementation problems, and to identify and document lessons learned. The MTR will assess early signs of project success or failure and identify the necessary changes to be made. The project performance will be measured based on the indicators of the project's Results Framework and relevant Tracking Tools. The MTR must provide evidence based information that is credible, reliable and useful. The International Consultant will be the team leader of the team, which will also include at least one national consultant. The review team is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The review team is expected to conduct field missions at pilot ESA sites. Interviews will be held with the following organizations and individuals at a minimum:

- A team of two independent reviewers will conduct the review - one international team leader and one national expert preferable an institutional /policy expert

[24] http://business-biodiversity.lk/

- The consultants will not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities
- The team will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review. A list of documents that the project team and UNDP Country Office will provide to the team for review.

Scope and tasks of the MTR

The review team will assess the following three categories of project progress. For each category, the review team is required to rate overall progress using a six-point rating scale. The three categories of the review are: progress towards Results; adaptive management and management arrangements.

Progress towards Results (project design and progress)

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions made by the project. Identify new assumptions;
- Review the relevance of the project strategy and assess whether it provides the most effective route towards results;
- Review how the project addresses country priorities;
- Review the baseline data included in the project results framework and GEF Tracking tool and suggest revisions as necessary.

Progress:

- Assess the outputs and progress toward outcomes achieve so far and the contribution to attaining the overall objective of the project;
- Examine if progress so far has led to, or could in the future lead to, beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis;
- Examine whether progress so far has led to, or could in the future lead to, potentially adverse environmental and/or social impacts/risks that could threaten the sustainability of the project outcomes. Are these risks being managed, mitigated, minimized or offset? Suggest mitigation measures as needed;
- Review the extent to which the implementation of the project has been inclusive of relevant stakeholders and to which it has been able to create collaboration between different partners. Identify opportunities for stronger substantive partnerships.

Adaptive management (work planning, finance and co-finance and monitoring)

Work Planning:

- Are work planning processes result-based? If not, suggest ways to re-orientate work planning to focus on results;
- Examine the use of the project document logical/results framework as a management tool and review any changes made to it since project start. Ensure any revisions meet UNDP-GEF requirements and assess the impact of the revised approach on project management?

Finance and co-finance:

- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Complete a co-financing monitoring table by taking into account the following: Sources of Co-financing (Type of Co-financing may include: Grant, Soft Loan, Hard Loan, Guarantee, In-Kind, Other); Name of Co-financer; Type of Co-financing; Amount Confirmed at CEO endorsement / approval; Actual Amount Materialized at Midterm and Actual Amount Materialized at Closing;
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.

Monitoring Systems:

- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required?
- Ensure that the monitoring system, including performance indicators, meet GEF minimum requirements. Apply SMART indicators as necessary;
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop SMART indicators, including disaggregated gender indicators as necessary;
- Review the mid-term GEF Tracking Tool (s) as appropriate and comment on progress made, quality of the submission, and overall value of the GEF Tracking Tool.
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to M&E? Are these resources being allocated effectively?

Risk Management

- Validate whether the risks identified in the project document, APR/PIRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate. If not, explain why?
- Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted.

Reporting

- Assess how adaptive management changes have been reported by the project management, and shared with the Project Board;
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

Management arrangements

- Review overall effectiveness of project management as outlined in the project document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement;
- Review the quality of execution of the project Implementing Partners and recommend areas for improvement;
- Review the quality of support provided by UNDP and recommend areas for improvement.

The following outputs and deliverables are expected from the team of Contractors

- Inception Report: the Review team clarifies the timing and method of review, and submit the Inception report to UNDP no later than 2 weeks before the review mission;
- Presentation: presentation of Initial Findings at the end of review mission to the project management and UNDP Country Office;
- Draft Final Report: A Full report (as per template in the detailed TORS) and with annexes submitted to the UNDP CO within 3 weeks of the review mission, and reviewed by RTA, PCU, GEF OFP;
- Final Report: Revised report with audit trail detailing how all received comment have (and have not) been addressed in the final review report submitted within 1 week of receiving UNDP comments on draft and Sent to UNDP CO.

Competencies

The selection of consultants will be aimed at maximizing the overall 'team' qualities in the following areas:

Competences and critical success factors:

- Sound judgment and strong client and results orientation;
- Extensive knowledge with results-based management evaluation methodologies;
- Extensive knowledge in applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to conservation or natural resource management;

- Strong analytical and report writing abilities;
- Ability to propose and recommend any modifications needed to make biodiversity mainstreaming work better.

Corporate competencies:

- Demonstrates commitment to UNDP's mission, vision and values;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Highest standards of integrity, discretion and loyalty.

Required Skills and Experience

Team Leader:

Education

- S/He should have a post-graduate qualification in biodiversity conservation/ project management

Experience

- S/he should have a Minimum 10 years practical experience in implementing (promotion and replicating), and managing biodiversity-related programs, preferably in Asia-Pacific Region
- S/he should have experience in facilitation and coordination, with strong communication and interpersonal skill;
- S/he should have experience in reviewing the responsiveness of the different technologies to the needs of the market;
- S/he should have experience with GEF financed projects and working in Asia region is an advantage;
- S/he should have prior experience in reviewing or evaluating similar projects.

Language

- Fluency in written and spoken English.

National Expert: Mid-Term Review

Education

- S/He should have a post graduate qualification in the social sciences.

