



MINISTRY OF ENVIRONMENT
GOVERNMENT OF SRI LANKA

National Portfolio Formulation Exercise

GEF CYCLE V

GEF SECRETARIAT

3/5/2012

[The report provides an account of GEF work in Sri Lanka during the last two decades and then describes the process for the GEF cycle V preparation and briefly outlines the concepts identified in the thematic areas of biodiversity, climate change, land degradation and chemical management.]

TABLE OF CONTENTS

SECTION I Introduction

GEF and Sri Lanka: A retrospective (from programming perspective).....	06
GEF IV Sri Lanka RAF Performance.....	07
Criteria for Endorsement of GEF Projects- Sri Lanka.....	09
The Criteria Declared for GEF Funding by the National Operational Focal Point (NOFP)	09
SGP Country programme.....	11
Preparatory process of GEF 5 STAR Portfolio.....	12

SECTION II Programming Plan

Biodiversity.....	14
Perspective	14
Challenges	17
Global & Local benefits	17
Concepts Identified	18
Climate Change.....	29
Perspective	29
Challenges	31
Global & Local benefits	32
Concepts Identified	33
Land Degradation	36
Perspective	36
Challenges	37
Global & Local benefits	38
Concepts Identified	40
Chemicals.....	42
Perspective	42
Challenges	43
Global & Local benefits	44
Concepts Identified	44
Conclusion	50

GEF COUNTRY FOCAL POINT (POLITICAL)

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ACRONYMS (need to add more)

BCAP- Biodiversity Conservation in Sri Lanka- a Framework for Action
BDS- Biodiversity Secretariat
CBD-Convention on Biological diversity
CCA- Coast Conservation Act
COP-Conference of parties
CPB-Cartogena Protocol on Biosafety
FAO-Food & Agriculture Organization
GEF-Global Environment Facility
GHG-Green House Gas
GMO-Genetically Modified Organisms
IUCN-International Union for Conservation of nature
LMO-SLM-Sustainable Land Management
LULUCF-Land use Land use Change & Forestry
MDG-Millennium Development Goals
MEA-Multilateral Environment Agreement
MOE-Ministry of Environment
NBSAP-National Biodiversity Strategy & Action Plans
NPFE-National Portfolio Formulation Exercise
PCB-Poly Chlorinated Bi phenyls
POP-Persistent Organic Pollutants
SAICM-Strategic Approach to International Chemical Management
SFM-Sustainable Forest Management
STAR-System of Transparent Allocation of Resources
UNDP-United Nations Development Programme
UNFCC-United nations Framework Convention on Climate Change

SECTION I

INTRODUCTION

1.0 GEF and Sri Lanka: A Retrospective

As we move forward to become the “Wonder of Asia” the primary challenge confronting the government of Sri Lanka is to promote economic development, alleviate poverty and provide a higher quality of life for the people of the country. In order to realize the above objective care must be paid to safeguard the environment and ensure that natural resources are used in such a manner as to ensure that development will remain sustainable.

Sri Lanka’s landscape, vegetation, climate and its people had once blended to form an island of incredible beauty and serenity and the country was called “Serendip”. Much of this has changed over the past few centuries particularly in the past few decades. It is the people that have brought about these changes.

Optimising development and sustaining it will only be possible by managing the environment through protecting nature and the life support systems. The constitution, the supreme law of the country makes it “The state shall protect, preserve and improve the environment (Chapter iv, Article 27 (14), the constitution also places a duty and obligations on the people of the country when it states that “it is the duty of the every person to protect nature and conserve it’s riches (Chapter iv Article 28). The National Environment Policy (2003) along with the Cleaner Production Policy (2002), National Watershed Management Policy (2004), National Policy on Sand for the Construction Industry (2005, National Land Use Policy (2006), National Agriculture Policy (2005), National Air Quality Management Policy (2000), National Forestry Policy (1995), National Policy on Wildlife Conservation (2000), National Wetland Policy (2006) together with legislations such as National Environmental Act (1980), Coast Conservation Act (1980), Forest Ordinance ((1885) amended in 1966), Fauna and Flora Protection Ordinance (2009 No 22 (Amended)), has created an enabling environment for sustainable development. Environmental screening (EIA / IEE) is a mandatory requirement under the NEA for all the prescribed projects and within the coastal zone of the island it is under the purview of CCA.

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The growing concern of the government in the management of environment and natural resources and ensure sustainable development is well reflected in the national action plan “Mahinda Chinthana- a Vision for Future”- National Development Framework, developed to date. The “Haritha Lanka (2008) “, National Environmental Action Plan: Path to Sustainable Development (2008), National Biodiversity Action Plan (2001), National Climate Change Action Plan (2007), National Action Plan to Combat Land degradation are good good examples reflecting the commitment of the GOSL.

Sri Lanka has signed and ratified a number of Multilateral Environment Agreement (MEAs) paying a great attention to join hands with global community to address environmental problems and issues of global significance. The country is party to UNCCD, UNFCCC, UNCBD and Chemical Conventions such as Basel Convention on hazardous waste, Rotterdam Convention on industrial chemicals and Stockholm Convention on Persistent Organic Pollutants (POPs).

The Operational Focal Point (OFP , the Secretary Ministry of Environment plays an important role in operation and coordination aspects while the Political Focal Point (PFP) the Minister of Environment plays a vital part in policy and the governance issues related to GEF. Since the PFP and the OFP are placed in one agency it has created an enabling environment for smooth functioning of the activities.

Sri Lanka is one of the first countries which accessed GEF financing. To date Sri Lanka has received approximately US\$ 59.30 million for implementing 21 projects of nationally important from 1991 to 2011. In addition, Sri Lanka is involved in three regional projects of US\$ 19.89 and six global projects worth of US\$ 139.77. The GEF funds have also generated co-financing amounting to US\$ 341,90 million (National), US\$ 26.68 million (Regional) and US\$ 126.30 million (Global) from other donor agencies and the Sri Lanka government.

1.2 GEF IV Sri Lanka RAF Performance

The priority areas for GEF funding in Sri Lanka and the national criteria for endorsement of projects for GEF funding have been identified and formulated through a widely consultative process, involving both individual consultations and group discussions. The National GEF Strategy also addresses national requirements necessitated by the Resource Allocation Framework (RAF) - the new system adopted by the GEF since July 2006 - for allocating GEF

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resources to countries under the focal areas of biodiversity and climate change, based on global environmental priorities and country level performance as relevant to the successful implementation of GEF projects.

During the GEF Cycle IV Sri Lanka had received an allocation of US\$ 70 million for 08 projects (National 04, Regional 01 and Global 03). Of which 04 projects focussed towards biodiversity conservation, 02 projects climate change mitigation and 02 projects concentrated on MF. Details are given below;

1.2.1 Biodiversity

1. The project mainly concentrated on controlling alien invasive species which has become a serious threat to the biological resources as well as bio diversity in the island. Identifying, categorizing and inventorying of alien invasive species was a long felt need of the country in the process of conservation of Biodiversity. The project was supported by UNDP.
2. The UNEP supported project had focussed on agro biodiversity in the agro – ecosystems and the project was able to bring multiple benefits in the fields of biodiversity conservation, alleviation of poverty and reduction of GHG emission.
3. The project had paid a great attention to the decision support tools for the sustainable use of genetic diversity in the livestock and wild relatives. The project was implemented with the support of UNDP.
4. The forth project in the Biodiversity field for the wellbeing of human community and nutrition link to the wise use of Biodiversity.

1.2.2 Climate Change

5. UNDP / FAO supported project targeted to electricity generation through biomass using modern bio energy technologies to minimise GHG emission release.
6. This was a pilot scale project on Bamboo conservation, supported by GEF. Bamboo is a basic raw material used for many domestic cottage industries in the country. The project has been funded by UNIDO.

1.2.3 Multi Focal Area

7. The small grant programme has been successfully operated in Sri Lanka promoting diverse projects in line with the Government priorities. This programme operated in the island under RAF 1. Under this programme a number of small scale projects were implemented in the country successfully. The project was supported by UNDP.
8. Forth operational phase of the GEF small grant under the RAF 2, supported by UNDP was successful and a number of projects related to biodiversity, poverty reduction, GHG emission reduction were carried out during the implementation of RAF 2.

1.3 Criteria for Endorsement of GEF Projects- Sri Lanka:

The criteria for the selection of projects for GEF funding were developed by the Sri Lanka GEF Secretariat (Air Resource Management & International Relations Division of the Ministry of Environment) under the guidance of GEF National Operational Focal Point (Secretary/Ministry of Environment) through a consultative process. The criteria developed are in line with the requirements, guidelines, procedures and process of GEF agencies. In preparation of criteria special attention had been paid to ensure private sector participation in terms of satisfying both technical and financial resource requirements for successful project implementation.

