



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

Partnerships and Innovative Financing to Mainstream Biodiversity and Sustainable Land Management in the Wet and Intermediate Climatic Zones

Part I: Project Information

GEF ID

10537

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI CBIT NGI**Project Title**

Partnerships and Innovative Financing to Mainstream Biodiversity and Sustainable Land Management in the Wet and Intermediate Climatic Zones

Countries

Sri Lanka

Agency(ies)

UNDP

Other Executing Partner(s)

Ministry of Environment and Wildlife Resources

Executing Partner Type

Government

GEF Focal Area

Multi Focal Area

Taxonomy

Focal Areas, Chemicals and Waste, Pesticides, Climate Change, United Nations Framework Convention on Climate Change, Nationally Determined Contribution, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Climate Change Adaptation, Mainstreaming adaptation, Climate resilience, Biodiversity, Financial and Accounting, Conservation Finance, Mainstreaming, Forestry - Including HCVF and REDD+, Certification -National Standards, Species, Threatened Species, Land Degradation, Land Degradation Neutrality, Carbon stocks above or below ground, Land Cover and Land cover change, Sustainable Land Management, Restoration and Rehabilitation of Degraded Lands, Sustainable Agriculture, Improved Soil and Water Management Techniques, Sustainable Livelihoods, Influencing models, Transform policy and regulatory environments, Demonstrate innovative approaches, Stakeholders, Civil Society, Non-Governmental Organization, Local Communities, Beneficiaries, Communications, Awareness Raising, Private Sector, Financial intermediaries and market facilitators, Gender Equality, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Capacity Development, Access to benefits and services, Capacity, Knowledge and Research, Knowledge Generation, Innovation, Knowledge Exchange, Forest, Forest and Landscape Restoration

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

60 In Months

Agency Fee(\$)

380,499

Submission Date

3/21/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	GET	2,776,712	19,400,000
LD-1-3	GET	1,228,539	8,600,000
	Total Project Cost (\$)	4,005,251	28,000,000

B. Indicative Project description summary

Project Objective

To conserve globally significant biodiversity by improving land management practices in tea and rubber production areas in the Wet and Intermediate Climatic Zones through innovative Private-Public-Community Partnerships.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1 Conservation and Restoration of High Conservation Value Forests (HCVFs) in the Wet and Intermediate Climatic Zones	Investment	Enhanced conservation of biodiversity rich forest ecosystems within tea and rubber plantations in the Wet and Intermediate Climatic Zones. This will be measured by the following: (i) at least 4,000 hectares (extent to be confirmed at PPG stage) of High Conservation value Forests and riparian areas within tea and rubber plantations identified and agreed by the private sector under improved conservation, restoration ^[1] and improved connectivity and management plans prepared	1.1 A GIS based database of tea and rubber plantations developed, mapping of remaining natural habitats, species composition and diversity and land degradation that is spatially defined. 1.2 A set of priority sites for conservation and forest and land restoration identified based on a set of selection criteria focusing on biodiversity conservation outcomes; opportunities for enhancing habitat connectivity; management of land degradation impacts and its management feasibility 1.3 Based on outcome of the mapping process (Output 1.2), conservation management and financing plans developed and agreed with private sector entities for improved conservation; restoration of degraded natural forests; and improve ecological connectivity in high biodiversity value priority sites within the 4 Regional Plantation Companies with private sector and community engagement 1.4 Technical support, extension and best practices to support implementation of priority measures for the selected pilot priority forests and	GET	1,911,000	8,500,000

<p>(ii) at least 500 hectares (to be validated at PPG stage) of degraded forests and riverine areas within plantations managed by the Regional Plantation Companies enhanced through assisted natural regeneration measures to improve conservation and habitat connectivity</p>	<p>ecological habitats through (i) improved conservation management and protection measures: (ii) assisted natural regeneration of degraded habitats with native species (including rare and endemic flora) through seeding, replanting and protection; and (iii) restoration of critical riparian areas including rivulets, gullies and stream banks to enhance connectivity corridors for terrestrial and aquatic faunal species.</p>
<p>(iii) status of endemic, vulnerable and threatened faunal and floral species in the pilot priority sites as measured by key freshwater fishes, amphibians, reptiles, birds, mammals and plants (refer Annex E for preliminary list of potential species for monitoring to be finalized at PPG stage)</p>	<p>1.5 Assessment of the impact of current practices of plantation companies and smallholder tea and rubber estates; development and promotion of incentives and best practices to enhance conservation outcomes in areas in and around the pilot priority conservation sites.</p> <p>1.6 Develop and conduct capacity building programs for local government officials, Civil Society Organizations working in conservation, tea small holders, plantation managers and workers and academics to collaboratively manage priority conservation areas and adopt sustainable agriculture practices</p>
<p>(iv) increase in institutional capacity as measured by UNDP Capacity Development Scorecard of baseline values of government</p>	

agency and the key plantation organizations.

(v) At least 6,189,396 tCO₂ mitigated over a 20 year period

[1] Restoration work will be financed through co-financing from the Regional Plantation Companies

Component 2 Innovative Public-Private-Community Partnerships for Biodiversity Conservation and Sustainable Land Management in Plantation Sector	Technical Assistance	Harnessing innovative private sector financing for conservation of biodiversity and LDN in plantations secured, as measured by: (i) number of initiatives underway at EOP using the new financial and institutional mechanisms established by the project (green lending, certification, biodiversity credits, PES, Sustainability Fund, etc.) ^[1]	2.1 A model(s) for private-public participation and financing for conservation of priority forests and ecosystems developed for the plantation sector in the Wet and Intermediate Climatic Zones. The model(s) will be based on economic feasibility assessments of alternative business models for the plantations to be more profitable premised on crop diversity, payment for ecosystem services (power generation and nature-based tourism), and restoration of the biodiversity and productivity of ecosystems and achievement of LDN. 2.2 Technical support, extension services and capacity development for alternative business models (based on Output 2.1 above) for interested plantation companies that incorporate improved silvicultural and conservation	GET	1,400,000	13,000,000
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<p>(ii) at least 50,000[2] hectares (extent to be confirmed at PPG stage) of tea and rubber plantation companies' and small holder actively mainstreaming biodiversity conservation by adopting environmentally friendly land management alternative models to reverse degradation in the wet and intermediate climatic zones</p>	<p>practices in support of biodiversity conservation and integration of LDN into existing planning process within plantation lands.</p> <p>2.3 Investment criteria and guidelines for responsible private sector investment in conservation actions developed and tested in the participating RPCs</p> <p>2.4 Development and operationalization of incentive mechanisms to recognize, reward and communicate achievements of private plantation companies in conservation and SLM</p>
<p>(iii) at least four major Plantation Companies allocating at least 10% of Plantation Company budgets towards achieving improved conservation and LDN outcomes</p>	<p>2.5 Technical support, extension and training to enhance smallholders (in particular, to adopt innovations undertaken by the larger companies); both smallholders and farmers ability to adopt sustainable land management, plantation, production practices and agroforestry in slopping lands to reduce degradation.</p>
<p>(iv) at least 1,000 hectares (to be confirmed at PPG stage) of degraded agricultural and common lands (e.g. home gardens) under sustainable land and agricultural management practices</p>	<p>2.6 Technical support and extension and training to enable good land management and agricultural practices by farmers to improve land cover, improve primary productivity and soil organic carbon by enhancing soil quality and fertility, reduce agro-chemical usage, improve water conservation within buffer zones of conservation sites in pilot plantation areas.</p>

(v) water quality in rivulets, streams and ponds within pilot priority sites improved as measured by: DO; NO₃, PO₄; BOD₂; EC, PH, conductivity, benthic macro-invertebrates, etc.

(vi) no net changes in land cover, net primary productivity and soil organic carbon in plantations

(vii) about 5,000 smallholders, plantation workers and community members directly benefitting from sustainable land management and agricultural practices

(viii) At least 6,189,396 tCO₂ mitigated over a 20 year period

[1] While, international certification is already ongoing, the potential for a national certification scheme

2.7 Facilitate technical assistance extension, and training through private sector and government financing to support introduction of renewable energy technologies (improved biomass, mini and micro hydro-power and solar power) to reduce the tea estates and community dependence on fuel wood and forest degradation.

managed by Biodiversity Sri Lanka will be investigated. PES pilots for mini-hydro operations are being supported by BIOFIN. A sustainable tourism certification scheme is also being piloted by BIOFIN. Other mentioned options are suggestions that will be investigated during the PPG stage.

[2] The target area for improved practices is around 50,000 hectares including plantation owned lands of the 4 participating RPCs (approximately 40,000 hectares) PLUS smallholder plantations and community home gardens and agricultural lands (additional 10,000 hectares) in the vicinity of the participating Plantation Companies' estates.