Experience

- S/He should have a Minimum 10 years practical experience and be able to review the existing institutional linkages of biodiversity conservation
- S/He should have experience in reviewing the relationships, roles and responsibilities of the various stakeholders in implementing conservation activities;
- S/He should have experience in analysing the commitment of stakeholders to project implementation;
- S/He should have experience in determining the appropriateness of monitoring and evaluation systems to provide performance data for decision making;
- S/he should have prior experience in reviewing or evaluating similar projects.

Language

- Fluency in written and spoken English.

B. International and National Evaluators, Terminal Evaluation

The Terminal Evaluation Consultant will be recruited to conduct the Terminal Evaluation (TE) of the project as per the UNDP and GEF TE guidelines. S/he will report to UNDP CO and will lead a team of national / international evaluators to prepare the Terminal Evaluation Report.

The terminal evaluation will assess achievement of outputs and outcomes and will provide ratings for targeted objectives and outcomes. The assessment of project results seeks to determine the extent to which the project objectives were achieved, and assess if the project has led to any other short term or long term and positive or negative consequences and an assessment of impacts when appropriate. While assessing a project's results, the evaluation will seek to determine the extent of achievement and shortcomings in reaching project's objectives as stated in the project document and also indicate if there were any changes and whether those changes were approved. If the project did not establish a baseline (initial conditions), the evaluator should seek to estimate the baseline condition so that achievements and results can be properly established.

The following three criteria will be assessed to determine the level of achievements/ impacts of project outcomes and objectives and must be rated as objective as possible and must include sufficient and convincing empirical evidence (see Table below)

Rating to be scored for each Output and Outcome Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency. Moderately Satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency. Moderately Unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency. Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency. Highly Unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
1. **Relevance**: Were the project's outcomes consistent with the focal areas/operational program strategies and country priorities 2. **Effectiveness**: Are the actual project outcomes commensurate with the original or modified project objectives9)? In case the original or modified expected results are merely outputs/inputs then the evaluators should assess if there were any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such projects? **Efficiency**: Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was, then did that affect cost-effectiveness? Wherever possible, the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects

The evaluators will also assess other results of the project, including positive and negative actual (or anticipated) impacts or emerging long-term effects of a project. Given the long term nature of impacts, it might not be possible for the evaluators to identify or fully assess impacts. Evaluators will nonetheless indicate the steps taken to assess long-term project impacts, especially impacts on local populations, global environment, replication effects and other local effects.

Overall Rating:

NOTE: The overall outcomes rating cannot not be higher than the lowest rating on relevance and effectiveness. Thus, to have an overall satisfactory rating for an outcome, project must have at least satisfactory ratings on both relevance and effectiveness.

B. Assessment of Sustainability of Project Outcomes

As per the GEF Monitoring and Evaluation Policy, 2006, a terminal evaluation will assess at the minimum the "likelihood of sustainability of outcomes at project termination, and provide a rating for this." The sustainability assessment will give special attention to analysis of the risks that are likely to affect the persistence of project outcomes. The sustainability assessment should also explain how other important contextual factors that are not outcomes of intervention, directly or indirectly, intended or unintended. Sustainability will be understood as the likelihood of continued benefits after the GEF project ends.

The following four dimensions or aspects of sustainability should be rates into

- **Likely (L):** There are no or negligible risks that affect this dimension of sustainability.
- **Moderately Likely (ML):** There are moderate risks that affect this dimension of
- Sustainability.
- **Moderately Unlikely (MU):** There are significant risks that affect this dimension of sustainability
- **Unlikely (U):** There are severe risks that affect this dimension of sustainability

1. **Financial resources:** Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood of financial and economic resources not being available once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcomes) **Socio-political:** Are there any social or political risks that may jeopardize sustenance of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project? 2. **Institutional framework and governance:** Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems for accountability and transparency, and the required technical know-how are in place. **Environmental:** Are there any environmental risks that may jeopardize sustenance of project outcomes? The terminal evaluation should assess whether certain activities will pose a threat to the sustainability of the project outcomes. For example, construction of dam in a protected area could inundate a sizable area and thereby neutralizing the biodiversity related gains made by the project.
Overall Rating:

NOTE: All the risk dimensions of sustainability are critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with lowest ratings. For example, if a project has an 'Unlikely' rating in either of the dimensions then its overall rating cannot be higher than 'Unlikely'.

C. Catalytic Role

The terminal evaluation will also describe any catalytic or replication effect of the project. If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out. No ratings are required for the catalytic role.

D. Assessment Monitoring and Evaluation Systems

As per the GEF Monitoring and Evaluation Policy, 2006, a terminal evaluation will assess whether the project met the minimum requirements for project design of M&E, the implementation of the Project M&E plan and whether long-term monitoring provisions to measure mid-term and long-term results (such as global environmental effect, replication effects, and other local effects) after project completion exist. Terminal evaluation reports will include separate assessments of the achievements and shortcomings of the project M&E plan and of implementation of the M&E plan.

M&E during Project Implementation

M&E design. Projects should have a sound M&E plan to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART14 indicators and data analysis systems, and evaluation studies at specific times to assess results and adequate funding for M&E activities. The time frame for various M&E activities and standards for outputs should have been specified. The evaluation should present its assessment on these.

M&E plan implementation. A terminal evaluation should verify that: an M&E system was in place and facilitated timely tracking of progress towards projects objectives by collecting information on chosen indicators continually through the project implementation period; annual project reports were complete, accurate and with well justified ratings; the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs; and, projects had an M&E system in place with proper training for parties responsible for M&E activities to ensure data will continue to be collected and used after project closure.