1.4 The Criteria Declared for GEF Funding by the National Operational Focal Point (NOFP).

- Be country-driven and endorsed by the host Government
- Produce identifiable national and global benefits
- Have participation of all affected groups and transparency
- Be consistent with the relevant Conventions
- Possess strong scientific and technical merit
- Be financially sustainable and cost-effective
- Include processes for monitoring, evaluation, and incorporation of lessons learned
- Use GEF funding to play catalytic role to leverages other financing
- Have balance among GEF thematic areas and avoid all proposals being concentrated under a few strategic priorities.
- Have ecosystem and geographical balance so that many projects should not cover the same ecosystem type or geographical area as they have less possibility of receiving GEF support.

DRAFT REPORT OF NPFE-SRI LANKA

- Have institutional balance to prevent a concentration of projects under one management agency.
- Avoid duplication with other similar projects carried out in the country, but should seek to increase complementarily to other development projects.
- Conform to national priorities articulated in policies and plans (identified in the relevant National Reports for the Focal Area and National Sector Development Plan (“Mahinda Chinthana- a Vision for Future”- National Development Framework), recommendations of appropriate regional intergovernmental meetings or agreements strategies, country’s regulatory reforms, urgent national priorities that emerge in response to natural hazards and communications to conventions.
- Issues in the Priority Areas of the BCAP (UNCBD), NAP For Land Degradation (UNCCD), National Communication For climate change (UNFCCC) and the National Implementation Plan For POPs
- Address the priority areas given under the relevant focal areas in the National GEF Strategy.
- Be consistent with national obligations under a Convention for which GEF is a funding mechanism or is supporting.
- Indicate country ownership, sustainability and replicability, and promote a spread effect and wider stakeholder involvement and transparency.
- Have ability to attract co-financing and help to leverage other donor resources
- Support sustainable development and promote spread of best practices and lessons learnt.
- Meet international commitments and / or Millennium Development Goals or Joint Implementation Plans and World Summit on Sustainable Development Targets.
- Obtain endorsement from the Department of National Planning and the Department of External Resources prior to submission for endorsement by the NOFP.

In addition to these basic criteria project design criteria has also been developed as a guideline for project proposals. Apart from these two set of criterion special emphasis have been made to develop subject specific criteria “ Additional Criteria where relevant” in respect of biodiversity, climate change, land degradation, international waters and Persistent Organic Pollutants (POPs) focal area projects.

DRAFT REPORT OF NPFE-SRI LANKA

1.5 SGP Country Programme

GEF-SGP Sri Lanka was launched as a pilot initiative in 1995. Since then it has developed into a fully operational programme and is now in its fifth operational phase. GEF status category for Sri Lanka is 2c.

As indicated in the table below, during the past 15 years (1995 - 2010), the country programme has implemented 340 projects, amounting to US\$ 6,579,760 of funding, which also includes financial allocations received for implementing the Community Water Initiative (CWI) and Mekong Asia Pacific/Community Based Adaptation (MAP/CBA) initiative that provides assistance for implementing climate change adaptation activities at community level. In addition an amount of US\$550,000 (not included in the above total) was mobilized for rehabilitation and reconstruction of destroyed habitats and infrastructure in the aftermath of the December 2004 tsunami.

Operational Phase	Time Frame	GEF Funds (US \$)	Co - financing	No. of Projects	Focal Area of Projects					
					BD	CC	LD	POPs	MF	IW
Pilot Phase	1995-1997	181,442	140,000	15	12	-	-		3	
Phase I	1997-1999	400,000	467,000	49	39	3	-		7	
Phase 2	2000-2004	1,847,815	650,000	126	68	22	15		21	
Phase 3 - Year 1	Mar 2005- Feb 2006	1,150,000	640,000	33	11		08		14	
Phase 3- Year 2	Mar 2006 June 2007	750,000	279,000	31	08	06	10	4	03	
Phase 4 - Year 1	July 2007- June 2008	570,000 (270,000 RAF)	170,000	23	10	04	06	2	01	
Phase 4 - Year 2	July 2008- June 2009	605,000 (405,000 RAF)	393,000	23	12	02	03	1	05	
Phase 4 - Year 3	July 2009- June 2010	605,000 (405,000 RAF)	570,000	21	14	02	-	-	03	2
Total		6,109,257	3,309,000	321	174	39	42	7	57	2
CWI	Nov 2003- Jan 2008	220,503	91,000	13						
MAP/CBA	Nov 2010- Nov 2012	250,000	49,000	06						
GRAND TOTAL		6,579,760	3,449,000	340						
SSC SSGF UNDP Additional funding for tsunami rehabilitation work	Sept. 2005		350,000	13						
	January 2007		250,000	17						
Total			600,000	30						

The GEF funded projects have also helped to develop in-country capacity to identify and address national environmental problems that will help conserve the global environment; strengthened governmental and non-governmental organizations, the corporate sector and

DRAFT REPORT OF NPFE-SRI LANKA

communities to contribute towards environmental conservation. In doing so the GEF has communicated with not just key actors in government but with the public at large right down to the grassroots level. The capacities of the grass root level organizations, community at large has been increased tremendously with the input of GEF-SGP Thus the commitment of the CBOs, NGOs and the community is very high today and the awareness on current national and global environment issues and concerns are commendable. The contribution of GEF agencies to achieve these outcomes is very significant.

In preparation of the proposals due consideration was placed upon the indicative allocations of GEF STAR and the allocations for the respective thematic areas. The country is qualifying for US\$ 12.68 and under Biodiversity US\$ 7.84, Climate Change US\$ 2.67 and for Land Degradation US\$ 2.16 respectively (GEF / C.38. /Inf. 8 /Rev.1). For the Chemical management funding is outside STAR and no limits indicated.

1.6 Preparatory Process of GEF V STAR Portfolio – Sri Lanka

The Sri Lanka GEF Secretariat in consultation with the Ministry of Environment (National Focal Point for GEF) and the GEF implementing agencies operating in Sri Lanka UNDP, ADB, WB, UNIDO, UNEP and FAO, a series of stakeholder workshops were organised and a number of thematic areas related to biodiversity, land degradation, climate change and persistent organic pollutants, were identified in the light of the National Biodiversity Action Plan, National Climate Change Adaptation Strategy, National Action Plan to Combat Land Degradation, ‘Mahinda Chinthana- A vision for future’ National Development Framework, Haritha Lanka National Environmental Action Plan and Caring for the Environment Path to Sustainable Development etc.

Based on the outcome of the stakeholder workshops a preliminary discussion was held on 23rd December 2011 (where the senior management of the Ministry of Environment, Thematic Consultants (05) and the National Consultants (02) participated and selected few concepts for GEF funding. The concepts were further screened to ensure that they are well in line with the Government concerns and priorities. The concepts selected for GEF Cycle V funding were discussed in detail and selected seven (Biodiversity 04 (one with CC), Climate

DRAFT REPORT OF NPFE-SRI LANKA

Change 01, Chemical 01, Land Degradation 01) for develop as project proposals. The two national Consultants prepared an Action plan for the preparation of the GEF CYCLE V proposals and agreed with the GEF secretariat of the MOE. The First Consultative session on National Portfolio Formulation Exercise (NPFE) was held on 10th January 2011 with possible co-financiers and the thematic consultants made presentations on the thematic concepts identified. These were discussed in length and agreed upon for further development by the thematic and national consultants. The thematic consultants submitted their concept notes on 20th January 2012 and the National Consultants finalized the thematic concepts by 31st January 2012. These were circulated among the stakeholders by the GEF Secretariat. The second consultative session on the thematic concepts was held on the 24th February 2012 and the concepts was revisited. The national consultants presented the respective thematic concepts and subsequently thematic groups were formed and concepts were studied in depth. The concepts so developed are presented in this draft report.

The project concepts for GEF Cycle V prepared in consultation with the stakeholders are indicated below.

1. Strengthening implementation of the Convention on Biological Diversity through establishment of national institutional and legal regimes for effective access to genetic resources and ensure fair and equitable benefit sharing (BD)
2. Implementation of the Cartagena Protocol on Bio-safety (CPB) through mainstreaming the National Bio-safety framework to alleviate the potential risks on biodiversity.(BD)
3. Sustainable Forest Management and Capacity Building in the Protected Areas for Biodiversity Conservation and Maintenance of Ecosystem services (BD & SFM)
4. Agro biodiversity Conservation in Production Landscapes for Mitigating Climate Change Impacts. (BD &CC)
5. Expanding Market Penetration and Transformation to Renewable Energy Technologies in Household. Commercial, Industrial and Agricultural Sectors for Sustainable Development. (CC)
6. Rehabilitation of Degraded Agricultural Lands in the central Highlands of Sri Lanka with special Reference to N' Eliya and Badulla. (LD)
7. Sustainable Chemical Management (CM)