Component 3 Knowledge Management, Gender	Technical Assistance	Awareness and collaborative support for Private-Public-Community partnerships in	3.1 A consortium of participating plantation companies and smallholder tea and rubber estates established to	GET	503,525	5,000,000
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Mainstreaming,
Learning,
and
Monitoring
and
Evaluation

biodiversity
conservation in the
plantation sector
enhanced through
effective knowledge
management, gender
mainstreaming and
M&E as indicated by:

(i) At least 60% (of
which at least 30%
women) of sampled
plantations,
smallholders and
community members,
government and sector
agency staff, and other
stakeholders aware of
potential opportunities
of improvement in
conservation and
sustainable land
management outcomes
in the plantation and
related sector and,
adverse impacts of
inaction on species,
ecosystems and land
management

(ii) number of data
sharing agreements
signed between
government entities
and private sector
companies for
enhancing conservation

effectively co-ordinate and promote
replication of Private-Public-Community
partnerships in the plantation sector.

3.2 Harmonized and user-friendly
information management system to
integrate lessons from private-public-
community partnerships operational.
This will be achieved through: (i)
development of simplified, standardized
and dedicated information management
system and operationalization; (ii)
strengthening information support
system for consortium of plantation
companies and smallholders for sharing
good practices; (iii) setting up of
standardized information collection
standards; and (vi) cross-agency and
cross-sector efforts to collect and
digitally catalog existing information to
support replication

3.3: Knowledge Management and project
experiences contributes to learning and
facilitates replication and scaling up of
integrated biodiversity and sustainable
land management approaches in other
plantation districts. This would be
achieved through: (i) documentation and
dissemination of best practices; (ii)
preparation of policy guidance notes to
address current gaps; (iii) technical
reports, publications and other KM
products; (iv) national and sub-national
workshops to facilitate dissemination
and promote replication; (v) preparation
of replication and scaling up strategy;
and (vi) preparation of an Implementers
Manual and Lessons Learned Guide to
support replication

and sustainable
production outcomes in
the plantations

(iii) functional online
platform developed and
sharing of information
on lessons and
outcomes with national
and international
partners with at least
20 Regional Plantation
Company users

(iv) At least ten good
practice in conservation
and sustainable land
management codified
and disseminated
nationally and adopted

(v) number of new and
innovative conservation
and sustainable land
management proposals
put forward by public,
private or civil society
organizations in the
country based on
project lessons (target
to be defined at PPG
stage)

Sub Total (\$)

3,814,525

26,500,000

Project Management Cost (PMC)

GET	190,726	1,500,000
Sub Total(\$)	190,726	1,500,000
Total Project Cost(\$)	4,005,251	28,000,000

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	Ministry of Mahaweli Development and Wildlife Resources Ministry of Plantation Industries Plantation Human Development Trust Forest Department Department of Botanical Gardens Tea Small Holdings Development Corporation (TSHD)	In-kind	Recurrent expenditures	7,900,000
Donor Agency	World Bank	Grant	Investment mobilized	12,000,000
Donor Agency	Green Climate Fund	Grant	Recurrent expenditures	3,000,000
Private Sector	Regional Plantation Companies	Grant	Investment mobilized	4,900,000
Private Sector	Biodiversity Sri Lanka	In-kind	Recurrent expenditures	200,000
Total Project Cost(\$)				28,000,000

Describe how any "Investment Mobilized" was identified

• Recipient Government: This will entail direct participation of agency staff in project related work (surveys, technical support, extension, etc.) and complementary investment from on-going activities that will be further defined at PPG stage. • The World Bank funded Integrated Watershed and Water Resources Management Project (IWWRMP) is implemented in 3 districts covered by the RPC and will provide catchment threat assessment, M&E, financing for watershed restoration and small soil and water conservation measures (that would likely benefit small holders and farmers), watershed conservation and improved delivery of water, improved water resources institution capacity and skills etc. • The GCF funded Knuckles area conservation project will provide climate resilience for small farmers and plantation communities in the intermediate climatic zones (refer Table 2 for further details) • Private sectors: These figures are extrapolated from what the 4 Private Plantation Companies currently annually incurs on conservation and environmentally friendly land management practices on their estates. At PPG stage these figures would be further validated and could potentially even increase • Biodiversity Sri Lanka: is an organization established under the Ceylon Chamber of Commerce with the membership of private sector companies who are interested in promoting sustainable biodiversity management practices. They manage

biodiversity related projects by pooling resources from member organizations. For this project too, the BSL will contribute through providing relevant business platforms to coordinate the private sector involvement in the project.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Sri Lanka	Biodiversity	BD STAR Allocation	2,776,712	263,788	3,040,500
UNDP	GET	Sri Lanka	Land Degradation	LD STAR Allocation	1,228,539	116,711	1,345,250
Total GEF Resources(\$)					4,005,251	380,499	4,385,750

E. Project Preparation Grant (PPG)

PPG Required



PPG Amount (\$)

150,000

PPG Agency Fee (\$)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Sri Lanka	Biodiversity	BD STAR Allocation	100,000	9,500	109,500
UNDP	GET	Sri Lanka	Land Degradation	LD STAR Allocation	50,000	4,750	54,750
Total Project Costs(\$)					150,000	14,250	164,250

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1500.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1,000.00			

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
500.00			

Indicator 3.3 Area of natural grass and shrublands restored

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

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

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

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
54000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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50,000.00			
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Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
4,000.00			

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	6189396	0	0	0
Expected metric tons of CO ₂ e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	6,189,396			

Expected metric tons of CO₂e (indirect)	
Anticipated start year of accounting	
Duration of accounting	20

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)				
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,500			
Male	2,500			
Total	5000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Indicator 3: This would include around 500 hectares of forest land under forest restoration practices (with co-financing) and around 1,000 hectares of degraded agricultural and common lands (including homesteads) under restorative practices Indicator 4: Includes improved and sustainable management of 50,000 hectares of large RPC plantation and smallholder plantations and degraded agricultural lands and 4,000 hectares of forests within tea and rubber plantations Indicator 6: Based on 4,000 ha natural forest (avoided loss); 500 ha degraded forest lands rehabilitated, 1,000 ha degraded agricultural land rehabilitated and 50,000 ha of existing plantations (initial low degradation) to no degradation indicator 11: This figure includes around 3,500 estate workers (who reside on estate property and will benefit from improved and sustainable chemical applications and use and consequently reduced pollution in water sources (health benefits), renewable energy benefits, improved vegetable plots, supply of nursery plants and potential supplementary income activities (these will be defined at PPG stage), 1,000 tea and rubber smallholders (benefits from improved plantation practices, home garden improvements, small agricultural improvements, etc.) and around 500 vegetable farmers (with improved SLM and agricultural practices)

Part II. Project Justification

1a. Project Description

1a. *Project Description.*

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description):

Sri Lanka is an island, 65,610 km² in area, lying off the Southeastern corner of the Indian subcontinent from which it has been separated since the late Miocene. Approximately 75% of the island is coastal plain, sometimes referred to as the first peneplain, that is most extensive in the north and east where the landscape features isolate hills, remnants of erosion. Inland from the first peneplain, a second peneplain rises to about 500 m. Further inland is third peneplain comprising a South-central massif which rises to just over 2,500 m. The massif is a compact physiographic unit, somewhat anchor-shaped, with the Central Highlands bounded by a high mountain wall to the south and the Knuckles Range forming the extremity of the northern arm. The headwaters of all major rivers originate from this massif. The Southwestern coastal plain and the central massif form the wet climatic zone of the country. Between the central massif and the eastern coastal plain lies the intermediate climatic zone of the country. The dry climatic zone occupies the entire coastal plain in the north western, northern, eastern and Southeastern part of the country. Accordingly, the climatic and topographic conditions of the country determine the biological diversity of the country.

Sri Lanka is one of the smallest, but biologically most diverse countries in Asia. It is recognized as one of the biodiversity hotspots of global importance, being one of 250 sites of prime importance for the conservation of the world's floristic diversity (Refer Figure 1). Its diverse topography and varied tropical climate have given rise to extremely high levels of plant diversity that comprises 927 or 28 % of flowering plants, of which 60% are found in the lowland wet zone and 34% in the montane zone ecosystems of the island. In terms of faunal diversity, among the 930 vertebrates species, 30% are endemic to the island. The proportion of endemic species among its amphibians is ~85%, reptile~ 60% and freshwater fishes 50%. In the invertebrate groups studied in depth, the endemic species component among freshwater crabs is 100%, land snails (83%), dragonflies (47%) and butterflies (8%). Like the endemic plant species, most of the endemic fauna too is confined to the wet-zone of the country.