Budgeting and Funding for M&E Activities. In addition to incorporating information on funding for M&E while assessing M&E design, a **se**parate mention will be made of: whether M&E was sufficiently budgeted at the project planning stage; and, whether M&E was adequately and timely funded during implementation.

Project monitoring and evaluation systems will be rated as follows on quality of M&E design and quality of M&E implementation:

1. **Highly Satisfactory (HS):** There were no shortcomings in the project M&E system.
2. **Satisfactory(S):** There were minor shortcomings in the project M&E system.
3. **Moderately Satisfactory (MS):** There were moderate shortcomings in the project M&E system.
4. **Moderately Unsatisfactory (MU):** There were significant shortcomings in the project M&E system.
5. **Unsatisfactory (U):** There were major shortcomings in the project M&E system.
6. **Highly Unsatisfactory (HU):** The Project had no M&E system.

The ratings should be justified with objective evidence.

Overall rating:

NOTE: The overall rating of M&E during project implementation will be solely based on the quality of M&E plan implementation." The ratings on quality at entry of M&E design and sufficiency of funding both during planning and implementation stages will be used as explanatory variables.

Monitoring of Long Term Changes

The M&E of long term changes is often incorporated in the GEF supported projects as a separate component and it may include determination of environmental baselines, specification of indicators, provisioning of equipment and capacity building for data gathering, analysis and use. This section of the terminal evaluations will describe the actions and accomplishments of the project in the establishment of a long term monitoring system. The review will address the following questions:

1. Did this project contribute to the establishment of a long term monitoring system? If it did not, should the project have included such a component?
2. What were the accomplishments and short comings in establishment of this system?
3. Is the system sustainable, i.e. is it embedded in a proper institutional structure and has financing?
4. Is the information generated by this M&E system being used as originally intended?

E. Assessment of Processes that Affected Attainment of Project Results

Among other factors, when relevant, it is suggested that the evaluation team considers the following issues affecting project implementation and attainment of project results. However, evaluators are not expected to provide ratings or separate assessment on the following issues but they could be considered while assessing the performance and results sections of the report:

1. **Preparation and readiness.** Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval? Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place at project entry?
2. **Country ownership/drivenness.** Was the project concept in line with the sectoral and development priorities and plans of the country or of participating countries in the case of multi-country projects? Are project outcomes contributing to national development priorities and plans? Were the relevant country representatives, from government and civil society, involved in the project? Did the recipient government maintain its financial commitment to the project? Has the government approved policies or regulatory frameworks been in line with the project's objectives?
3. **Stakeholder involvement.** Did the project involve the relevant stakeholders through information-sharing, consultation and by seeking their participation in the project's design, implementation, and monitoring and evaluation? For example, did the project implement appropriate outreach and public awareness campaigns? Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the design, implementation and evaluation of project activities? Were perspectives of those that would be affected by decisions, those that could affect the outcomes and those that could contribute information or other resources to the process taken into account while taking decisions? Were the relevant vulnerable groups and the powerful, the supporters and the opponents, of the processes properly involved?
4. **Financial planning.** Did the project have the appropriate financial controls, including reporting and planning, that allowed management to make informed decisions regarding the budget and allowed for timely flow of funds. Was there due diligence in the management of funds and financial audits? Did promised co-financing materialize? (Please fill the form in Annex 1 on co-financing).

5. **Implementing/Executing Agency's supervision and backstopping.** Did Implementing/Executing Agency staff identify problems in a timely fashion and accurately estimate its seriousness? Did Implementing/Executing Agency staff provide quality support and advice to the project, approved modifications in time and restructured the project when needed? Did the Implementing/Executing Agencies provide the right staffing levels, continuity, skill mix, and frequency of field visits for the GEF projects?
6. **Co-financing and Project Outcomes and Sustainability.** If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for the variance? Did the extent of materialization of co-financing affect the project's outcomes and/or sustainability, and if it did affect outcomes and sustainability then in what ways and through what causal linkages?
7. **Delays and Project Outcomes and Sustainability.** If there were delays in project implementation and completion, then what were the reasons? Did the delay affect the project's outcomes and/or sustainability, and if it did affect outcomes and sustainability then in what ways and through what causal linkages?

F**. Lessons and Recommendations**

The evaluators will present lessons and recommendations in the terminal evaluation report on all aspects of the project that they consider relevant. The evaluators will be expected to give special attention to analysing lessons and proposing recommendations on aspects related to factors that contributed or hindered: attainment of project objectives, sustainability of project benefits, innovation, catalytic effect and replication, and project monitoring and evaluation. Evaluators should refrain from providing recommendations to improve the project. Instead they should seek to provide a few well formulated lessons applicable to the type of project at hand or to GEF's overall portfolio. Terminal evaluations should not be undertaken with the motive of appraisal, preparation, or justification, for a follow-up phase. Wherever possible, the reports should include examples of good practices for other projects in a focal area, country or region.