SECTION II PROGRAMMING PLAN

BIODIVERSITY, CLIMATE CHANGE LAND DEGRADATION & CHEMICAL MANAGEMENT

2.1 BIODIVERSITY

2.1.1 Perspective

Sri Lanka is one of the Island countries of the world rich in biological diversity. An area of about 6.57 mha, Sri Lanka has a varied climate and topography which has resulted in a rich biodiversity distributed with in a wide range of ecosystems. It is the result of the varied edaphic, climatic and topographic conditions. Sri Lanka has 14 Great Soil Groups, 23 Agro-ecological regions (Panabokke & Kannangara, 1996), 15 floristic regions (Ashton & Gunathilake, 1987) and four major ecosystems divided in to 29 sub-systems. Its 103 River basins and the coastal region provide greater diversity to its biota. This immense diversity has contributed to the rich biological diversity with large variation in species of plants, animals and microbes. The various facets of biodiversity related richness of the country can be gauged from the following:

Salient features:

- Sri Lankan biotas are a mix of many different elements. The floristic elements are Sri Lankan, Indo-Sri Lankan, Himalayan, Malayan, African, Pantropic and Cosmopolitan (Abeywickrema, 1956). The faunal affinities are of Indian, Malaysian, Indonesian, African and Madagascar (Crusz, 1984).
- Sri Lanka has 15 bio regions, namely, Arid, Dry, Intermediate, Lowland wet, Sub-montane wetlands, Wet highlands, Intermediate highlands, Mineral sands, Eastern lagoon systems, Wildlife habitat, Near shore coral beds, Coastal marshes and lagoon systems, Western marshes, Large off-shore coral beds and Limestone beds. The country also has one global biodiversity hotspot.
- Sri Lanka is endowed with vast forest resources. The recent estimates of the closed-canopy forest cover in the island range from 22% (Anonymous, 2004) to 25.7% (Rathnayake et al., 2002).

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- Sri Lanka's Protected Area System include three Internationally important Wetland sites, Bundala NP, Anawilundawa Sanctuary and Maduganga Sanctuary declared under the Ramsar Convention on Wetlands of International Importance. Further it has four International Man & Biosphere Reserves (Sinharaja, Hurulu, KDN and Bundala) declared under the UNESCO World Heritage Convention. Sri Lanka also has two natural World Heritage sites, Sinharaja and Central Highlands.
- Sri Lanka is rich in Floral and Faunal endemism. Among the invertebrates, 47% Dragon flies, 100% Fresh water crabs and 83% Land snails are endemic. In Vertebrate Fauna 85% Amphibians, 59% Reptiles and 54% Fresh water fish are endemic. In flora 24% Angiosperms, 14% Ferns and 11% Mosses are endemic.
- The Agricultural Biodiversity is also of significant importance since the country has a long history of agricultural practice. The national Herbarium confirms that there are over 400 species of CWRs in the country. The recently concluded crop wild relative project identified five priority crops for conservation and they are Paddy, Pepper, Green Gram/Black Gram, Cinnamon and Banana CWR. The PGRC has 11205 accessions of 150 species in their germplasm collection. In addition the other major crop research institutes (ten crop groups) have 10444 accessions.
- Diversity in Farm animals & fisheries is also important. The indigenous cattle are believed to be a local breed. Despite their low genetic potential for milk yield they possess several adaptive traits such as resistance to disease, ability to feed on coarse grasses, tolerance of high level of internal parasitism, low requirement of water etc. These traits could be preserved and used in cross breeding programmes with improved high yielding breeds to retain the favorable traits. Several other farm animals and cultivated fish species also possess useful traits that we need to retain.

Sri Lanka's commitment to Conservation of Biodiversity has been amply demonstrated by ratifying the Convention on Biological Diversity (CBD) in 1994. Following the recommendations of Bio Diversity Conservation in Sri Lanka- a Frame Work for Action (BCAP-1999) the Bio Diversity Secretariat (1999) was established in the MOE to coordinate the activities related to fulfilling the obligations of the CBD and for the implementation of the BCAP.

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Sri Lanka with strong institutional, legal and policy framework has the potential to emerge as one of the leaders in biodiversity conservation, and to play an important role in setting the global agenda on biodiversity in this UN Decade on Biodiversity. Sri Lanka is committed to conservation of its rich biodiversity not only because it provides several goods and ecosystem services, but also because it is directly linked to providing livelihoods to millions of local people and contribute to sustainable development and poverty alleviation. The rural population living in the periphery of large tracts of forest reserves and protected areas, managed by the Forest Department and Department of Wildlife Conservation respectively, depend for their livelihood. Some of the key policies that has been developed over the years that has a bearing on Conservation of Biological Diversity include the National Forest Policy (1995), National Policy on Wildlife Conservation (2000), National Watershed Management Policy (2004), National Wetland Policy (2005), National Policy on Elephant Conservation (2006), National Environment Policy (2003) and National Policy on Biotechnology & Bio safety (2004).

The Biodiversity Conservation in Sri Lanka- a Frame Work for Action (BCAP-1999) is the main policy frame work for Bio Diversity Conservation in Sri Lanka. Over the years several strategies and action plans have been developed. They include Caring for Environment 2003-2007; Path to Sustainable Development, National Sustainable Development Strategy, Updated the Coast Conservation Master Plan (2000) as the National Coastal Resources Management Plan (2003), National Invasive Species Action Plan, National Wetland Conservation Action Plan (2004), National Bio safety Action Plan (2004) and the National Action Plan on Alien Invasive Plants (2004). The National Wetland Directory has been updated (2006) as a follow up of the adoption of the Wetland Policy and several Provincial Bio Diversity profiles (except Northern, and Sabaragamuwa) have been developed as part of a new policy initiatives resulting from BCAP. The MOE/BDS in collaboration with the IUCN has compiled the 2007 Red list of Threatened Fauna and Flora of Sri Lanka.

The Global Biodiversity Outlook 3 released during COP 10 at Nagoya, Japan presents a grim scenario. The pressures leading to biodiversity loss are either constant or increasing in intensity, bringing us closer to potential tipping points (also, due to climate variability). This would reduce the capacity of ecosystems to provide essential services, thereby adversely

DRAFT REPORT OF NPFE-SRI LANKA

impacting food security, poverty eradication and human well being in general. This would most adversely affect the subsistence of the rural poor, who depend most directly and immediately upon ecosystem services for their livelihoods. There is an urgent need to recognize and integrate the contributions made by biodiversity services to poverty alleviation efforts and to national economic growth. The intrinsic nature of biodiversity and multiple natures of stakeholders underline the need for forging partnerships at various levels to improve conservation and sustainable use of biodiversity in Sri Lanka. Sri Lanka is currently a member of the World Heritage Council.

Sri Lanka has submitted four National Reports on Biological resources for the CBD since mid-nineties, the last being the fourth National Report on 2010.

2.1.2 Challenges

The multitude of anthropogenic activities poses a major threat to the future survival of threatened species coupled with insufficient resources for follow up, implementation and coordination activities of the BDS. The human activities leading to bio diversity loss are habitat loss, modifications and fragmentation, poaching and over-exploitation of species and spread of invasive alien species. There are also links to impacts of global climate change on forests and local climate change and acidification of rain water on endemic herpetofauna and land snails having restricted distribution.

Despite the establishment of the BDS as the focal point for implementation of the CBD in Sri Lanka the inadequate resources provided for it does not allow it to expand its work in a more rational way. The BDS currently operate without adequate man power, space and technology. It needs a proper cadre to undertake the full scope of the activities listed in the BCAP. Despite all these set back BDS has performed commendably over the last decade.

2.1.3 Global & Local benefits

It provides stability to agricultural systems, habitats for wild pollinators and pest enemies. At species level it provides diversity of food types & other useful products for man. Creates habitats for useful species, coastal & marine ecosystems have supported fisheries, forests

DRAFT REPORT OF NPFE-SRI LANKA

have produced energy and timber. The forests provide various woody and non woody products for the man.

The plants and animals play a key role in maintenance of the ecological processes such as nutrient recycling, forest regeneration etc. at ecosystem level act as buffer for environmental changes and maintain the productivity. The diversity also encourages recreation and tourism and plays a significant role in cultural values as well.