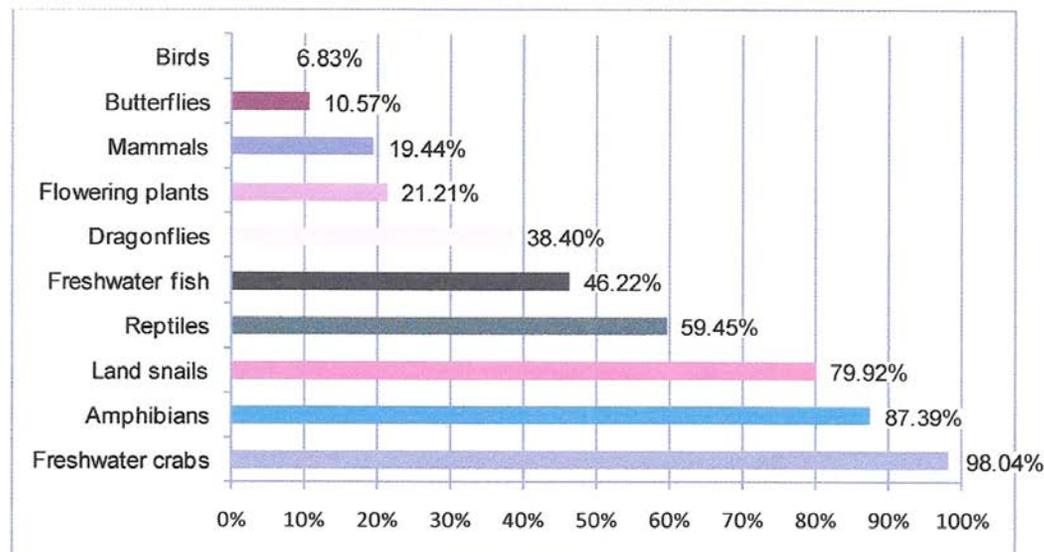


Figure 1: Endemicity Among Some of the Main Taxonomic Groups in Sri Lanka (Source: National Biodiversity Strategy and Action Plan 2016-2022)

While tea plantations are a prominent and very abundant land use type in the Central Highlands, and rubber in the lower elevations, the remaining natural habitats that occur within these plantations in the wet and intermediate climatic zones sustains an abundance of biodiversity. This is exemplified by surveys in the Nuwara Eliya district in the Central Highlands that showed the presence of 245 fauna and 158 flora species within a single tea plantation. This comprised of 22 amphibian species (73% endemism), 19 reptile species (53% endemism), 95 bird species (11% endemism) and 21 mammal species (10% endemism). The invertebrates recorded from the study comprises of 43 species (2 of which were endemic) of butterflies, 18 species of land snails (8 of which were endemic) and 27 *odonate* species (7 of which were endemic). Eleven of the 158 species of plant recorded were endemic. An example of the rich biodiversity in the tea plantations is provided from the Talawakelle Estates (Refer Table 1)

Most the forests within the tea and rubber plantations in the Wet and Intermediate Zone are fragmented into smaller patches of 200 hectares or less. It is estimated that 20% of the tea and rubber plantation areas are under natural vegetation or plantation forestry. While these forest patches are small in extent and fragmented, these forests contain irreplaceable biodiversity (endemic species and genera) that need conservation to prevent the loss of its critical biodiversity. Most of the endemic species that are found in these forests are small and less agile than the mega-invertebrates in the Dry Zone, hence making these small patches of forests important conservation refuges. In addition, these forests are critically important for flood control, headwater protection, erosion reduction and fog interception, the latter in relation to forests above 1,500m. As a result, the National Conservation Report (1999) recommends that the conservation of forest patches in the wet and intermediate climatic zones for watershed protection and biodiversity conservation should be a priority and these forests should be included in a nationally recognized conservation system.

Conservation Status	Globally Threatened (GT)	Critically Endangered (CR)	Endangered (EN)	Vulnerable (VU)	Near Threatened (NT)	Total
Land Mollusks		01	01	03	01	06
Dragonflies/Damselflies		02	09	09	04	24
Butterflies		01	05	03	17	26
Freshwater Fish				01	03	04
Amphibians		01	12	04	03	20
Reptiles			05	02	06	13
Birds	01		01	08	25	35
Mammals			05	04	03	12
Total Number of Species	01	05	38	34	62	140

Table 1: Summary of Faunal Species within the Talawakelle Estates (Source: "Worth Protecting" Sri Lanka Business and Biodiversity Platform 2016)

The small forest patches within the estates have no legal status and are not within the PA network that is managed by either the Forest Department (FD) or the Department of Wildlife Conservation (DWLC). The Regional Plantation Companies (RPCs) voluntarily manage the forest areas within their plantations. These include both natural forests that are managed for its biodiversity and plantation forests (or woodlots) that are managed to provide fuel wood to the workers and for the tea estates that are used for production process. The current agreement with the Government prevents the conversion of these areas into other land uses. However, while the extent of forest cover loss, particularly within the tea and rubber plantations are not very significant within the forests itself, has resulted in degradation of the condition of the forests. The collection of fallen timber and forest debris, creates disturbances to the forest floor through leaf litter removal, soil compaction, erosion and increased run off and other climate-induced changes have resulted in ecological changes. The wet and intermediate forests are intricate biological systems that contain many endemic and rare species that have specific niche requirements. Changes within the forest ecosystem have implications for these specific niche dependent species. Some species, that are niche dependent such as land snails, reptiles and amphibians are severely affected by forest floor conditions, leaf litter and climate change that also cause drier ground conditions that are not conducive for the survival of these species.

While, the forest cover losses in the tea and rubber plantation areas have not been significant, there are a number of critical implications on account of collection of fire wood, forest floor disturbances, leaf litter removal, invasive alien species and other human-induced actions that are resulting in a number of ecological and environmental impacts as discussed below:

- The wet and intermediate forests are intricate biological systems that contain many endemic and rare species that have specific niche requirements. Changes within the forest ecosystem have implications for these specific niche dependent species. Some species, that are niche dependent such as land snails, reptiles and amphibians are severely affected by forest floor and leaf litter removal that also cause drier ground conditions that are not conducive for their survival;
- Heavy soil losses on sloping lands in the higher elevations of the wet and intermediate climatic zones where there are gardens (vegetables and potatoes) tobacco, poorly managed seedling tea and shifting cultivation. For example, in the following districts that are within the wet and intermediate climatic zones erosion is severe. In Badulla district, 36.5% of total area is under high to extremely high erosion hazard level and 32% in Kandy district, 38.5% in Kegalle district, 40.7% in Nuwara Eliya, 38.7% in Ratnapura and 20.3% in Matale district are under high to extremely high erosion hazard level. Factors such as climate (high rainfall intensity), and topography (slope) are reasons for severe erosion in these districts. Generally, soil erosion is considered to be more severe in tea plantations in these areas because of cultivation on steep slope and poor crop and land management practices under plantations and other agricultural lands[1]. These districts are also the major contributors for supplying vegetables for local consumers and earning foreign revenue from tea and rubber. Severe erosion in these districts can have a significant impact on the economy of Sri Lanka by lowering the land productivity and potential cultivable areas in long-term. Therefore, implementation of proper soil conservation practices and monitoring of soil erosion are essential in order to reduce further soil loss.
- In terms of the percentage of organic carbon in tea soils in a study area, most plantations were very low and below the critical carbon level indicating a soil fertility decline (see Table 2 below)[2]

Table 2: Organic Carbon Criticality

Estate	Average Organic C (%)	% Area below critical level
Welimada Group	1.69	68.07
Udaweriya	3.18	18.89
Glenmore	3.74	34.05
Chelsea	2.78	30.50
Dickwela	1.75	81.4
Alslaby	2.01	78.33
Poonagalla	1.50	88.23
Craig	2.52	23.09
MEAN	2.16	52.82

- Soil fertility decline and reduction in crop yields in agricultural and plantation croplands over the past several decades has been attributed to the loss of valuable topsoil due to erosion. It is widely accepted that agriculture on sloping lands in many areas is generally maintained by the artificial replacement of nutrients removed by erosion. The on-site and off-site costs of soil erosion have been estimated in recent studies. Some of the estimates are given below.
 - (A) On-site cost (i) Value of loss of productivity – USD 20/ha/year; (ii) Value of loss of nutrients – USD 28/ha/year; (iii) Estimated cost due to nutrient loss in Upper Mahaweli River watershed – USD 5.3 million
 - (B) Off-site cost (i) Based on value of loss of productivity – USD 22/ha/year; (ii) Based on value of loss of nutrient – USD 30.5/ ha/year; (iii) Estimated loss in hydro-power production and irrigation from the Upper Mahaweli Watershed – USD 85,000/year.
- Landslides: A reconnaissance survey carried out in landslide prone areas has indicated that approximately 12,500 square miles of the country are vulnerable to landslides. The available evidence seems to indicate that the country has been experiencing a spate of landslides over extensive areas in the central and south-western parts (wet zone) of the country since the early eighties.

Root Causes of biodiversity loss and land degradation in tea and rubber production landscapes in wet and intermediate climatic zone

Demand for land, fragmentation of habitat and degradation: High human population density in the Wet Zone has resulted in an immense pressure on the natural and semi-natural habitats, resulting in the transformation of most areas into human settlements, industrial areas and related infrastructure. This has resulted in loss of habitat, habitat degradation and habitat fragmentation. As a consequence, there has been encroachment of forest reservations along

stream and rivers and loss of grasslands and the small patches of forests that are still remaining mainly within the tea and rubber plantations are rich in endemic and threatened species. In addition, sprawling townships and villages have pushed against the boundaries of protected areas, forest plantations and these remaining forests. Unless these forest patches and associated riverine habitats are recognized and demarcated with specific measures to manage these, it is likely that key endemic and threatened species will be lost forever.