Annex 1: Cofinancing

Co-financing (Type/Source)	**IA own Financing (mill US$) Total (mill US$) Total Disbursement (mill US$)**		**Government (mill US$)**		**Other* (mill US$)**		**Total**		**Total Disbursement (mill US$)**	
Grants	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Loans/Concessions (compared to market rate)										
Credits										
Equity investments										
In-kind support										
Other (*)										

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and

- Annex 2: Final Tracking Tools
- the progress towards achievement of the project objectives as outlined in the initial project document
- Look into the relationship between this project and other relevant projects to mainstream biodiversity conservation
- Present the findings to relevant stakeholders

Qualifications

- Familiarity with the challenges developing countries face in mainstreaming biodiversity and the approaches they are taking
- 10 years of relevant field-based experience in M&E of projects – especially of UNDP-GEF project
- Excellent writing and analytical skills
- Willingness to travel and work in Sri Lanka if residing overseas

8. National landscape conservation expert

The national expert will have direct inputs into the following project results

1. Guidelines and tools for ESA land use planning and biodiversity conservation
    - National guideline to integrate biodiversity conservation and sustainable use into Land use planning
    - Updated online integrated biodiversity assessment tool available identifying biodiversity hotspots nationwide, building on national and international data
2. Long term overall ESA land use plans with quantifiable biodiversity conservation targets and indicators
3. Increased awareness on biodiversity values within the ESA and capacities to support ESA land use/ seascape use plans' implementation

The consultant will ensure that the national guidelines on how to integrate biodiversity conservation into land use planning is based on national and international best practices. S/ he will also ensure that the guidelines is built on lessons from practical land use planning work at the two site levels. S/he will also be responsible for building capacities of local land use planning teams and ensuring that all relevant stakeholders are included in the process and that effective mechanisms are instituted to enforce any zonation plans etc. S/he will also ensure that the land use plans are recognized and are used in updating/ preparing any national land use plans. The expert will also ensure that these plans are communicated to the wider stakeholders.

As an additional role, the expert will also work with other relevant organizations and experts to ensure that land use conflicts can be dealt with effectively and that human-wildlife conflicts are accounted for and plans are in place to also mitigate them (as possible) through land use planning.

The expert will also play a role in the development of the national online tool on integrated biodiversity assessment by making sure that the tool is used by land use planners, and at the same time land use plans that are already available are also reflected in the online tool.

Qualifications:

- Technical expertise on mainstreaming biodiversity in land use planning with at least 15 years' experience in Sri Lanka and other countries
- Effective capacity building expertise and knowledge on the use on internet based tools for information sharing
- Proven ability to manage, monitor, and troubleshoot at a comparable level in other projects; and
- Excellent working knowledge of spoken and written English and local languages

Two National experts on incentive based mainstreaming biodiversity in agro ecosystems

(One for each site)

This consultant will play a key role in supporting the development and implementation *of incentive based* mainstreaming of biodiversity conservation into agriculture, fisheries, and homestead management. This consultancy is linked to the following key result in the Strategic Results Framework:

- Extent of land brought under biodiversity compatible agricultural production practices

Key tasks of this consultant will be:

- Ensure biodiversity conservation are integrated into agricultural planning and policy processes, including the updating of existing plans and extensions
- To ensure that farming households have links to market mechanisms and other incentives to adopt and maintain biodiversity-friendly land use practices during and after project end (such as through creation of a special label for biodiversity friendly products to give it a distinct market niche, and linking their marketing through national chain of supermarkets or to restaurants)
- For site 2, the expert will have specific experiences of incentive based fisheries and marine/ aquatic resources management
- To build capacity of extension agents and local government agencies to include promotion of incentive oriented agro ecosystems management
- Ensure technical support and assistance is available and provided to support project implementation.

- Ensure project capacity building, awareness, educational and training programmes are developed and implemented; and
- Ensure resources are available to conduct training, including offering technical support.

Qualifications:

- Understanding of markets and marketing of agro-products issues in Sri Lanka and the main stakeholders in the agriculture sub-sector; knowledge of practical approaches to mainstream biodiversity conservation into agriculture and fisheries
- For site 2, experience on sustainable resource use and marketing of marine, coastal resources will be required.
- At least 10 years' experience with the implementation of development projects, especially in the fields of linking agriculture and environment
- Proven ability to manage, monitor, and troubleshoot at a comparable level in other projects; and
- Excellent working knowledge of spoken and written English and local languages
- Past involvement in similar projects in the dry zone of Sri Lanka an added advantage

Annex 8: ENVIRONMENTAL AND SOCIAL SCREENING (ESSP)

PROJECT: Enhancing Biodiversity Conservation and Sustenance of Ecosystem services in Environmentally Sensitive Areas (PIMS 5165, Sri Lanka)

A. Environmental and Social Screening Outcome

Category 1. No further action is needed

Category 2. Further review and management is needed. There are environmental and social benefits, and possible impacts, and/or risks associated with the project, but these are predominantly indirect and very long-term and so extremely difficult or impossible to directly identify and assess.

Category 3. Further review and management is needed, and it is possible to identify these with a reasonable degree of certainty. If Category 3, select one or more of the following sub-categories:

Category 3a: Impacts and risks are limited in scale and can be identified with a reasonable degree of certainty and can often be handled through application of standard best practice, but require some minimal or targeted further review and assessment to identify and evaluate whether there is a need for a full environmental and social assessment (in which case the project would move to Category 3b). See Section 3 of the Review and Management Guidance.

Category 3b: Impacts and risks may well be significant, and so full environmental and social assessment is required. In these cases, a scoping exercise will need to be conducted to identify the level and approach of assessment that is most appropriate. See Section 3 of Review and Management Guidance.

C. **Environmental and Social Issues**

A number of environmental and social issues had been identified during the project concept development (PIF) stage. During the project preparation phase, these issues were considered, and the actions taken are presented in Table I below:

Potential environmental and social issues for the proposed project, and potential mitigation measures are tabulated below. As the project's Outcome 1 are all related to policy and capacity building activities, the screening only focuses on project's Outcome 2.