2.1.4 Project Concepts Identified

(A) ACCESS & BENEFIT SHARING:

Project Title: Strengthening implementation of the Convention on Biological Diversity through establishment of national institutional and legal regimes for effective access to genetic resources and ensure fair and equitable benefit sharing

Country: Sri Lanka

GEF project ID:

GEF Agencies: UNDP/ /FAO

GEF Agency project ID:

Other Executing partners: Ministry of Environment, Department of Forest, Department of Wildlife, Ministry of indigenous medicine, Department of Ayurvedic Medicine, IUCN

Submission Date:

GEF Focal area: Biodiversity objective 4-Build capacity on Access to Genetic Resources & Benefit Sharing

Project Objective: To establish a regulatory system and an institutional mechanism to enhance access to Biological Resources (including all genetic resources) and benefit sharing while ensuring conservation and sustainable utilization of traditional knowledge, farmers rights, intellectual property rights and bio cultural protocols

Project Framework:

Project Component	Expected outcomes	Expected Outputs	Finances (GEF) \$
Mainstreaming access to genetic resources and benefit sharing into national development plans and programs	<ul style="list-style-type: none"> • National and sectoral policies and regulatory framework including arbitration process on Access to Genetic Resources (AGR) and benefit sharing (BS) strengthened, where required, newly developed • Decision making on AGR and BS at national, state and local levels strengthened 	<ul style="list-style-type: none"> • Regulations and national and sectoral policies on AGS and ABS strengthened, and harmonized across sectors • National Strategy and Action Plan on AGR and BS finalized and implemented • Provincial and national level institutional network is strengthen to instill the implementation of Action Plan on AGR and BS 	250,000
Capacity building on AGR and BS	<ul style="list-style-type: none"> • Institutional capacities and staff competences are built/ strengthen to facilitate arbitration at national and international levels • Institutional capacity and staff competences on AGR and BS built to provide national level support for implementing AGR and BS 	<ul style="list-style-type: none"> • Staff of relevant state institutes (50 numbers) are trained on arbitration process to be followed in national and international scenarios • At least 500 staff of state (national and local government levels), private sector and community based organizations trained on AGR and BS • Public awareness and Participation programs developed at national level on AGR and BS and in at least 5 Provinces with focus on BS; • Focal state agency formally mandated, 	400,000

DRAFT REPORT OF NPFE-SRI LANKA

	<ul style="list-style-type: none"> • Collaboration with and capacities in Partner Networks of the Biodiversity Conservation and utilization are strengthened 	<p>staffed and operating to coordinate AGR and BS</p> <ul style="list-style-type: none"> • A multi-stakeholder advisory forum on AGR and BS established supporting the national efforts 	
<p>Globally significant genetic resource areas are identified and community based AGR and BS activities piloted</p>	<ul style="list-style-type: none"> • Area Specific biodiversity registers in place • Traditional knowledge under selected themes are recorded and documented • Information generation and dissemination on bio-prospecting is established and facilitated • Regulatory mechanism for bio-prospecting is in place • Village Seed Banks are in place • Farmer groups and Field multiplication plots established • Community-based sustainable production and <i>in-situ</i> biodiversity conservation and rehabilitation is strengthened • Pilot Biodiversity Conservation and Utilization Models with combined 	<ul style="list-style-type: none"> • 09 nos of Biodiversity Registers prepared covering 09 provinces • 05 national Traditional Knowledge records prepared under 05 specific themes • A collection of new and useful biological samples and mechanisms is prepared • Capacity of 3 national level laboratories are developed in order to facilitate (by testing, processing and verification) the bio-prospecting • 10 Nos of Village Seed Banks established • 10 farmer groups and 50 ha of field multiplication plots established • Five <i>In situ</i> biodiversity conservation and utilization areas established in 5 provinces • Four Biodiversity Conservation and Utilization Models piloted in selected 	1,250,000

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	<p>objectives for income generation, sustainable production and biodiversity conservation are established</p> <ul style="list-style-type: none"> • Better and informed access to genetic resources under the provisions of regulations established possible with equitable benefit sharing options. 	<p>agro-ecosystems</p> <ul style="list-style-type: none"> • Establishment of Biodiversity Fund at national, and local levels supported in at least 5 provinces 	
Project Management, Monitoring & Evaluation			125,000

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(B) BIO-SAFETY

Project Title: Implementation of the Cartagena Protocol on Biosafety (CPB) through mainstreaming the National Biosafety framework to alleviate the potential risk on biodiversity.

Country: Sri Lanka

GEF project ID:

GEF Agencies: UNDP//FAO

GEF Agency project ID:

Other Executing partners: Ministry of Environment
Ministry of Agriculture
IUCN

Submission Date:

GEF Focal area: Biodiversity Objective 3 – Build Capacity for the Implementation of the Cartagena Protocol on Bio-safety (CPB)

Project Objective: Ensure the effective implementation of the National Biosafety Framework of the country by establishing a regulatory system in managing and monitoring of both Genetically Modified Organisms (GMOs) and Living Modified Organisms (LMOs).

Project Framework:

Project Component	Expected outcomes	Expected Outputs	Finances (GEF) \$
Mainstreaming Bio-safety Framework in national regulatory process and related programs	<ul style="list-style-type: none"> • National Bio-safety master plan is in place • The implementation of the National bio-safety framework (NBF) keeping in line with the CPB is strengthened to ensure the effective regulation of GMOs and LMOs. • Regulatory Strategies on bio-safety at national and local levels is in place. 	<ul style="list-style-type: none"> • Bio-safety activities are properly regulated at national, provincial and institutional levels • Implementation strategies of NBF at national and sectoral levels are regularized • National Bio-safety Framework is implemented to ensure the proper management of LMOs. 	200,000

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	<ul style="list-style-type: none"> Strengthen National Bio-safety Clearing House Mechanism (CHM) 	<ul style="list-style-type: none"> Bio-safety Regulatory Strategies (risk assessment and monitoring) are in operation. 	
Capacity building of different stakeholder institutes on the bio-safety regulatory process	<ul style="list-style-type: none"> Building the capacities of national Institutions on bio-safety regulations, management and monitoring. Building the capacity on networking mechanism in order to effective implementation of bio-safety regulatory process Capacity in the Department of Customs, Department of Health and other respective regulating institutions are developed in GMO and LMO Testing and Identification 	<ul style="list-style-type: none"> At least 500 numbers of staff trained in state (national and local government levels) on CHM, risk assessment and monitoring processes The operations of focal point for the clearing house mechanism is strengthened Multi-stakeholder networking for identifying, informing and managing GMOs and LMOs in comply with CPB articles (7 and 18). 50 Officials are trained in GMO and LMO Testing and Identification The adequate analytical capacities (adequate enough for accreditation) of at least 3 laboratories are built Adequate numbers of GMO and LMO Test kits made available 	500,000
Enhance the public awareness on the national bio-safety framework	<ul style="list-style-type: none"> Raised public awareness on GMOs and LMOs, bio-safety issues and regulations. Public participation in bio-safety regulatory process is enhanced. 	<ul style="list-style-type: none"> Effective communication and information system for general public is in operation. TV and mass media programs on bio-safety concerns and issues aiming at general public conducted in three languages Seminars and workshops aiming at creating awareness among the policy makers, scientists/academia and general public 	500,000
Project Management, Monitoring & Evaluation			110,000

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(C) SUSTAINABLE FOREST MANAGEMENT

Project Title: Biodiversity Conservation and sustenance of Ecosystem services in Protected Areas

Country: Sri Lanka

GEF project ID:

GEF Agencies: UNDP/FAO

GEF Agency project ID:

Other Executing partners: Ministry of Environment (Forest Department)
Ministry of Agrarian Service and Wildlife (Department of Wildlife Conservation)
Ministry of Economic Development
Ministry of Higher Education (Universities)
Ministry of Technology and Research (National Science Foundations, National Research Council)
Ministry of Agriculture (Sri Lanka Council for Agricultural Research Policy)
Ministry of Finance (Department of National Planning)
IUCN

Submission Date:

GEF Focal area: Biodiversity Objective 1: Improve sustainability of Protected Area Systems
Sustainable Forest Management Objective 1: Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services

Project Objective: To enhance protection and conservation in the Protected Area Systems through Sustainable Forest Management practices, fostering markets for certified forest products and increased income of buffer-zone communities

Project Framework:

Project Component	Expected outcomes	Expected Outputs	Finances (GEF) \$
Implementation mechanisms to assist biodiversity conservation in protected areas	<ul style="list-style-type: none"> • Appropriate and comprehensive mechanisms for protected area management developed and approved • Monitoring capacity of protected area management is established 	<ul style="list-style-type: none"> • mechanisms relating to sustainable forest management developed and implemented • State and provincial procurement mechanisms for certified forest products • Decrease in the illegal trade. • National and sub-national level monitoring system for protected area management • National and sub-regional level data bases on the protected areas (species, ecosystems and services) are in place • The capacity of at least 50 staff members representing national and sub-national level state organizations is developed on collection, management and analysis of data in decision making process • Mainstreaming of decision making process in adoptive management is enabled 	250,000
Strengthen capacity of communities to support sustainable protected area management and partnership development	<ul style="list-style-type: none"> • Forest area protected through a biodiversity-friendly certified forest management scheme • Best practices in biodiversity-friendly forest management practices, and forest product development, certification and 	<ul style="list-style-type: none"> • 1000 forest- dependent community members trained on sustainable forest management and maintaining certification standards for forest products • Communication strategy for the best practices dissemination • 10 sites in protected areas demonstrating best practices • 25% increase of the state and private sector 	1,000,000

DRAFT REPORT OF NPFE-SRI LANKA

	use, piloted	investment through partnership agreements on sustainable protected area management <ul style="list-style-type: none"> • 10 new alliances established between producers and national or international buyers with procurement commitments for certified forest products 	
Piloting Conservation initiatives in critical and less explored areas	<ul style="list-style-type: none"> • Conservation activities in critical and less investigated areas are developed and initiated 	<ul style="list-style-type: none"> • Biodiversity status, including critical issues related to Biodiversity of 10 critical and less investigated areas are documented • Community participation in conservation of at least 5 identified critical species is piloted. • Livelihood development activities of participating communities are strengthened. • Increased sales for certified forest products • Increased income of forest-dependent local communities through sustainable forest management practices • Well-articulated demand and supply chain capacity to process and trade in certified forest products 	1,500,000
Project Management, Monitoring & Evaluation			130,000