Exploitation and over-extraction: Many colourful endemic freshwater fishes (i.e. *Puntius nigrofasciatus*, *P. titeya*, *P. cuningii*, and *Rasbora vaterifloris*) are over-exploited for export trade, leading to drastic decline in their populations. Similarly, the endemic aquatic plants such as *Cryptocoryne spp.*, *Aponogeton spp.* and *Lagenandra spp.* are also over-exploited from wild habitats for export purposes. Insufficient enforcement with the support of the local government enforcement agencies and monitoring has constrained the ability to prevent exploitation. Forest exploitation for timber, fodder, and fuel wood as well as hunting is common among forest-adjacent communities and plantation labour causing further degradation and forest depletion. In addition, the large-scale fuel wood extraction to meet the thermal needs of tea and rubber factories is also a continuing destructive practice. Reducing and managing the demand for timber and non-timber forest products, especially fuel wood, by substituting with alternative renewable energy technology and certification of sustainable forest management is needed to control over-exploitation as well as improved coordination with law enforcement agencies (such as the Forest and Wildlife Conservation Departments) is necessary.

Invasive alien species (IAS): Reforestation practices in this region have been dominated by fast growing non-native species, now recognised as detrimental to the biodiversity and survival of ecosystems of the Wet and Intermediate Zones. However, there is now a better understanding of the impacts of non-native species and there are efforts to prevent the clearing of native forests for raising forest plantations of non-native species. Non-native fast growing species such as *Pinus*, *Albizia*, *Swietenia*, *Eucalyptus* and *Mahogany* are now largely grown on degraded lands, and on degraded estate lands, *Eucalyptus* (which although is a non-native species, is not considered an IAS) is mainly grown to provide firewood for the tea estates and workers. In other areas, several species of invasive alien flora and fauna have however, caused adverse impacts on native fauna, flora and their habitats, by functioning as superior competitors for resources, predators, pests and disease vectors. The Clown Knife Fish (*Chitala ornata*), a voracious carnivore was introduced as an ornamental aquarium fish, has now established breeding populations in streams and reservoirs competing with threatened endemic freshwater fish. The spread of *Annona glabra*, *Dillenia suffruticosa* and *Eichhornia crassipes* has resulted in degradation of the remaining marshy habitats of the threatened blind eel (*Monopterus spp.*) in the Wet Zone of Sri Lanka. Climatic changes, in particular can raise the prospect of increased IAS impacts.

Unsustainable agricultural and other land use practices in the Wet Zone, in particular in the Central highland and the Intermediate zone has resulted in extensive soil erosion and declining soil fertility. Extensive use of land for potato cultivation without proper soil conservation measures, vegetables growing and tea planting on sloping lands are also major reasons for soil erosion. In addition, there are unproductive and abandoned tea plantations in the lower elevations where further degradation due to soil erosion. Large plantations are also designed and operated, in most cases for a single purpose (mono-cropping) with limited consideration of broader ecosystem values and the large societal and environmental costs associated with the single purpose approach. As a consequence, there is concomitant loss or decline of biodiversity, soil erosion, diminishing freshwater and/or aquatic resources and reduced recreational uses downstream. The use of chemical fertiliser, pesticides and fungicides is also rampant causing depletion of organic soil content and pollution of rivers and streams. While Sri Lanka has banned many POPs (Persistent Organic Pollutants) that are detrimental for human health and eco-systems, the continued practice of chemical use and the resultant deterioration of soil quality, fertility and eutrophication of water sources is a serious threat. The threat is

especially high considering that Sri Lanka's endemicity is largely found in the wet zone, in its forests and aquatic environments. Amphibians, fish, reptiles and insects that thrive in riparian habitats and freshwater ecosystems are extremely vulnerable. Establishing settlements in environmentally sensitive areas coupled with forest clearing is another major cause of soil erosion in the Central Highlands of Sri Lanka. However, there are attempts to reverse some of the adverse impacts of monocultures through the Rainforest Alliance Certification process that needs to be further strengthened and expanded through the plantation sector.

Urban and industrial pollution: Unrestricted garbage disposal, especially in the urban centres, along with the clogging of drains as a result of the disposal of non-biodegradable material such as polythene has affected most of the threatened freshwater fish species in the wet zone. In addition, rivers and its tributaries are also adversely affected by gem mining, sand mining, and industrial discharge, disposal of solid waste and discharge of agrochemical residues.

Climate Change: Changes in rainfall, temperature and deepening of drought has impacted stream flows, soil productivity and caused damage/losses in both annuals and perennial crops. The tea plantations have been severely affected with some tea factories closing down due to loss of productivity. Longer term, the solution will rest in improving labour productivity and adapting alternate business models that optimise the use of the land assets in the custody of private plantation companies. Crop diversification, multiple land-use, nature-based tourism, and harnessing other similar ecosystem services' potentials would inform the development of such alternate business models.

The current model of public sector-led biodiversity expenditure related to protected areas (PAs) is not adequate to help conserve the remaining forest fragments of the Wet and Intermediate Zones, in particular forests outside the PA network. As such, a private sector model of multi-stakeholder and collaborative ecosystem restoration is needed to address conservation outside of protected areas and preserve the remaining high biodiversity forests and riparian habitats within the plantation areas, as well as to improve habitat connectivity. This model should harness existing interest and investments by the private sector and local authorities to conserve critical biodiversity and habitats outside the protected area network in a mutually beneficial model. Summarized below are the current barriers to such a conservation model, as emerged from consultations with public and private sector stakeholders.

Barriers to long-term biodiversity-focused sustainable tea and rubber production

Barrier 1: Limited financing for conservation objectives beyond protected areas

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As mentioned earlier, biodiversity conservation investments are largely financed by the State through national budget allocation and external donor financing. The State's allocation for biodiversity conservation mainly goes to supporting the protected area network and conservation of key species such as the elephant or for habitats such as corals. Financing for conservation needs 'outside protected areas' is not adequately mainstreamed into the development budgets of districts/provinces and sectoral agencies overseeing agriculture, irrigation, tourism, fishery and livestock management in rural areas. While private sector investments in conservation within the plantation sector has been recently initiated by a few Regional Plantation companies, these efforts need to be

translated into the core business investments and budgets of the plantation sector as a whole, in order to ensure a long-term sustainable models for private sector engagement in conservation. However, private sector investments and business practice transformation is hindered by the Sri Lanka's slack growth, high production costs and low prices for agricultural commodities such as spices, tea and rubber in international markets. The tea plantation sector, while interested in conservation and long-term land conversion into sustainable models, are facing the challenge of making choices between economic and conservation interests. The sector attributes the declining economic situation to low labour productivity and high production costs. The plantation model itself is questioned by experts who suggest that it may be more feasible to turn these lands in to forests and restore the watersheds rather than continue with tea, but the industry that is still among Sri Lanka's top foreign exchange earners and employs some 200,000 persons in 2011[3] has an important place in the economic map of Sri Lanka. Hence securing private sector investment, especially from the plantation sector for conservation and forest restoration would require a new plantation model that could deliver economic benefit and social safeguards as well.

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Barrier 2: Policy coherence and a supportive incentive system for private sector engagement lacking

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While the private plantation sector has been actively engaged in conservation from recent years, collaboration with the public sector has been very limited. Sri Lanka has several public policies that govern natural resources in the areas of water, land, forests and coastal management, but these policies are often not explicit in terms of promotion of multi-stakeholder coordination and engagement, in particular with the private sector. There have been many deliberations to enhance the engagement of the private sector in conservation through appropriate policies and to encourage and partner with the private sector in sustainable development, reforestation and conservation actions. However, this would require a cultural shift, particularly in natural resource sectors that have been traditionally overseen by public sector institutions and funding. In relation to this project, there are two specific issues that would need to be addressed to enhance private-public partnerships for conservation. First, it is necessary to evaluate current policies and practices to identify specific gaps in promoting greater public-private collaboration. Secondly, it is important to identify options for inclusion of forests within plantations into a nationally recognized category of PAs that will provide greater incentives for private sector participation. Thirdly, it is necessary to identify a range of incentive mechanisms to stimulate greater public sector participation. Additionally, one option to move towards greater public-private partnerships by exploring the possibility of establishing new model(s) of collaboration - a private sector consortia that works closely with the public sector to enhance cooperation in conservation, in this case with the plantation sector. Second, the plantation land under current lease agreements with the State enables the government to channel appropriate incentive mechanisms to encourage the private plantation sector to move towards biodiversity-friendly alternative revenue options that retain the viability of the core business in the longer term.

Barrier 3: Adaptive management of a multi-use landscape limited

The Sixth National Report to the CBD (2019) recognizes that much of Sri Lanka's unique biodiversity lies outside formal protection, in multiple use landscapes that are governed by policies and institutions that are not oriented towards conservation. In a country where conservation agencies are centrally managed and have little stake in local development planning process, there are challenges to integrating and instituting locally appropriate management regimes for lands and resources that lie outside the formally protected area network. Core production sectors such as agriculture, plantations, fisheries, tourism and infrastructure like rural roads, housing, town expansion, power generation, irrigation and coastal protection do not consider natural capital aspects (except

when forced to conduct EIAs for large projects), and do not take into consideration biodiversity losses stemming from development actions. There are many barriers to mainstreaming biodiversity and ecosystem services in the production sectors, including the lack of effective planning tools (SEAs, rapid biodiversity assessments, biodiversity monitoring, land use plans incorporating biodiversity etc.) and planning capacities within local governments and national agencies that can consider conservation priorities within their own mandate. While, the Government's intention is to reforest the watersheds in accordance with its obligations under Bonn Challenge and associated targets, these are not well known, or communicated to the private sector and local authorities, thereby precluding an opportunity for establishing more collaborative efforts between the public and private partners. Adaptive management decisions are taken in an ad hoc^[4] manner that constrain the ability to promote a more collaborative and integrated approach to management of multi-use landscapes in which plantations, forestlands and other productive used lands are located.