Table II. Potential Environmental Issues related to end of project results and possible ways to mitigate them

Indicator	**End of Project Target**	**Potential negative social impacts**	***Potential* Mitigation Option/s**
11. Area legally declared as environmentally sensitive areas under land use management and zoning plans to reduce threats to biodiversity with inter-sectoral partnership with quantifiable biodiversity conservation targets and indicators under implementation with inter-sectoral partnership	1. 200,000 ha	Poor involvement of women and marginalized groups in decision making or having limited mechanisms to have their voices heard in such committees may lead to their further marginalization Additionally, Land use/ sea scape plans may not consider its impacts to people beyond ESA boundaries who may not reside within ESA boundaries but may be resource users within ESA boundaries (such as forest / marine resource users from outside ESA boundaries) Focus given to ESAs may result in generating a perception that other areas or landscapes are not as important and fall on the blind spot during the process of conducting EIAs or SEAs -- potentially locating major developments in such areas beyond capacity and to also compensate for lost land area as a result of ESA designation.	• Representatives to be identified by Samurdhi households (one man and one woman) to be invited to as members in local management committee • Consultation mechanisms to be developed for separate consultations with women, poor households and households which might be negatively impacted by proposed project activities • Public hearing on proposed actions and mechanisms for community consultations • Representatives from women's groups (CBOs) should be special targets for consultations The planners must consider off-site users of ESA resources as well as downstream users
12. Increased stakeholders' support and capacities to implement land use/ seascape plans for conservation	1. General awareness amongst school children, peri urban dwellers, and local leaders increased by 100% over baseline (targeting at least 3000) 2. At least 2300 people trained, based on their training needs assessment	• Women and marginalized groups may not be adequately involved	• The project must ensure, as far as possible, 50% of the targeted trainees and awareness programme participants are women.

13. Increased intersectoral commitment for sustainable financing that build on local government funds, sectoral line agency funds, public-private partnerships (such as ecotourism, CSR) to continue ESA management, and to mitigate human wildlife conflicts beyond project end	Two long term financing plans – one for each ESA endorsed by all relevant parties	1. Financing plans may put more burden on local people, if additional local resource use fees or taxes are levied	Any local mechanism must be equitable and socially acceptable.
	12. At least 20% increase in funding from baseline by various sectors compatible with land use / seascape plans (at least 4 sectoral plans):Agriculture, Forestry, Fisheries, Water resources management	2. Financing of ESA's environmental activities reduces financing for other social development actions at ESAs, making people living within worse off	Financing by local governments should be additional and should not be at cost of development budget losses
14. *Increased effectiveness of protected areas management to minimize threats from outside PA and to mitigate land and resource use conflicts*	*Increased METT scores from baseline for at least three protected areas that cover at least 160,000 ha:*	1. Improved protected areas management will limit access to forest and marine area resources for poor families, increasing their hardship. 2. Increased wildlife populations resulting from improved PA management may cause more human wildlife conflicts	1. Social equity of proposed actions should be assessed, and sustainable harvesting, substitution or compensation must be planned as appropriate. Particular needs of women and other marginalized groups should also be considered. 2. Project will support the development and implementation of a robust human and wildlife conflict mechanism through national policy updating and ensuring appropriate plans at ESAs.
15. Critical biodiversity habitats outside protected areas under effective management regimes within the ESA for habitat connectivity, integrity and resilience	1. Additional 25500 ha of habitats under effective protection, rehabilitation and management regimes[25]	Restoration and rehabilitation may force "illegal" users to have to evict from the land they are using, and may cause severe hardship on already poor households.	The project will adopt a "do no harm" approach so that people are not worse off because of project implementation approaches. Project will work with local government projects to ensure alternative options and livelihoods. Needs of women and other marginalized groups should be given priority.
16. Extent of land brought under biodiversity compatible agricultural production practices	25,000 ha (including paddy, chena land and homesteads)	As richer farmers will have more paddy fields, they may get disproportionate support and hence increase social inequities	Social equity concerns, and especially gender aspects must be strongly considered.

[25] At least 7000 ha of critical habitats and landscapes restored and/ or effectively managed; At least 6000 ha of forests, catchments and tank cascade landscapes under effective restoration and management regimes; At least 1000 ha of critical coastal habitats (mangroves, salt marsh, riverine forests) outside protected areas under effective management at Wilpatthu ESA; At least 1500 ha of isolated hills better conserved at Site 1 that harbour globally and nationally threatened species; At least 10,000 ha of seascape managed as buffer area for marine protected area at Bar Reef

Indicator	End of Project Target	Potential environmental negative impacts	Potential mitigation mechanisms
17. Area legally declared as environmentally sensitive areas under land use management and zoning plans to reduce threats to biodiversity with inter-sectoral partnership with quantifiable biodiversity conservation targets and indicators under implementation with inter-sectoral partnership	2. 200,000 ha	1. Land use/ sea scape plans may not consider its impacts beyond ESA boundaries, leading to off –site impacts	Land use planners to consider ecological linkages beyond ESA boundaries Land uses must also ensure that by limiting use of natural resources or land use activities within ESA does not lead to more resources degradation outside the ESA, as some users may have to resort to such actions to offset any loss of resource access
18. Increased stakeholders' support and capacities to implement land use/ seascape plans for conservation	3. General awareness amongst school children, peri urban dwellers, and local leaders increased by 100% over baseline (targeting at least 3000) 4. At least 2300 people trained, based on their training needs assessment	Information on biodiversity status (particularly on their location) locally may allow unscrupulous people to exploit rare and threatened species of economic values.	Information that could potentially pose threats to specific species of economic value to be used with caution
19. 10. Increased intersectoral commitment for sustainable financing that build on local government funds, sectoral line agency funds, public-private partnerships (such as ecotourism, CSR) to continue ESA management, and to mitigate human wildlife conflicts beyond project end	Two long term financing plans – one for each ESA endorsed by all relevant parties		
	12. At least 20% increase in funding from baseline by various sectors compatible with land use / seascape plans (at least 4 sectoral plans):Agriculture, Forestry, Fisheries, Water resources management		
20. *Increased effectiveness of protected areas management to minimize threats from outside PA and to mitigate land and resource use conflicts*	*Increased METT scores from baseline for at least three protected areas that cover at least 160,000 ha:*		