(D) AGRO-BIODIVERSITY CONSERVATION IN PRODUCTION LANDSCAPES:

Project Title: Agro-biodiversity Conservation & Ecosystem restoration in Production Landscapes for Mitigating Climate Change Impacts

Country: Sri Lanka

GEF project ID:

GEF Agencies: UNDP

DRAFT REPORT OF NPFE-SRI LANKA

GEF Agency project ID:

Other Executing partners: Ministry of Environment
 Ministry of Agriculture
 IUCN

Submission Date:

GEF Focal area: Biodiversity objective 2- Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors

Climate Change Objective 5- Promote Conservation & enhancement of carbon stocks through sustainable management of land use, land use change and forestry

Project Objective: To enhance CO₂ sequestration and reduce GHG emissions through restoration of agro-biodiversity in order to contribute to the global efforts on mitigating climate change

Project Framework:

Project Component	Expected outcomes	Expected Outputs	Finances (GEF) \$
Strengthen knowledge base	<ul style="list-style-type: none"> Integrated knowledge base on conservation of agro-biodiversity as an important means of climate change mitigation strategy 	<ul style="list-style-type: none"> Assessment of level of adaptation of the agro-biodiversity under changing and variable climate in 4 agro-ecosystems Assessment of the restoration needs of the degraded ecosystems Assessment of the level of contribution of the adapted agro-biodiversity on enhancing CO₂ sequestration and reducing GHG emissions and other economic, social and environmental benefits National database and web portal on adapted agro-biodiversity is established and linked with global databases 	750,000
Policy support for effective implementation	<ul style="list-style-type: none"> National Climate Change Mitigation Policy framework is 	<ul style="list-style-type: none"> Policies related to in situ agro-biodiversity conservation is developed 	100,000

DRAFT REPORT OF NPFE-SRI LANKA

	strengthened	where appropriate, strengthened and harmonized across sectors	
	<ul style="list-style-type: none"> • Comprehensive national and regional strategic approaches for using agro-biodiversity as a mechanisms for climate change mitigation 	<ul style="list-style-type: none"> • National strategy and action plan for using adapted agro-biodiversity for climate change mitigation. 	
Capacity building and Technology Transfer	<ul style="list-style-type: none"> • Actions of all stakeholders guided by practical, policy relevant and timely information on adapted agro-biodiversity • Best practices on use of agro-biodiversity for conservation and restoration of degraded ecosystems for climate change mitigation piloted • Community initiatives for conserving adapted agro-biodiversity for climate change mitigation promoted 	<ul style="list-style-type: none"> • Focal state agency formally mandated, staffed and operating to coordinate renewable energy use efforts • Advisory forum on agro-biodiversity for climate change mitigation established • Information gaps on use of agro-biodiversity for climate change mitigation is filled through primary research, surveys and monitoring • Best practices in conserving agro-biodiversity and restoration of agro-biodiversity in degraded ecosystems for climate change mitigation identified and piloted in 4 agro-ecological regions • Capacity of stakeholders enhanced through establishment of communication strategies 	650,000
Project Management, Monitoring & Evaluation			125,000

2.2 Climate Change

2.2.1 Perspective

Sri Lanka has placed much emphasis and concern on climate change variability and change which is heralded as one of the major threats to the global society. The agriculture, fisheries and health sectors are experiencing dramatic changes due to climate change and global warming. The coastal economy of the island would face a significant risk resulting from the predicted sea level rise. The reversals of the catastrophes in these sectors and the efforts of poverty reduction of the Government of Sri Lanka would fail inevitably if the climate change issues are continuously ignored.

The CO₂ emission from fossil fuel combustion (estimated at 2007) is about 12400 Gg. CO₂ which is only 0.04% of the global emission of 29300 Mt Carbon Dioxide. The corresponding per capita CO₂ emission was 648 Kg in 2007. Despite that fact that the GHG emissions is still much less than the global values estimated by the United Nations Framework Convention on Climate Change (UNFCCC), Sri Lanka has taken many policy measures that would result in mitigating GHG emissions. In keeping with the global concern on sustainable development, the Government of Sri Lanka has taken many policy and programme initiatives towards sustainable development which in turn help to mitigate the adverse impact of climate change. The measures for Mitigation have been promoted in all the sectors including energy (power, transport, industry, household and commercial), land use, forestry, waste, and etc.

The Haritha Lanka (Greening Lanka) National Programme (HLNP), focused on management of environment and conservation of natural resources to ensure sustainable development, among its many recommendations has recommended for switching from non renewable energy to renewable energy by 75% during the 2009 – 2016 period. Compared to energy consumption in 1972 with the same of 2006 it is revealed that the country has been moving from biomass to thermal energy. According to the energy balance sheet 60% of the thermal energy (2010) had originated from petroleum.

DRAFT REPORT OF NPFE-SRI LANKA

The Ceylon Electricity Board (CEB) has carried out a study at divisional, district and provincial levels to identify households to which electricity cannot be supplied from the national grid. The study has identified 37814 households in the process and the CEB will provide electricity to these households through sustainable renewable energy sources. The Government expects to provide electricity to the entire country before end of 2012.

The government of Sri Lanka has taken a number of initiatives in policy regime, regulating systems and institutional framework to minimize possible adverse impacts on biological resources & its diversity, food & food security and health & sanitation. Some of those effective measures are;

- Set up a Centre for Climate Change Studies (CCS) in the Meteorology Department
- Establishment of National Ozone Unit in (NOU) the Ministry of Environment.
- Establish a National Cleaner Production Centre (NCPC) in the Ministry of Industries.
- Establishment of the Biodiversity Secretariat in the Ministry of Environment.
- Establishment of the Climate Change Secretariat in the Ministry of Environment.
- Set up National expert Committees on Land Degradation, Climate Change and Biodiversity

The role of the expert committees is to advise respective Ministries and Departments on land degradation, climate change and biodiversity issues encountered in the country. In addition the following tasks related to climate change has also been completed. Leadership in Energy and Environmental Design (LEED), “Greening Sri Lankans Hotels Programme”, an establishment of the Sri Lanka Sustainable Energy Authority in 2007 are some of the other initiatives and they will reduce the Carbon foot print in the service sector.

- National Climate Change Adaptation Strategy for Sri Lanka 2011 to 2016
- National Climate Change Policy 2011
- Climate Change Technology Need Assessment
 - Adaptation (Biodiversity, Water, Agriculture, Health and Coastal)
 - Mitigation (Energy, Industry, Transport and Waste)
- Climate Adaptation Action Plan (in progress) and scheduled to be completed by the end of 2012

DRAFT REPORT OF NPFE-SRI LANKA

- National Communication one and two completed and third is in progress
- Caring for the Environment one and two
- Sri Lanka Environmental Outlook 2009
- Haritha Lanka (Green Lanka) National Action Plan (HLNAP) :

The national action plans of the country had paid great attention towards climate change mitigation and adaptation. The Haritha Lanka (Green Lanka) National Action Plan (HLNAP) launched in 2008 by the government of Sri Lanka which is implemented through a holistic and an integrated approach provide an important evidence for the commitment of the country in tackling environment related issues seriously. The HLNAP has been formulated under nine thematic areas viz Clean Air Every Where, saving the Fauna, Flora and eco systems, Healing the Challenges of Climate Change, Wise use of Land resources, Doing away with Dumps, Water for All and Always, Green Cities for Health and Prosperity, Greening the Industries and Knowledge for right Choices to ensure national commitment of Sustainable Development, while addressing the climate change objectives and the mitigation of greenhouse effect. In the light of these developments it was decided to submit a proposal for GEF Cycle V under Climate Change focal area for renewable energy development in the country.

2.2.2 Challenges

Though the country is well below the base line (1992) from the GHG emission point of view, a number of steps have been taken to address the climate change issue in Sri Lanka. The following major challenges have been encountered in the process of addressing the issue.

- **Decreasing the use of fossil fuel for electricity generation**, the country is highly depending on fossil fuel in producing electricity to meet the local demand. Moving from non renewable to renewable sources is a must but is a major challenge since non availability of low cost renewable energy technologies.
- **Promoting and Popularizing of Renewable Energy Technologies**, it is noted that promotion and popularizing of climate friendly technologies are difficult since lack of awareness of benefits link to RET and high cost of application of RET.

DRAFT REPORT OF NPFE-SRI LANKA

- **Non availability of sector specific RET** to meet the specific requirements of the vital sectors (household, agriculture, commercial and industry) in bringing down GHG emission.
- **Lack of funds for new innovation and invention of RET** applicable to local conditions to minimize GHG emissions. There are a set of R&T institutions but hardly engaged in RET activities.
- **Lack of inventor promotion scheme** to promote and encourage researchers on RET to meet the local demand and support the government's effort in addressing climate change issue.
- **Lack of funds for adequate investments on climate change mitigation** It is rather difficult to find sufficient funds to invest on climate friendly activities, with the other national commitments viz free education, free health care facilities etc.