Barrier 4: Limited capacity in increasing agriculture and land productivity

There is inadequate capacity at plantation and farm levels to arrest and reverse current trends in land degradation and to increase productivity through employment of sustainable land management methods. People are shifting from traditional, low input and sustainable production systems to commercial farming with shorter growing periods and high yields with a concomitant increase in chemical fertilizers. However, these new farming practices pay little interest in ensuring soil productivity and fertility on the longer term. There are also limited incentives for farmers (particularly vegetable growers and smallholder tea and rubber growers) to apply new techniques in the field. While, agroforestry as a land rehabilitation and climate change adaptation measure is well known, particularly through the Kandyan Garden Model, there is much scope to extend this model as a means of diversification, livelihood and climate adaptation in the Central Highlands. Little extension and marketing support is provided to farmers outside the current high-chemical dependent vegetable crops cultivated in the wet and intermediate climatic zones to encourage change to less chemical dependent crops. Financial constraints also present a further barrier to upscaling Sustainable Land Management (SLM) actions across the landscape at the level required to successfully arrest land and forest degradation and deforestation. Baseline program resources for supporting forestry and agriculture often focus on production and technical efficiencies without weighing their negative impacts on land and forest degradation processes. In part, this is related to the lack of information on long-term costs of land degradation both in terms of loss in income and reduced ecosystem goods and services.

2) The baseline scenario and any associated baseline projects:

Table 3: Key Baseline Activities Associated with the Proposed GEF Project

Baseline Project/Activities	Key Objectives of baseline project/activities related to the GEF project	Complementarity with proposed GEF project
Ministry of Mahaweli Development's World Bank funded Integrated Watershed and Water Resources Management Project	The project is to enhance functionality of water resources infrastructure and strengthen institutional capacity for watershed and water resources management. Key activities	The World Bank project will complement the GEF project in the following ways: (i) Assessment of threats to socio-economic conditions and most effective conservation measures, broad-based stake

<p>(IWWRMP) – USD 172 million (>2020 onwards)</p> <p>The project benefits around 1,110,000 families through on-farm and off-farm soil and water conservation actions and around 538,000 families from reduced risk of dam failure and access to improved irrigation services</p>	<p>s are:</p> <ul style="list-style-type: none"> (i) Watershed management planning including GIS informed assessments, evidence-based watershed stakeholder participation and investments in remote monitoring and evaluation systems to enable the soil runoff and sedimentation load in micro-watersheds; (ii) Watershed restoration and related infrastructure investment to increase broadleaved forest cover; reduce soil erosion and sedimentation; increase dry-season catchment water flows; and increase water quality and (iii) Watershed management in plantation companies. (iv) Infrastructure improvements in water resources storage and delivery systems (v) Strengthen water resources institutions for water resources planning and management and environmental services management <p>The project takes place in three districts covered by the GEF 7 project</p>	<p>conservation measures, broad-based stakeholder participatory processes and M&E systems will enable a better understanding how the plantation sector fits within the overall ecological systems in the Central Highlands;</p> <ul style="list-style-type: none"> (ii) Provides financing for watershed restoration and related infrastructure investments including erosion control and land stabilization that will complement capacity development, technical support and best practices to support conservation actions of the proposed GEF project (iii) Infrastructure improvement of large water resource structures and delivery will overall improve watersheds that will benefit plantation and smallholders (iv) Strengthened water resources institutions that help policy innovations facilitating improved water and soil management in the plantations as well (v) Development of capacity for monitoring and assessments of environmental services will benefit the plantation sector to assess their benefits from environmental actions
<p>Ministry of Plantation Industry's IFAD-funded Small Holder Tea and Rubber Revitalization project (USD 65.4 million) 2015-2022</p> <p>The project area covers eight districts in central and southern Sri Lanka: Co</p>	<p>The overall goal of the project is to improve food security, increase incomes and strengthen the resilience of poor rural people and ensure that smallholder economic activities in tea and rubber become more productive, profitable and resilient. The project will achieve this by:</p> <ul style="list-style-type: none"> (i) Promoting better organization among smallholders to effectively and sustainably produce and market 	<p>The project provides the key stepping stones that the proposed GEF project will build on, namely:</p> <ul style="list-style-type: none"> (i) Promote smallholders as key decision-makers and adopt "value chain" approach linked to commercial chains for production, processing to marketing. (ii) Improved practices for Tea replanting and intercropping to increase yields and intercropping with banana

<p>in southern Sri Lanka: Galle, Matara, Badulla, Kandy and Nuwara Eliya for tea cultivation, Moneragala and Ampara for rubber cultivation and Ratnapura for tea and rubber processing. Key participating agencies include the Tea Smallholders Development Authority (TSHDA) and Rural Development Department (RDD)</p>	<p>to sustainably produce and market tea</p> <p>(ii) Supporting smallholders to improve rubber production and processing and links to markets</p> <p>(iii) Facilitating smallholders' access to rural financing for both green tea and rubber production and development</p>	<p>no inter-cropping with pepper.</p> <p>(iii) Strengthen tea and rubber cooperatives and links to private sector partners to facilitate institutional and income sustainability at the village level</p>
<p>Regional Plantation Companies' Innovations in biodiversity and ecosystem conservation (through Biodiversity Sri Lanka)</p>	<p>The plantation companies have been in the forefront of private sector involvement in conservation through many programs such as:</p> <p>(i) Integrating conservation in sustainable plantation management</p> <p>(ii) Species and ecosystem inventory and conservation</p> <p>(iii) Establishment of forest corridors</p> <p>(iv) Soil conservation and fertility improvement</p> <p>(v) Water and energy conservation</p> <p>(vi) Replacing fire wood use with alternative sources of energy for cooking and heating</p> <p>(vii) Climate mitigation</p> <p>(viii) Forest cover improvement and stream protection</p>	<p>The GEF project will build on and expand all of the initiatives already under implementation by the Private plantation company to other estates and smallholder plots and sustainable (refer Annex D for details of current Regional Plantation Company conservation and sustainable management efforts)</p>
<p>Ministry of Environment and Wildlife Resources'</p>	<p>The project is to generate resilient livelihoods by increasing the capacity</p>	<p>All of the defined activities are relevant to the GEF project that could be effective</p>

GCF Knuckles Area Conservation project	<p>ty to adapt to climate induced change in Knuckles mountain range in intermediate climatic zone. Activities include:</p> <p>(i) Direct land use interventions with farmers and other land users (vegetation management, rehabilitation of village ponds for water harvesting, climate smart farming, increasing efficiency of irrigation, fertilizer and integrated pest control, agroforestry, home gardens and analogue forests. Restoration and sustainable intensification of degraded plantations into food gardens, agroforestry practices including intercropping with high-value short-rotation horticultural crops.</p> <p>(ii) Upgrade of value chains by strengthening the capacity of farmers and collective groups as enterprises</p> <p>(iii) Inclusive and evidence-based land use planning processes, including governance mechanisms that reconcile non-congruent hydrological and administrative boundaries, information systems and climate-responsive rural advisory services required to enable land users to adapt to change.</p>	<p>ly channeled in particular for:</p> <p>(i) Land use interventions with farmers and small holders for climate smart agriculture and soil and water conservation</p> <p>(ii) Value chain promotion of farmer collectives, for minor crops in particular</p> <p>(iii) Local land use planning</p>
Biodiversity Finance Initiative (BIOFIN)	<p>In Sri Lanka, BIOFIN works with national stakeholders such as the Central Bank of Sri Lanka and Sri Lanka Tourism Development Authority to develop innovative financial solutions for biodiversity management.</p> <p>Under the Sustainable Finance Framework...</p>	<p>In terms of the GEF project the relevant activities will include:</p> <p>(i) Certification of small and medium hotels and homestays</p> <p>(ii) Sustainable banking options</p> <p>(iii) Increased private sector responsibility</p>

	<p>mework, green lending facilities are promoted with the financial institutions of the country and with the SLTDA a sustainability tourism certification program has been introduced for the tourism accommodation sector.</p> <p>(i) Eco-labels: Introduction of an Eco Label for products with certified sustainable</p> <p>(ii) Green Lending: “Green Financing” under the Sustainable Banking</p> <p>(iii) Corporate Social Responsibility and its increased share in biodiversity conservation</p> <p>(iv) Lotteries: a lottery for biodiversity conservation</p> <p>(v) PES: Payment for watershed management at mini-hydro power plant</p> <p>(v) PES: Payment for watershed management for hydropower</p>	<p>ty for conservation and sustainable land uses</p> <p>(iv) PES options</p>
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There are a number of initiatives within the private plantation sector to conserve biodiversity and reduce environmental degradation that is very promising. Biodiversity Sri Lanka (BSL), a national platform entirely owned and driven by the private sector was established to promote strong engagement of the corporate sector in biodiversity and environmental conservation in Sri Lanka. BSL provides - technical support, sharing of information, knowledge and experience; promotion of best practices through active learning and understanding mechanisms; and facilitates dialogue between State and civil society partners and the private sector; advocates biodiversity-friendly policies and positive instruments; and campaigns for the conservation of Sri Lanka’s fragile environment. The Sri Lanka Business and Biodiversity Platform (SLBBP) was established in August 2012 as a program of the Ceylon Chamber of Commerce (CCC) by its Initiating Partners – the Dilmah Conservation (DC) and the International Union for Conservation of Nature and Natural Resources (IUCN) as a Not-for-Profit Company Limited by Guarantee under the Sri Lanka Companies Act No. 07 of 2007, as well as the rebranding and re-launch of the platform by its current name – Biodiversity Sri Lanka (BSL). BSL membership is open to Sri Lanka-based businesses ranging from national to multinational companies as well as Small and Medium Enterprises (SME). Currently, 31 leading corporates – all with high standards of environmental custodianship have backed BSL by becoming its invited Patron Members. 32 General Members together with the previous ones, make up the wide array of members that represent diverse industries, including the private Regional Plantation Companies (RPCs) in Sri Lanka. It has 85 corporate entities as members to date.