21. Critical biodiversity habitats outside protected areas under effective management regimes within the ESA for habitat connectivity, integrity and resilience	2. Additional 25500 ha of habitats under effective protection, rehabilitation and management regimes[26]	Management, Restoration and habitation work within the landscape may be too scattered and small scale or strategic to show impacts at wider ecosystem/ landscape level	Project support needs to be based on strategic planning (land use planning) noted above
22. Extent of land brought under biodiversity compatible agricultural production practices	25,000 ha (including paddy, chena land and homesteads)	Support to better manage chena lands (slash and burn) may be considered as incentive for some households to continue or even expand such practices, contrary to government policies to discourage it.	The project must have strong biodiversity and social criteria to be able to ensure that project support is not seen as encouraging more chena cultivation.

[26] At least 7000 ha of critical habitats and landscapes restored and/ or effectively managed; At least 6000 ha of forests, catchments and tank cascade landscapes under effective restoration and management regimes; At least 1000 ha of critical coastal habitats (mangroves, salt marsh, riverine forests) outside protected areas under effective management at Wilpatthu ESA; At least 1500 ha of isolated hills better conserved at Site 1 that harbour globally and nationally threatened species; At least 10,000 ha of seascape managed as buffer area for marine protected area at Bar Reef

C. Next Steps

The project team must take into considerations the potential risks identified in the table above and keep track of risks and mitigation measures. These will be further refined during the project inception phase and will also be include in project risk log as necessary.

The project team will prepare updates on the risks and mitigation measures annually, which will be verified by mid-term review and terminal evaluation teams.

D. Sign Off

Programme Manager **Date** **31 October 2014**

Vishaka Hidellage

Assistant Country Director, UNDP, Sri Lanka

ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST

QUESTION 1:

Has a combined environmental and social assessment/review that covers the proposed project already been completed by implementing partners or donor(s)?

✓ **NO** → Continue to Question 2

QUESTION 2:

Do <u>all</u> outputs and activities described in the Project Document fall within the following categories?

- ☐ Procurement
- ☐ Report preparation
- ☐ Training
- ☐ Event/workshop/meeting/conference
- ☐ Communication and dissemination of results

✓ **NO** → Continue to Question 3

QUESTION 3:

Does the proposed project include activities and outputs that support *upstream* planning processes that potentially pose environmental and social impacts or are vulnerable to environmental and social change (refer to Table 3.1 for examples)? (Note that *upstream* planning processes can occur at global, regional, national, local and sectoral levels)

✓ **YES**

<u>TABLE 3. 1</u> EXAMPLES OF UPSTREAM PLANNING PROCESSES WITH POTENTIAL DOWNSTREAM ENVIRONMENTAL AND SOCIAL IMPACTS	
1 Support for the elaboration or revision of **global- level** strategies, policies, plans, and	No

TABLE 3. 1 EXAMPLES OF UPSTREAM PLANNING PROCESSES WITH POTENTIAL DOWNSTREAM ENVIRONMENTAL AND SOCIAL IMPACTS	
programmes.	
2 Support for the elaboration or revision of **regional-level** strategies, policies and plans, and programmes.	No
3 Support for the elaboration or revision of **national-level** strategies, policies, plans and programmes.	Yes
4 Support for the elaboration or revision of **sub-national/local-level** strategies, polices, plans and programmes.	Yes

QUESTION 4:

Does the proposed project include the implementation of *downstream* activities that potentially pose environmental and social impacts or are vulnerable to environmental and social change?

✓ **Yes**

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT	
1. Biodiversity and Natural Resources	
1.1 Would the proposed project result in the conversion or degradation of modified habitat, natural habitat or critical habitat?	Yes
1.2 Are any development activities proposed within a legally protected area (e.g. natural reserve, national park) for the protection or conservation of biodiversity?	No
1.3 Would the proposed project pose a risk of introducing invasive alien species?	No
1.4 Does the project involve natural forest harvesting or plantation development without an independent forest certification system for sustainable forest management?	No
1.5 Does the project involve the production and harvesting of fish populations or other aquatic species without an accepted system of independent certification to ensure sustainability?	No
1.6 Does the project involve significant extraction, diversion or containment of surface or ground water?	No
1.7 Does the project pose a risk of degrading soils?	No
2. Pollution	
2.1 Would the proposed project result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and transboundary impacts?	No
2.2 Would the proposed project result in the generation of waste that cannot be recovered, reused, or disposed of in an environmentally and socially sound manner?	No