2.2.3 Global & Local Benefits

The proposed project will generate socio economic and environmental benefits (short term & long term, primary & secondary, tangible & intangible) for both local and global communities. The significant of them are noted below;

1. *Reduction of GHG emissions*

Energy efficient technologies developed for application of renewable energy will reduce the consumption of non-renewable energy (Fossil Fuel) leading to Reduction of a fair volume of CO₂. The use of biogas (based on urban waste) in day today activities will also minimize releasing of (CH₄) to the atmosphere mitigating the climate change impacts at global scale.

2. *Minimize threat to the Biodiversity*

Application of the fuel (fire wood) efficient stow for cooking purposes specially in the rural areas of the country (70% of the population living in rural areas) will reduce the threat to the natural forests and the forest plantations and thereby support for the conservation of forest biodiversity of Sri Lanka.

3. *Improve system performance*

Strengthening the capacities of institutions designated for energy supply and energy conservation will ensure to deliver an efficient and effective service.

DRAFT REPORT OF NPFE-SRI LANKA

4. Sustainable Development

As committed by the government of Sri Lanka, the proposed project will contribute for the realization of the national goal on sustainable development.

5. Carbon Credit

The country will qualify for Carbon Credit through reduction of GHG emissions by sustainable urban waste management and curtailing the consumption of fossil fuel.

2.2.4 Project Concepts identified

Project Title: Expanding Market Penetration of and Transformation to Renewable Energy Technologies in Household, Commercial, Industrial and Agriculture sectors for Sustainable Development

Country: Sri Lanka

GEF project ID:

GEF Agencies: UNDP/UNIDO

GEF Agency project ID:

Other Executing partners: Ministry of Environment
Ministry of Power and Energy
Sri Lanka Sustainable Energy Authority
Sri Lanka Energies (Pvt.) Ltd. / Ceylon Electricity Board
Sri Lanka Energy Managers Association (SLEMA)
Ministry of Higher Education (Universities)
Ministry of Technology and Research (National Science Foundation, National Research Council)
Ministry of Agriculture (Sri Lanka Council for Agricultural Research Policy)
Ministry of Industry and Commerce
Ministry of Petroleum Industries
Sri Lanka Standards Institute
Board of Investment of Sri Lanka (BOI)
Ministry of Traditional Industries & Small Enterprise Development
Ministry of Urban Affairs
Ministry of Fisheries and Aquatic Resources Development
Provincial Councils
Samurdhi Authority of Sri Lanka
NGOs
National Engineering Research and Development Centre of Sri Lanka (NERD)

DRAFT REPORT OF NPFE-SRI LANKA

Date of Submission:

GEF Focal Area: Climate Change Objective 3: Promote investment in renewable Energy Technologies

Project Objective: To promote investment in Renewable Energy Technologies in household, commercial, industrial and agriculture sectors for achieving Sustainable Development.

Project Framework:

Project Component	Expected outcomes	Expected Outputs	Finances (GEF) \$
Creating an Enabling environment in regulatory & policy regimes and facilitating the promotion of Renewable Energy.	<ul style="list-style-type: none"> • Appropriate and comprehensive renewable energy-friendly policies and legal framework developed and approved, reducing the impacts of climate change • Strategic approaches for using renewable energy developed as mitigatory measures to climate change • Financing strategies to fund for promoting use of renewable energy technologies focusing on a “green industry” established 	<ul style="list-style-type: none"> • Laws and policies relating to renewable energy technologies developed, harmonized across sectors • National renewable energy use Strategy and Action Plan are finalized keeping in line with the state policies and legislation. • Fiscal and market-based instruments to support renewable energy technologies and their application identified and endorsed by the government • Industry specific financing strategies for renewable energy piloted 	150,000
Institutional and operational capacity for planning and management of renewable energy technology transfer strengthened	<ul style="list-style-type: none"> • Integrated institutional and planning structure for transforming to renewable energy technologies including market chains, is in place and being implemented across sectors • Actions of all stakeholders guided by practical, policy relevant and timely information on renewable energy technologies and their benefits 	<ul style="list-style-type: none"> • Focal state agency formally mandated, staffed and capacitated to coordinate renewable energy applications. • Inter-sectoral, multi-stakeholder advisory forum on renewable energy established to support national efforts • Information gaps on renewable energy application filled through primary research, surveys and monitoring 	350,000

DRAFT REPORT OF NPFE-SRI LANKA

<p>Scaling-up of the National Program on Renewable Energy-based Integrated Development</p>	<ul style="list-style-type: none"> • Technical and enforcement capacity is strengthened within designated agencies to promote the use of renewable energy technologies • Broad-based public support for renewable energy technologies • Partnerships between public and private sectors, NGOs in investing and promoting renewable energy technologies established. • Minimizing the GHG emissions through transformation to efficient and effective renewable energy technologies • Innovation and Invention of Renewable Energy Technologies low cost and fit in to Sri Lankan conditions promoted. 	<ul style="list-style-type: none"> • At least 1000 staff from public, private and NGO sector are trained on renewable energy technologies, their benefits and its application • Business and economic cases for transforming to renewable energy prepared and shared stakeholder agencies • National strategy for communications, outreach and dialogue on renewable energy usage implemented, involving representatives from state and private sector industries and enterprises as well as the general public • 50% increase in investment on renewable energy technologies • Renewable energy applications technologies demonstrated over identified pilot locations involving state and private sector industries and enterprises and general public, focusing on green industry • Lowered GHG emissions by 50% from the baseline especially in the urban sector of country resulting from enhanced use of renewable energy technologies in household, commercial, industrial and agriculture activities • R & D Research Centres focused on Renewable Energy Technologies selected and strengthened. 	<p>1,250,000</p>
<p>Project monitoring & Evaluation</p>			<p>100,000</p>

2.3 Land Degradation

2.3.1 Perspective

Sri Lanka being an agriculture based society had recognized the importance of proper land management from the very beginning. The ancestors were keen and wise enough to bring the land under zoning, allocating lots for settlements, for agriculture and for watersheds (forests) and thereby maintained the land resource of the island at a minimal degradation up to 19th century.

Degradation of land due to soil is of much concern because of its consequences on agriculture, which is major contributor to the country's GDP. Only about 31% of the total land area is arable. The contribution from land based activities to GDP has declined to 18% (2006) compared to 26% in 1978, due to growth of the service sectors in the economy. Many land use practices, past and present have reduced the productive capacity of soil and land in the country. The process of soil erosion intensified in the 19th century with the expansion of human settlement and cultivation of upland rain fed crops. This was aggravated by the changes in land use patterns during the 19th century when upper catchments of major rivers located in the central highlands were stripped natural vegetation to make way for plantation agriculture such as coffee and tea. Land clearing continued even after independence primarily for the establishment of human settlements.

In Sri Lanka, major contributors to land degradation are soil erosion and soil fertility degradation. Over exploitation of ground water, salinization, water logging and water pollution are also becoming important contribution to land degradation. According to the Global Assessment of soil degradation, about 50% of the land is degraded. The area affected by soil fertility decline is 61% of the total agricultural land.

It is reported that 44% of the total farm lands in the country suffer from some form of land degradation and about 30% of the land in dry zone is degraded and unsuitable for agriculture while 30% of tea lands in the wet zone is considered to marginally or uneconomically for continued cultivation. It is established that soil erosion rates in the hilly region of the country could be as high as 100 tones / ha / year ((Sri Lanka Environmental Outlook, 2009).

DRAFT REPORT OF NPFE-SRI LANKA

Much of the erosion has been taking place in the hill country, the problem being given over to the cultivation of highly erosive temporary crops such as vegetables, potatoes and tobacco, seedling tea.

Although the island has a special legislation” Soil Conservation Act “far back in the 20th century for combating land degradation the concern for arresting and reversing land degradation get reflected in a number of policies, strategies and regulatory framework. The National Environment Policy (2007), the National Forestry Policy (1996), National Policy framework Ministry of Agriculture Lands and Forest (1995), National Land Use Policy (1996), National Water Policy (2000), National Agriculture Food and Nutrition Strategy (1984), National Conservation Strategy (1988), National Policy on Sand for the Construction Industry (2006), Upper Watershed Management Policy (2008), National wetland Policy (2006), Involuntary Resettlement Policy (2002), are case in point.

Land Degradation has been accorded high priority in the National Action Plans eg. National Action Plan (NAP) to Combat Desertification / Land Degradation Green (2005), Lanka 2008, National Environmental Action Plan path to sustainable Development (1992), Forestry Sector Master Plan (1995), Coastal Zone Management Plan (2000), National Disaster Management Plan (1999).

2.3.2 Challenges

The following major challenges have been identified in the process of combating land degradation.