Most of the private forests and tea plantations use one or more certification schemes. The Rainforest Alliance Certification (RAC) is popular in the tea sector, while plantation forests often follow the Forest Stewardship Council (FSC) certification, both of which encourage sustainable land-use and biodiversity conservation. In addition, other certification programs available are the Rainforest Alliance UTZ certification for coffee, tea, cocoa and hazelnuts; which is guided by the principles of fairness and transparency; the Sri Lanka Standards Institution (SLSI) in association with the Sri Lanka Tea Board (SLTB) that operates a Product Certification Scheme to certify the manufacturing process and the final product (i.e. Black Tea); ISO 140001; ISO 9001 and sustainable tourism certification program. Overall there is a lot of interest and commitment from the private plantation sector to biodiversity conservation and the GEF 7 project is timely in that it could act as a catalyst to build on the existing private sector efforts and promote further public-private collaboration across the entire plantation sector in the wet and intermediate climatic zones of the country.

The Platform serves to coordinate their efforts in biodiversity conservation, build related capacities, and facilitate the implementation of biodiversity conservation activities that its members wish to undertake in the field individually or together. It has earned the recognition of the donor community in Sri Lanka. This offers a great opportunity as a foundation on which an institutionalized structure can be built for: (a) co-ordinating and synergizing the private sector contributions to conservation, (b) liaison with the public sector; and (c) serving as a pivotal hub and secretariat for public-private partnerships to enhance the conservation of biodiversity in Sri Lanka. Refer **Annex D** for specific examples of Regional Plantation Company (RPC) engagement in conservation.

In terms of specific actions taken by Sri Lanka in the context of addressing its LDN obligation under UNCCD, these are the following:

- Sri Lanka has ratified nearly 20 international conventions, protocols and treaties on environment.
- The President of Sri Lanka made two very important declarations in the year 2016. The first is the declaration of 2017 as the “Year of Poverty Alleviation 2017”. The second is to increase the forest cover from existing 29% to 32% within next few years.
- Sri Lanka prepared a National Adaptation Plan (NAP) for combating land degradation in 2014 with support of UNCCD. The NAP is a comprehensive document that elaborated the land degradation status in the country in detail and identified 25 programs to be implemented through 2024.
- A national coordination mechanism (National Steering Committee) has been established that guides the program of NAP, along with a Technical Advisory Committee
- To achieve Sustainable Development Goals (SDG) in National Planning Processes in the economic, social and environmental fields, Sri Lanka passed a Sustainable Development Act in 2017 (Act 19) along with the establishment of a Sustainable Development Council (SDC) within the Ministry of Environment and Wildlife Resources. Every ministry, department, provincial council, provincial ministry and departments and any local authority is required to comply with the National Policy and Strategy on Sustainable Development (which is in conformity with the SDG) and prepare their strategies accordingly. The SDC is the main coordinating body to provide overall coordination to respective line ministries to develop their programs at the national level. The responsible line ministries help to develop the programs at the provincial and the local level. The funding is allocated from the consolidated fund from the government. The implementation would be done at the local level. Monitoring of these activities is conducted through District Development Committee meeting which meets monthly. The Parliamentary Select Committee reviews the progress of the implementation plan and take appropriate policy level interventions at the highest level.

- Sri Lanka is leveraging on-going projects and other country commitments for LDN activities. These include rehabilitation of degraded agricultural lands in Kandy, Badulla and Nuwara Eliya Districts; Management of Environmentally Sensitive Areas; World Bank funded Ecosystems Conservation and Management Project (ESCAMP); Green Climate Fund of the UNDP that benefits 70,000 people; and the World Bank Mahaweli Upper Watershed project and World Bank funded Integrated Watershed and Water Resources Management Project, GCF Knuckles Area Conservation project and others.
- The Associated measures to achieve LDN have been defined as follows:
 - a. Restore degraded forests.
 - b. Establish new forest plantations.
 - c. Provide protection status, through regulatory measures, to forests that are not yet identified as protection forests.
 - d. Introduce legislations to avoid land fragmentation.
 - e. Strengthen institutional and regulatory mechanisms along with required interventions to restore and manage wetlands and grasslands.
 - f. Adopt soil and water conservation measures, in annual and plantation croplands.
 - g. Update and operationalize the Soil Conservation Act, the main regulatory instrument related to soil erosion control in the country, to eliminate deficiencies and make it more effective to address the current land degradation issues.
 - h. Update and operationalize legislations to control sand mining and to reduce land degradation due to gem mining.
 - i. Change the policy of regularizing the encroachment of state lands.
 - j. Halt the cultivation of annual crops in steep lands and facilitate the conversion of such lands to perennial crops.
 - k. Encourage the adoption of sustainable land management practices through incentives.
 - l. Leverage LDN in to national programs on climate change adaptation, biodiversity conservation and poverty alleviation.
 - m. Formulate a National Land use Plan so that new lands required for development and other purposes could be identified in a systematic manner and alternative lands could be improved in order to ensure that the natural capital remains the same.
 - n. Improve institutional coordination to formulate and implement the National Physical Plan and the Land Use Plan.

In terms of the associated measures for LDN mentioned above, the GEF project will directly contribute to the following LDN associated measures: (a), (c), (e), (f), (j), and (k).

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project:

To address the above-mentioned challenges and barriers, the proposed project aims to integrate biodiversity conservation and sustainable land management practices within the private sector tea and rubber plantations in the wet and intermediate climatic zones. This will be achieved through a set of targeted outputs that will support biological and land degradation assessments and provide technical guidance to promote alternate business models for tea and rubber plantations through partnerships between the public sector, private sector (mainly the plantation sector), smallholder groups and local communities, including estate labour.

The strategy is intended harness innovative private sector financing through: (a) involve public-private-community partnerships to conserve remaining high biodiversity value forests within the plantation estates; (ii) where options exists, to try to enhance connectivity of the currently fragmented forest ecosystems, in particular through improved practices within plantation lands, restoration of degraded tea and rubber lands to its natural vegetation (through promotion of assisted natural regeneration using native species) and improving native vegetation along stream and river banks; (iii) enhance the health and diversity of soil biota and aquatic biodiversity and achieve improved land cover, primary production and soil organic carbon through improvement of land management practices in plantation estates and small-holdings as well as reduce chemical use and soil leakage to streams and rivers; and (iv) increase productivity of

plantations by testing out new business models with a corresponding diversification and increase in revenue so as to enhance co-benefits to private plantations and neighbouring smallholders and associated communities and provide best practices and incentives for investment in the conservation of forests (natural forests occurring on the plantation estates) and achievement of LDN. The intent of this exercise is to increase tea and rubber production in existing large plantations and smallholdings, while achieving LDN and focussing on sustainability. While, investments in conservation and sustainable land management might not always yield short-term benefits, it is well understood that benefits on the long-term would be substantial and sustainable.

Conservation decisions will be guided by a mapping of existing forests, rare species and ecosystems and land degradation within the plantation lands in the Wet and Intermediate Climatic Zones so as to identify 3-5 priority plantation areas for piloting improved conservation and land management approaches through public-private-community partnerships. The pilots will demonstrate: (i) improved conservation practices aimed at protecting the remaining high biodiversity forests; (ii) innovative strategies to restore degraded forest areas and/or rehabilitate degraded tea or rubber lands augmented by assisting the processes of assisted natural regeneration using native species; (iii) protection and/or restoration of riparian areas to enhance their quality as ecosystems and habitats, particularly for native aquatic and riparian species; and (iv) improved management practices in plantations (tea, rubber and forest) to improve land cover, improve primary productivity and soil organic carbon through enhanced soil fertility, reducing chemical usage, soil and water conservation, and improving macro-invertebrate composition and diversity.