2.3 Will the propose project involve the manufacture, trade, release, and/or use of chemicals and hazardous materials subject to international action bans or phase-outs?	No
2.4 Is there a potential for the release, in the environment, of hazardous materials resulting from their production, transportation, handling, storage and use for project activities?	No
2.5 Will the proposed project involve the application of pesticides that have a known negative effect on the environment or human health?	No
3. Climate Change	
3.1 Will the proposed project result in significant[27] greenhouse gas emissions	No
3.2 Is the proposed project likely to directly or indirectly increase environmental and social vulnerability to climate change now or in the future (also known as maladaptive practices)? You can refer to the additional guidance in Annex C to help you answer this question.	yes
4. Social Equity and Equality	
4.1 Would the proposed project have environmental and social impacts that could affect indigenous people or other vulnerable groups?	yes
4.2 Is the project likely to significantly impact gender equality and women's empowerment[28]?	yes
4.3 Is the proposed project likely to directly or indirectly increase social inequalities now or in the future?	No
4.4 Will the proposed project have variable impacts on women and men, different ethnic groups, social classes?	Yes
4.5 Have there been challenges in engaging women and other certain key groups of stakeholders in the project design process?	Yes
4.6 Will the project have specific human rights implications for vulnerable groups?	No
5. Demographics	
5.1 Is the project likely to result in a substantial influx of people into the affected community (ies)?	No
5.2 Would the proposed project result in substantial voluntary or involuntary resettlement of populations?	No
5.3 Would the proposed project lead to significant population density increase which	No

[27] Significant corresponds to CO_2 emissions greater than 100,000 tons per year (from both direct and indirect sources). Annex E provides additional guidance on calculating potential amounts of CO_2 emissions.

[28] Women are often more vulnerable than men to environmental degradation and resource scarcity. They typically have weaker and insecure rights to the resources they manage (especially land), and spend longer hours on collection of water, firewood, etc. (OECD, 2006). Women are also more often excluded from other social, economic, and political development processes.

could affect the environmental and social sustainability of the project?	
6. Culture	
6.1 Is the project likely to significantly affect the cultural traditions of affected communities, including gender-based roles?	No
6.2 Will the proposed project result in physical interventions (during construction or implementation) that would affect areas that have known physical or cultural significance to indigenous groups and other communities with settled recognized cultural claims?	No
6.3 Would the proposed project produce a physical "splintering" of a community?	No
7. Health and Safety	
7.1 Would the proposed project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
7.2 Will the project result in increased health risks as a result of a change in living and working conditions? In particular, will it have the potential to lead to an increase in HIV/AIDS infection?	No
7.3 Will the proposed project require additional health services including testing?	No
8. Socio-Economics	
8.1 Is the proposed project likely to have impacts that could affect women's and men's ability to use, develop and protect natural resources and other natural capital assets?	Yes
8.2 Is the proposed project likely to significantly affect land tenure arrangements and/or traditional cultural ownership patterns?	yes
8.3 Is the proposed project likely to negatively affect the income levels or employment opportunities of vulnerable groups?	yes
9. Cumulative and/or Secondary Impacts	
9.1 Is the proposed project location subject to currently approved land use plans (e.g. roads, settlements) which could affect the environmental and social sustainability of the project?	Yes
9.2 Would the proposed project result in secondary or consequential development which could lead to environmental and social effects, or would it have potential to generate cumulative impacts with other known existing or planned activities in the area?	Yes

Annex 9: Contractual Services: Potential actions and agencies for contractual services identified under ESA Project

Project 's Results for which contractual services have been identified	**Tentative Budget Allocated**	**Possible nature of services to be sought/ provided**	**Potential organizations / agencies that could provide such services**
Capacity of the Biodiversity Secretariat to act as the national lead agency to promote effective ESA implementation	25000 USD	• Conduct detailed training needs assessment building on self-assessment already done using UNDP Capacity Scorecard • Provide training and exposure related to gaps identified by capacity needs assessment • Develop a long term capacity development plan	Academic institutions NGOs Consultancy firms
Decision Support System available to practitioners for managing multiple land uses in ESAs	100000	• Develop mainstreaming guidelines, test them and publish them • Develop online map/ tool like IBAT • Build capacity of LUPPD on biodiversity and ecosystem management so that they can integrate those concerns in land use planning	• Activities to be led by relevant government agencies with support from experts groups (agriculture, tourism, land use planning, coastal development, land use planning) on developing guidelines with support from experts groups, NGOs, consultants, consultancy firms as necessary) • For online IBAT type tool, partner with government agency such as the National Science Foundation and contract to private service provider (consultancy firn) for actual work
Area legally declared as environmentally sensitive areas under land use management and zoning plans to reduce threats to biodiversity with inter-sectoral partnership *with quantifiable biodiversity conservation targets and indicators under implementation with inter-sectoral partnership*	60000	• Biodiversity and socio economic assessments for whole ESA, particularly outside protected areas • Zonation and consultations with stakeholders on zonations and what is allowed/ disallowed • Mechanisms to monitor implementation of plans • Publication of land use plans and dissemination	Divisional Secretariat LUPPD to lead in land use planning with agencies such as, NRMC, Survey Department, CEA, HARTI Consultancy firms providing expertise, Survey Department can also be involved in zonation etc.