- **Poor enforcement of law**, major challenge is poor implementation of Soil conservation act and other legal enactments (coast conservation Act, National Environmental Act etc) properly.
- **Lack of awareness of benefits link to soil conservation**, responsibility of people – from policy makers to end users of lands should take mitigation measures on land degradation seriously. People do not see quick results or do not get benefits by controlling land degradation. Especially farmers are not benefitted. Because of that they do not care about the conservation of lands.

DRAFT REPORT OF NPFE-SRI LANKA

- **Lack of awareness regarding the impacts of land degradation**, among farmer community awareness should be made and some kind of subsidy is required to attract poor farmer community to get involved in controlling land degradation activities.
- **Inadequate capacity building and Skill enhancement**, training of field level officers is very crucial to promote environmentally sound climate friendly technologies and practices for soil conservation and land improvement.
- **Poverty and Population increase**, Increase rural population is another challenge with limited land resources. Farmers tend to use unsustainable land management practices due to poverty and increased population pressure. They cultivate in vulnerable lands without using proper land management practices.
- **Lack of proper coordination mechanism** – Responsibility lies with different agencies of central and provincial governments for soil conservation and land improvement. Coordination and cooperation among these agencies are not sound enough to tackle the problem since their mandates are not much complement each other.
- **Poor political commitment**, Due to the present political system the politicians are hesitating to take any action against encroachers who do not pay attention on socio economic or environmental importance of the particular land.

2.3.3 Global & Local benefits

2.3.3.1 Local Benefits

▪ **Enhance Land Productivity**

The rehabilitation programme will mainly focus on prevention on further land fertility loss and enrich through soil conservation measures and it will lead to increase land productivity which will upgrade socio economic status of user communities.

▪ **Reduction of fertility loss**

A set of environment friendly technologies and practices will be introduced to the farmers to upgrade their degraded lands. When it is in place effectively the replacement cost of fertilizer will be saved by the farmers.

- **Water Quality improvement**

The project will support to reduce soil erosion at large scale and it will prevent contamination leading to turbidity and algal bloom threatening aquatic resources and its biodiversity. The cost of water purification will reduce and threat to the aquatic fauna also will be minimized.

- Once the degraded lands are improved, the mitigatory measures apply for soil conservation and land fertility improvement will prevent soil erosion that will minimize off site impact (siltation and sedimentation) on aquatic habitats and hydropower generation.

- **The cost of wear and tear of machinery & equipment**

Connected to hydro power generation will be reduced due to water non contamination of eroded soil and also enhance the water retention capacity of reservoirs.

2.3.3.2 Global Benefits

- **Reduce consumption of fossil fuel and minimize GHG emission**

The project will contribute for strengthening of the national grid by adding a fair amount of electricity generated from renewable energy sources and that in turn reduce releasing of GHG emissions.

- **Carbon Sequestration to minimize greenhouse effect**

Rehabilitation of degraded tea plantations, forests and wood lots will play an important role in Carbon sequestration, this will further enhance through the other plantation crops planted by in farm lands.

- **Conservation of Biodiversity**

The central highland is rich in biodiversity and a number of endemic species have been recorded, especially endemic and point endemic aquatic species are reported from CH. They are at a risk due to siltation and sedimentation. This threat will reduce with the

DRAFT REPORT OF NPFE-SRI LANKA

rehabilitation of the degraded lands leading to soil conservation and prevent water contamination.

- **Phasing out of POPs and other agro chemicals**

Organic farming and Integrated Pest Management (IPM) .will lead to minimize application of inorganic fertilizer and agrochemicals. It will prevent water contamination and support the global effort to control POPs and chemical application.

2.3.4 Project Concepts Identified

Project Title: Rehabilitation of degraded lands in the central highlands of Sri Lanka with special reference to Nuwara Eliya and Badulla Districts.

GEF Project ID:

Project Duration: Five years

GEF Agency Project ID:

Country: Sri Lanka

GEF Agencies:

Other Executing Partners: Ministry of Environment and Natural Resources, Dept. of Agriculture and Ministry of Plantation industries

GEF Focal Area: Land Degradation

GEF – 5 Strategic Programme:

PROJECT FRAMEWORK:

Project component	Indicate whether investment TA or STA	Expected outcomes	Expected outputs	Indicative GEF financing
				\$
Identification, classification, and mapping of degraded lands in the central highlands and preparation of an inventory. (Year 1)	TA	Inventory on degraded lands in the Central Highlands that can be used in mitigation of land degradation	Degraded agricultural lands in the Central Highlands, identified, classified and mapped	500,000
Establishment of Technology Transfer Centres with a demonstration farmlands in two districts of Nuwara Eliya and Badulla representing micro	TA	Demonstrable appropriate technologies for rehabilitation of degraded lands	Appropriate technologies for rehabilitation of degraded lands to control land	750,000

DRAFT REPORT OF NPFE-SRI LANKA

watersheds of different land use patterns (Year 2)		are in presence that will have a 'spread effect'	degradation in the area are identified in two districts. Establishment of a "Technology Transfer Centre"	
Build up capacities and enhance skills of selected land user groups be employed as trainers on proposed technologies and practices identified to prevent land degradation (Year 3)	TA	land users and relevant stake holders are knowledgeable of the appropriate technologies	Actions to make the land users knowledgeable about measures suitable for rehabilitation of degraded lands and control of land degradation are identified. Posters, fact sheets, leaflets, handbook and newsletter made available for circulation	500,000
Implementation of the identified land restoration technologies in the affected areas of the two districts through a participatory process.. (Year 4 and 5)		Degraded lands are rehabilitated with measures to control Land degradation implemented. In two districts of the Central Highlands of Sri Lanka. Improved ecosystem health is in presence	Land users in the two districts implement the technologies to rehabilitate degraded lands and adopt measures to control further land degradation.	250,000
Project monitoring & Evaluation				100,000

2.4 Chemicals Management

2.4.1 Perspective

Sri Lanka became a signatory to the Stockholm Convention on Persistent Organic Pollutants (POPs) on 5th September 2001 and the Ministry of Environment became the focal point. Ministry obtained funding from GEF to prepare the national Implementation Plan to control 12 POPs, and the newly classified 9 POPs and other prospective chemicals are requiring intensive assessment. Sri Lanka is also a party to the Basel Convention on the control of Transboundary Movements of Hazardous Waste and their Disposal and compelled to find environmentally sound solutions for the management of POP chemicals as hazardous wastes. In January 2006, Sri Lanka became a party to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain hazardous chemicals and Pesticides in International Trade. Few POPs are also included as hazardous chemicals and pesticides under this convention. Thus all three conventions are appropriate for the implementation of the activities identified under the NIP and many are complementary.

The use of POP pesticides were initially prohibited during the early seventies and the last POP pesticide (i.e., chlordane) used in Sri Lanka for termite control in building construction was banned in 1996. This regulatory action has been taken under the Control of Pesticides Act No. 33 of 1980 and its amendment Act No. 06 of 1994. Hence, we can safely assume no legal importation of POP pesticides are taking place in Sri Lanka. However possibility exists for illegal importation POP pesticides under a different HS code as other chemicals that are not classified as pesticides.

The preliminary inventory of Polychlorinated Biphenyls (PCBs) released in June 2006 shows that there are 17,528 transformers owned by the CEB and 2700 owned by the LECO. Further, 74 are owned by independent power producers. Through a sample survey some field testing has been done and 60% of the samples showed positive for PCBs. The gas chromatography indicate 48% positive in the samples. Thus, it warrants a comprehensive survey to determine exact number of transformers and capacitors which contain PCBs. This survey should have also covered other industries, residential and commercial buildings to obtain a clear picture of the PCB stocks in Sri Lanka.

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The preliminary inventory of sources of the unintentional releases of POP chemicals revealed the burning of household garbage is the biggest contributor, particularly the dioxins and furans. In fact, the household wastes rich with plastics and allied matter and wood preservative used and wood products burning will release these two chemicals. The hospital waste incinerators generate these emissions, too. The metal recycling industries coming under the Board of Investments of Sri Lanka (BOI-SL) is the other source for the emissions of dioxins and furans. There are some cottage level metal industries in some parts of the Island (e.g. Pilimathalawa and Athurugiriya).

2.4.2. Challenges

Despite legal importation of POPs has been banned under the regulations of the Control of Pesticides Act No 33 of 1980 and its subsequent amendment of Act No 6 of 1994, strong possibilities exists for illegal importation of the POPs under a different HS code as chemicals without being classified as pesticides.

The other major issue regarding POPs is linked to the importation of food items that may contain residues of POPs chemicals, particularly if they are being imported from countries where POPs pesticides are still being used and manufactured. Sri Lanka does not practice routine analysis of pesticide residues in food items. In addition, there are very few studies related to POPs in our environments, despite higher possibility of existence of them due to their "global distillation" effect.

Although Sri Lanka has signed the Stockholm Convention and is therefore bound by the conditions of it no domestic legislations are in place to prevent any party from importing PCB or PCB containing equipment. Regulation can be brought under the Import and Export Control Act. In order to facilitate the development of regulations the Harmonized System (HS) codes have been developed. Sri Lanka is required to phase out the PCBs in an environmentally safe manner by 2028 under the provisions of the Stockholm Convention. This is possible only if we have precise information on PCBs in the country and a comprehensive survey for this is vital.