The project's private sector financing and implementation is premised on innovative public-private-community partnerships. Here the aim would be to (a) increase new and innovative financing in the funding mix for the conservation of biodiversity; (b) incentivize the RPCs to recognize the need for, and invest further in biodiversity conservation and achieve LDN on the companies' managed lands as a part of their core business model; (c) institute financial and institutional mechanisms (designed, pilot-tested and refined) for scaling up public-private partnerships and their biodiversity conservation and land management impact in the future; and (d) enhancing conservation and land management measures in plantation practices within the vicinity of natural forests within the estates. Key to the success of the partnership would be crafting and implementing a robust partnership agreement between the public sector (Ministry of Finance and other key national environmental, forestry and plantation ministries) and the RPCs. The contributions of each partner will be documented to ensure mutual commitments are met, investments and activities are transparently monitored, and the results are widely communicated. Each project component represents a sub-objective that will be achievable on its own, but will not suffice to achieve or even sustainably contribute to the overall objective on its own. It is together, that all the components closely netted together will enable the weaving of the fabric of biodiversity conservation and sustainable land management in the targeted production landscapes.

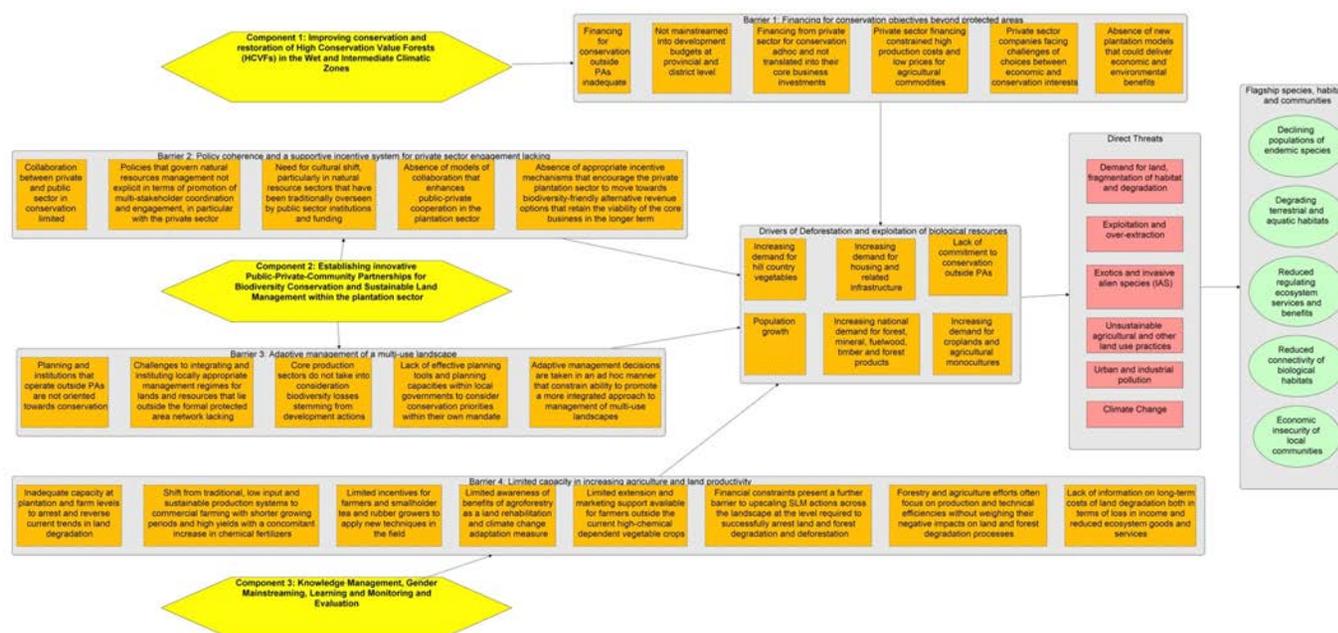
[1] Jayasekera, M.J.P.T.M et.al: (2018). Mapping of Soil Erosion Hazard Zones of Sri Lanka. Tropical Agriculture Research Volume 29

[2] Illukpitiya, P. et.al (2004). Tea Agroecosystems in Uva Highlands of Sri Lanka

[3] <http://www.seu.ac.lk/researchandpublications/symposium/5th/religiousandculturalstudies/51.pdf>

[4] For example, the private banks refusing to fund mini hydro development in sensitive watersheds with endemics

Figure 1: Situational Analysis



Project's Theory of Change:

The project's theory of change is to conserve endemic and threatened biodiversity in the plantation sector. This will require to address the following key barriers through specific actions:

Barrier 1: Limited Financing for conservation objectives beyond protected areas: This will be addressed through the following actions:

- Technical support for development of financing and management plans that support conservation
- Incentives operational to reward and encourage plantations and smallholders to improve practices that support species and genetic diversity conservation

- Financial models for alternative plantation business models developed and tested to support economic and environmental benefits

The outcome of these actions are expected to lead to the following: (i) increased private sector financing for conservation; (ii) plantation companies practicing alternative models that support conservation of species and habitats; (iii) plantation companies supporting sustainable, environmentally-friendly measures on the plantations (sustainable and reduced chemical use, alternative environmentally-friendly revenue generation activities such as ecotourism to offset environmental costs, etc.); and (iv) unproductive tea and rubber lands brought under forest cover to improve species conservation and connectivity.

Barrier 2: Policy coherence and a supportive system for private sector engagement lacking. This will be addressed through the following:

- Capacity improvement and support for multi-sectoral collaborative management approaches
- Improved coordination between private-public sectors function through partnership/consortium
- Public-private participation and financing of priority conservation and SLM actions under active consideration by estate companies
- New initiatives and mechanisms support conservation and sustainable practices (national forest and sustainable plantation certification, PES, national sustainable tourism certification programs, green lending from commercial banks, etc.)
- Government willingness to accommodate forests within private plantations into a nationally recognized conservation system

The outcome of these actions are expected to lead to the following: (i) functional consortium of participating plantation companies and smallholder tea and rubber estates established to effectively co-ordinate and promote conservation practices; (ii) public-private partnership established to support collaboration through a collaboration between plantation companies and government conservation agencies in conservation actions, in particular for planning for establishing forest connectivity and monitoring of species and habitats; (iii) improved willingness of private sector to support conservation through appropriate financial incentive and certification programs; (iv) improved willingness of private plantation companies to support conservation practices of smallholders and adjacent communities; (v) elevation of biodiversity rich forests within plantations to nationally recognized category, with potential increased government financial support for conservation; and (vi) technical support from universities and research institutions to facilitate species inventory, conservation practice and species monitoring.

Barrier 3: Adaptive management of a multi-use landscape limited. This would be addressed through the following:

- Mapping of remnant forests (species composition, diversity and degradation) to identify sites of high conservation value and habitat connectivity
- Plantation companies recognize importance of adopting improved conservation and SLM practices for economic benefit

- Smallholders and farmers recognizing benefits of adopting SLM and agroforestry models on their lands
- Improved technologies for renewable energy developed to reduce demand on fuel wood and halt forest and land degradation
- Capacity, skills and procedures for sustainable plantation and SLM approaches available
- Feasibility and effectiveness of different environmentally-friendly plantation models being tested

The outcome of these actions are expected to lead to the following: (i) Improved water quality in streams supporting aquatic biodiversity; (ii) remnant HCVFs forests within plantation set-aside and enhanced protection for species and delivering ecosystem services; (iii) degrading forests, and riverine areas restored with enhanced habitat connectivity and increase in key species populations; (iv) degraded plantation and agricultural land restored with increased soil cover, fertility and productivity as well as soil organic carbon content.