Increased stakeholders' capacities to implement ESA's land use/ seascape plans for conservation	220,000	• Assess needs • Design awareness programmes and events, publications, videos for general public • Implement school level conservation awareness and action oriented activities • Training needs assessment of government staff and local leaders related to environmental/ ecosystems management	School level programme to be led by CEA, other possible organizations to involved are HARTI for needs assessment/ awareness programmes by Audio Visual Centre of the DOA General awareness activities could be contracted to media firms Training on environmental management/ conservation could be contracted to NGOs. Consultancy firms, Universities etc.
Increased effectiveness of protected areas management to minimize threats from outside PA and to mitigate land and resource use conflicts	550000	• Baseline assessments and development of management plans • Support to prioritization of action to be supported by GEF funds – including species management/ human wildlife conflict mitigation • Sustainable financing mechanisms identified • Capacity of PA staff increased • Some provision of materials • Mechanisms to ensure visitors' awareness on PA biodiversity	DWC to lead and seek additional help as needed from NGOs, consultancy firms, Universities etc. Much of the focus is on Bar Reef so will need to also identify expertise related to marine areas management
Critical biodiversity habitats outside protected areas under effective management regimes within the ESA for habitat connectivity, integrity and resilience	350000	• Identify most biodiversity appropriate technology for restoration, demarcation, management of forest patches, riverine areas, wetlands and implement actions • De-silting of minor tanks, cascade development / management • De-silting of minor tanks, cascade development / management also as an important activity. It can be contracted to Department of	• DoF and other relevant agencies to lead • Local communities and community based organizations to be involved • Other NGOs, consultancy firms, academia to be used as necessary • Desilting could be contracted to Department of Agrarian services. • De-silting of minor tanks, cascade development / management can be contracted to Department of Agrarian services. •

		Agrarian services. • Identify appropriate models and modalities including community based resource management to manage areas outside PAs - restoration of forest patches, riverine forests, catchment reservations etc. to ensure linkages in landscape between ecosystems	

Annex 10: STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT FOR THE PROVISION OF SUPPORT SERVICES

HOW TO USE THIS LETTER OF AGREEMENT

- This agreement is used to provide appropriate legal coverage when the UNDP country office provides support services under national execution.
- This agreement must be signed by a governmental body or official authorised to confer full legal coverage on UNDP. (This is usually the Minister of Foreign Affairs, the Prime Minister /or Head of State.) The UNDP country office must verify that the government signatory has been properly authorised to confer immunities and privileges.
- A copy of the signed standard letter will be attached to each PSD and project document requiring such support services. When doing this, the UNDP country office completes the attachment to the standard letter on the nature and scope of the services and the responsibilities of the parties involved for that specific PSD/project document.
- The UNDP country office prepares the letter of agreement and consults with the regional bureau in case either of the parties wishes to modify the standard text. After signature by the authority authorised to confer immunities and privileges to UNDP, the government keeps one original and the UNDP country office the other original. A copy of the agreement should be provided to UNDP headquarters (BOM/OLPS) and the regional bureau.

Dear [name of government official],

1. Reference is made to consultations between officials of the Government of [the name of programme country] (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

(a) Identification and/or recruitment of project and programme personnel;

(b) Identification and facilitation of training activities;

(a) Procurement of goods and services;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project,

the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the [Insert title and date of the UNDP standard basic assistance agreement with the Government] (the "SBAA"), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

_____

Signed on behalf of UNDP

[Name]

[Title: Resident Representative]

_____

For the Government

Udaya .R. Seneviratne

Secretary, Ministry of Mahaweli Development and Environment

[Date]

Attachment

to the

STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT FOR THE PROVISION OF SUPPORT SERVICES

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between Ministry of Mahaweli Development and Environment and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed project "**Enhancing Biodiversity Conservation and Sustenance of Ecosystem services in Environmentally Sensitive Areas**" (Project Number: 00079607 Output Number: 00089554).

2. In accordance with the provisions of the letter of agreement signed on (date) and the attached project document, the UNDP country office shall provide support services for the Project as described below.

Support services (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
Services related to human resources (including but not limited to): 1. Identification, selection and recruitment of project personnel (including advertising, short-listing and recruiting): o Project Associate 2. HR & Benefits Administration & Management: o issuance of a contract; o closing the contract 3. Personnel management services: Payroll & Banking Administration & Management	April 2015 – June 2015 Ongoing throughout project implementation when applicable Ongoing throughout project implementation when applicable	As per the pro-forma costs: o 10 days over 60 months of GS5 HR Assistant: **1000 USD** o 4 days over 60 months of NOB HR Manager: **1000 USD**	UNDP will directly charge the project
Services related to procurement (including but not limited to):	Throughout project implementation when applicable	As per the pro-forma costs:	UNDP will directly charge the project

Procurement of goods Procurement of services o Consultant recruitment o Advertising o Short-listing & selection o Contract issuance		o 35 days over 60 months of GS5 Procurement Associate: **3000 USD** o 8 days over 60 months of NOB Procurement Manager: 17**00 USD**	
Services related to finance (including but not limited to): o Payments o Fund Transfers	Ongoing throughout implementation when applicable	As per the pro-forma costs: o 20 days over 60 months of GS6 Finance Associate: **2300 USD** o 6 days over 60 months of NOB Finance Manager: **1200 USD**	UNDP will directly charge the project
Services related administration (including but not limited to): o Travel authorization o Ticket requests (booking, purchasing, etc.) o F10 settlements o Asset management	Ongoing throughout implementation when applicable	As per the pro-forma costs: o 15 days over 60 months of GS5 Administration Assistant: **1600 USD** o 2 days over 60 months of GS7 Administration Manager: **350 USD**	UNDP will directly charge the project
Services related to ICT (including but not limited to): o Email box maintenance o ICT and office equipment installation and maintenance o Internet channel use o Mobile telephony contracting and use	Ongoing throughout implementation when applicable	As per the pro-forma costs: o 4 days over 60 months of GS5 IT Assistant: **350 USD** o 1 day over 60 months of GS7 IT Manager: **185 USD**	UNDP will directly charge the project
Total		**12,685 USD**	