2.4.3 Global & Local Benefits

Global:

1. Reduction of POPs and other persistent chemicals has a significant global benefit as these chemicals are globally transported with allied health and environmental consequences. Sri Lanka is an agricultural country and its export base is mainly comprised of agricultural products, processed or otherwise, in which POP contamination would be a health concern.

Local:

1. Enhance the knowledge of judicious use of chemicals and pesticides in industries and agriculture through improved understanding the nature and correct use of chemicals/pesticides – to enable prevent negative health effect to workers, consumers and farming communities through direct and indirect exposure, and to improve the quality of products and the environment.
2. Introduce a skilled-profession into the agriculture sector in Sri Lanka – termed as Registered Spray Operators
3. Prevent the use of chemicals and pesticides for self-harm/ suicide attempts.

2.4.4 Concepts identified for GEF Cycle V

(A) POPs ENABLING ACTIVITIES AND PHASING OUT- Complete Life Cycle management of the Chemicals in an environmentally sound manner.

Project title: Sustainable approach for the management of Persistent Organic Pollutants, mercury and other relevant hazardous chemicals in Sri Lanka

Component-1: Development of a National Chemical Policy (NCP) and establishment of an apex body for chemical management in Sri Lanka

Component-2: Establishing and maintaining a national chemical inventory and a database

DRAFT REPORT OF NPFE-SRI LANKA

Component-3: Streamlining mechanisms for safe disposal of hazardous chemicals while controlling unintentionally released Persistent Organic Pollutants from isolated and substandard practices

Component-4: Building capacity for effective participation and management of SAICM chemicals by awareness and capacity building

2.4.5 Summary of Project Frame work

(A) POPs ENABLING ACTIVITIES AND PHASING OUT- Complete Life Cycle management of the Chemicals in an environmentally sound manner.

Project Title: Sustainable approach for the management of Persistent Organic Pollutants, mercury and other relevant hazardous chemicals in Sri Lanka (†SAICM chemicals)

Country: Sri Lanka

GEF project ID:

GEF Agencies: UNDP

GEF Agency project ID:.....

Executing agency: Ministry of Environment

Other Executing partners: Ministry of Agriculture (Registrar of Pesticides)
Ministry of Industries
Customs Department
Board of Investments in Sri Lanka
Lanka Electricity Company
Central Environmental Authority

Supporting agencies: Industrial technology Institute

Submission Date:

GEF Focal area: Chemical objective 1- Phase out POPs and reduce POPs release

Chemical objective 4- POPs enabling activities

DRAFT REPORT OF NPFE-SRI LANKA

- Project Objectives:
1. To formulate a national policy on chemical management
 2. To establish a national inventory and database on chemicals
 3. To streamline disposal of and process improvements of hazardous chemicals
 4. To create awareness and capacity building

Project Framework:

Sustainable approach for the management of Persistent Organic Pollutants, mercury¹ and other relevant hazardous chemicals² in Sri Lanka

Project Component	Expected outcomes	Expected outputs	Finances (\$)
1. Development of a National Chemical Policy (NCP) and establishment of an apex body for Sri Lanka	<ol style="list-style-type: none"> 1. Chemical-related priority areas identified and disseminated as a policy document 2. Coordinated and informed intervention in chemical management 3. Strengthen governance and policy implementation mechanisms among regulators and chemical use sub-sectors 4. Focused activities in chemical management and avoiding duplication 	<ol style="list-style-type: none"> 1.1 A focal point is established 1.2 A chemical policy document is formulated 	184,000
2. Establishing and maintaining a national chemical inventory and a database	<ol style="list-style-type: none"> 1. Developing inventories and databases for chemical use sub-sectors 2. Characterization of pollutant streams (i.e. release 	<ol style="list-style-type: none"> 1.1 Priority industries identified and monitored 1.2 National chemical register is formulated 1.3 Chemical database is 	684,000

¹ As a member country to the four main conventions related to the hazardous chemical and waste regulations such as Basel Convention, Stockholm Convention, Rotterdam Convention and Montreal Protocol, Sri Lanka support for a legally binding mechanisms to control designated chemicals and wastes in the global context.

² Chemical management actions required on International Groups of chemicals that might be prioritized for assessment and related studies include: persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs); mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level.

DRAFT REPORT OF NPFE-SRI LANKA

	<p>register) from industries in order to identify POPs and other potential candidate chemicals</p>	<p>established</p> <p>1.4 Sources of international trading identified</p> <p>2.1 Industrial chemical release register is formulated</p> <p>2.2 Sources of contamination and cross-contamination identified</p> <p>2.3 Chemical classification tools (e.g. HS codes) identified (refine vague import categories)</p> <p>2.4 Mechanisms set up for management of chemicals not covered by other governing mechanisms (e.g. industrial chemicals)</p>	
<p>(3) Streamlining mechanisms for safe disposal of hazardous chemicals while controlling unintentionally released Persistent Organic Pollutants from isolated and sub-standard practices</p>	<p>1. Incineration/disposal facility</p> <p>2. Encourage industries and research and development institutions to give greater emphasis to process improvements and promote cleaner production technologies</p>	<p>1.1 Reduction in the waste accumulation and potential hazards</p> <p>1.2 Minimization of uncontrolled combustion of wastes</p> <p>1.3 Minimization of low-technology incineration of medical wastes and related emission of unintentionally produced POPs</p> <p>1.4 Management of e-waste and electrical equipments containing/contaminated with POPs and toxic elements (e.g. mercury, cadmium etc.)</p> <p>2.1 Introduction of BAT and BEP in the thermal process in the metallurgical Industry</p> <p>2.2 Promoting BAT/BEP for scrap pre-treatment to reduce unintentionally</p>	45,800,000

DRAFT REPORT OF NPFE-SRI LANKA

		<p>releases of POPs from small and medium size metal recycling facilities</p> <p>2.3 Promoting cleaner production and technologies of green chemistries in the chemical sector</p>	
<p>(4) Development of institutional capacity for effective participation and management of chemicals by increased awareness and infrastructure</p>	<p>1. Develop and strengthen existing regulatory and monitoring mechanisms for more effective chemicals management</p> <p>2. Strengthening of entry-point regulatory inspection through monitoring arms for existing mechanisms by possibly stationing sub-offices at both Port and Airport (This is an ongoing activity for sister regulations such as Plant Protection Act No. 20 of 1986).</p> <p>3. Promote effective management of chemicals by certification of chemical use sub-sectors including ODSs³</p> <p>4. Upgrade existing laboratory facilities (e.g. ITI, CEA, ROP) on accreditation status for internationally recognized standards</p>	<p>1.1 Legal mechanisms are revised where applicable</p> <p>1.2 Identification of synergies for strategic adoption of the new globally harmonized system (GHS) for the classification and labelling of chemicals with a view to cater to the global chemical trade.</p> <p>2.1 Monitoring mechanisms and/or sub-offices in chemical entry-points are established</p> <p>3.1 Training and certification of chemical/pesticide applicators</p> <p>3.2 The establishment of steering mechanisms to improve the knowledge of highly hazardous chemicals and increasing skills in personnel for safe and effective use of chemicals (including pesticides) in chemical use sub-sectors</p> <p>3.3 Prevention and reduction of pesticide poisonings and suicide related incidences among vulnerable communities</p> <p>3.4 Reduction of exposure to heavy metals (e.g. mercury, lead, cadmium, arsenic, persistence organic</p>	300,000

³ Ozone Depleting Substances

DRAFT REPORT OF NPFE-SRI LANKA

		<p>pollutants- POPs) among vulnerable communities (e.g. recyclers)</p> <p>3.5 Reduction of environmental degradation by release of POPs and other toxic pollutants.</p> <p>3.6 Capacities to deal with poisonings and other chemical incidents would be strengthened</p> <p>3.7 Mechanisms set up for inspection and monitoring of ODS (e.g. methyl bromide) treatments in a centrally functioning facility</p> <p>3.8 A common treatment yard is identified</p> <p>3.9 Necessary adjustments to the quarantine certificates are proposed and implemented</p> <p>4.1 Declaration of focal analytical facilities for chemical management</p> <p>4.2 Upgrading of focal analytical facilities for international accreditation status (with respect to SAICM chemicals)</p> <p>4.3 Increased capacity and performance of laboratories in analyzing for all POPs</p> <p>4.4 Increased capacity to analyse commodity and environmental samples for POPs according to mandates and widely accepted international standards</p>
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3.0 Conclusion

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Seven concepts were identified and initial work has been completed for developing the project proposals. The four thematic areas covered were biodiversity, climate change, land degradation and chemical management. Only the first three thematic area concepts will be funded by the STAR. The chemical management has funding outside the STAR allocation.

During the stakeholder workshop several agencies such as FAO, UNDP, UNIDO expressed their willingness to help in funding some of the proposals at least partially. IUCN also has shown interest in assisting in programme implementation. These concept will be fully developed for proposals later.