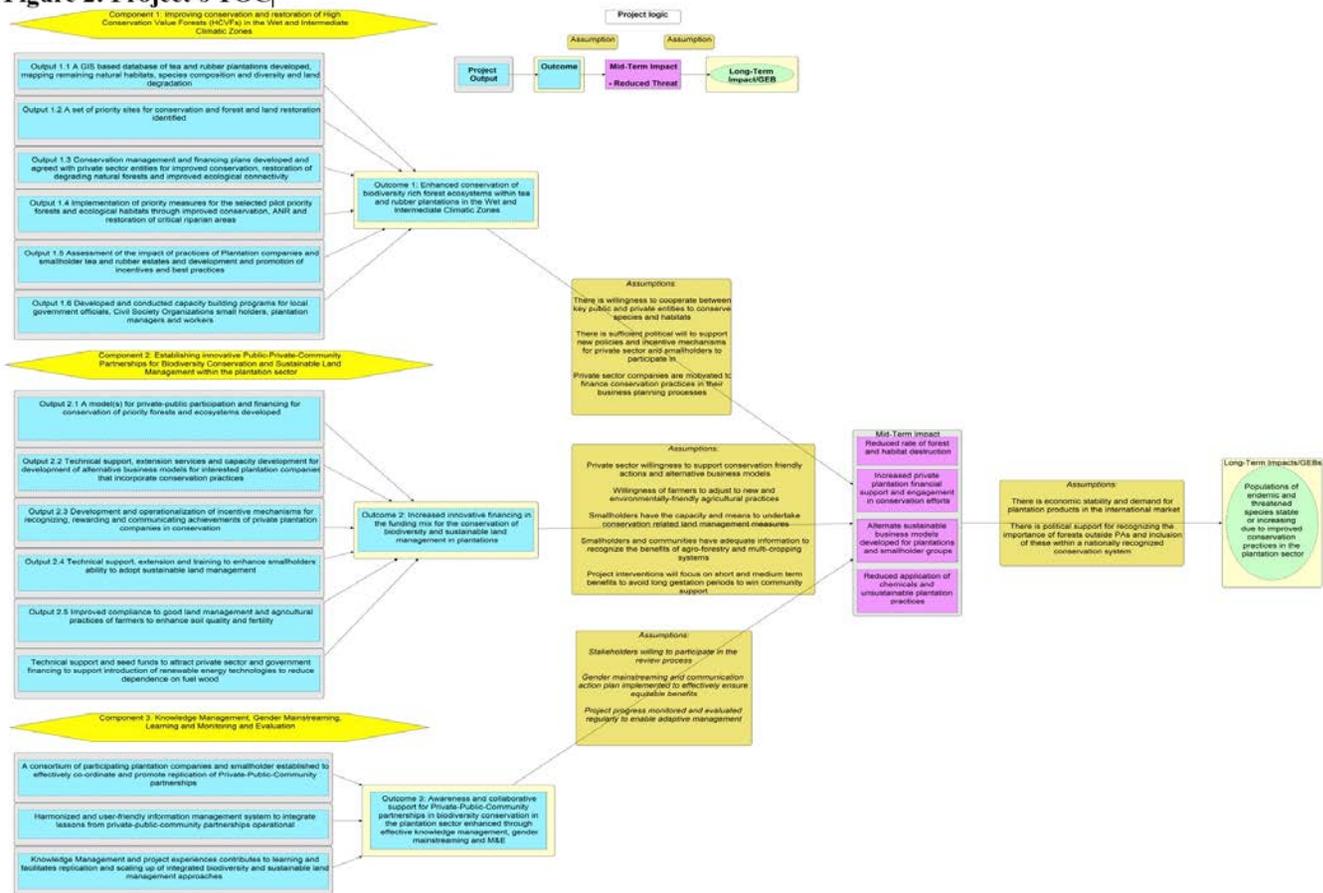
Barrier 4: Limited capacity in increasing plantation, agriculture and land productivity. This would be addressed through the following actions:

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- Improved coordination between private-public sectors function through partnership/consortium
- Information management system operational and integrating lessons
- Awareness programs for understanding biodiversity conservation values, threats and management options

The outcome of these actions would lead to: (i) improved capacities of key stakeholders for implementation of conservation and SLM measures; (ii) improved awareness and public support for conservation of biodiversity and threat reduction; and (iii) best practices for replication are actively promoted.

The long-term outcome of this exercise would be to ensure that terrestrial and aquatic ecosystems within tea and rubber plantations in the wet and intermediate climatic zones in the country have healthy species populations and habitats and that there is increased and sustainable incomes that accrue to the plantation companies, smallholders and farmers.

Figure 2: Project's TOC



A brief description of the main project components are the following:

Component 1: Improving conservation and restoration of High Conservation Value (HCV) forest ecosystems in the Wet and Intermediate Climatic Zones

This component will strengthen the enabling environment and technical and institutional framework for enhancing the conservation of biologically important forests within existing tea and rubber plantations in the wet and intermediate zones of Sri Lanka through active public-private partnerships. This will entail mainstreaming biodiversity conservation and ecosystem services into key planning instruments of private and smallholder plantations to systemically address reduction of threats, while at the same time supporting institutional capacities to protect, restore and rehabilitate these forests and related ecosystems. It will

also incorporate sustainable environmental management and silvicultural practices within plantations (large plantations companies and smallholders) and agricultural lands in the vicinity of these plantations to reduce threats on forests and aquatic systems from erosion, chemical pollution and IAS. This component lays the foundation for testing private-private partnerships to enable replication and scale up in the rest of the plantation districts of the country (being piloted under Components 2 and 3).

Under Output 1.1, a GIS based database of tea and rubber plantations will be developed, mapping remaining natural habitats, species composition and diversity, forest plantations and land degradation (including assessment of drivers of degradation) within the tea and rubber plantations with the intent of spatially defining conservation elements (including HCVPs) that would complement the National Conservation Review of forest biodiversity undertaken in 1991-1996 and building on existing information available with government institutions, NGOs (e.g. IUCN), academia and Regional Plantation Companies (RPC). The forest patches sampled in the NCR included only those over 200 hectares. Rapid surveys will be undertaken within the tea and rubber plantations to access their species composition and diversity and rank these smaller forest patches (<200 hectares) according to their biological importance on the basis of endemic, rare and threatened species as well as to identify potential opportunities for linking these remaining forests with other smaller patches and/or with the existing network of protected areas, where this is feasible. Following the mapping exercise, **Output 1.2** will define a set of priority activities and locations for targeted interventions within 4 Regional Plantation Company estates to pilot conservation and land and forest restoration practices. The selection of HCVPs for priority investments and their locations will be identified based on biological factors (e.g. number of endemic and threatened species, species irreplaceability, habitat connectivity and ecological permanence and having representative bio-indicators), opportunities for establishing habitat connectivity, management of land degradation impacts (where there is clear and present risks related to land-use changes and land use conflicts) and demonstration potential (e.g. willingness of estate management to conservation, resource use conflict reduction, enabling policy environment and potential trade-offs). In addition, RPCs will be selected on the basis of following: (i) RPCs having a prominent presence in the Wet and Intermediate zones of the country; (ii) engaged in national dialogue; (iii) a member of Biodiversity Sri Lanka (BSL) with the common objective of conserving Sri Lanka's rich biodiversity; (iv) playing an active part in the deliberations of the Plantations and Agri-business steering committee of BSL; (v) having a strong corporate sustainability and environmental commitment; (vi) showcasing demonstrable efforts in biodiversity conservation in the national interest which are also replicable; and (vii) allocating specific budgets set aside for conservation efforts. Output 1.3 will entail the participatory development of conservation management and financing plans for the priority HCVP sites with private sector, smallholders, communities and other stakeholders (species experts, ecologists, NGOs, government entities) to improve conservation outcomes in existing forests, restoration of degraded tea and rubber lands, degraded forests and riparian forest to improve native species conservation and ecological connectivity. The long-term goal is to attempt to have these remaining forests within the plantation estates categorized as an 'included forest' or Environmentally Sensitive Areas (ESAs) with a view to conserve and sustainably manage them with the involvement of multiple partners (plantation industry and communities) under a suitable legislation and having these areas recognized as private protected areas in accordance with international norms such as that of the International Union for Conservation of Nature's (IUCN) Protected Area category.

Output 1.4 will provide technical support, training and monitoring support for the implementation of selected investments in the priority HCVPs and connecting ecological habitats to promote: (i) improved conservation management and protection measures; (ii) support assisted natural regeneration of degraded forests and riparian areas with native species (including rare and endemic flora) through assisted natural regeneration, with additional seeding, replanting and protection; (iii) improve practices in timber and fuel wood forest plantations within tea and rubber estates to enhance species diversity, enhance habitats and overall biodiversity as well as meet fuel wood and energy needs; and (iv) restoration of critical riparian areas including rivulets, gullies and stream banks to enhance connectivity corridors for terrestrial and aquatic faunal species. Restoration of native species will entail sourcing the planting

stock from the RPCs' own nurseries, gene pools and seed banks and from the existing nurseries of the Forest Department or private sector. Most of the assisted natural forest regeneration, supplemented by planting will be on the Companies' lands set-aside for conservation and/or promotion of connectivity and not within state-managed forests and national parks that the corridors could connect to and serve. All restoration and improve practices in timber and fuelwood plantation will be financed through the co-financing (from the private and government) and not from GEF resources.

Given the small and isolated nature of the HCV forests within the plantations, the project does not anticipate application of a large landscape approach to achieve conservation outcomes. In those very limited cases, where natural forest patches within the plantation estates are likely to be connected to PAs, the project will set up collaboration between the PA managers and RPCs for (i) species surveys; (ii) joint patrolling; (iii) joint monitoring, (iv) technical support and information exchanges etc.

Complementary to conservation and forest restoration, Output 1.5 will support the replication of best practices in forest conservation from the larger estates to smallholder tea and rubber with technical support, training and extension from the project, with seed grants to initiate the restoration efforts.

Output 1.6 will support capacity building and skills development for local government officials, Civil Society Organizations, tea and rubber smallholders, plantation managers, plantation workers and farmers to collaboratively manage priority conservation areas and adopt sustainable land and plantation practices. Capacity building also underlines all the project interventions.

Component 2: Innovative Public-Private-Community Partnerships for conservation and sustainable land management established within the plantation sector

There is a demonstrated interest and willingness in the plantations sector to conserve biodiversity and reverse land degradation, and the proposed public-private-community partnership envisaged under this Component is geared towards leveraging, consolidate and expanding these efforts. To this end, the project will make an assessment of current financial flows to develop a menu of sustainable financing options to support the conservation and land management efforts. The investments for conservation and shift in land management practice will be leveraged through the private sector – by Regional Plantation Companies or through green lending schemes from Commercial Banks. Conversely, provision of alternative renewable energy options (to reduce demand on fire wood for the tea industry and its labour force) and clean water and sanitation to communities could provide incidental benefit to the industry itself. Activities such as development of economically feasible alternative business models for the plantations estates may be co-financed jointly. Under this Component, the project will support the following Outputs:

Output 2.1 will support the development of model(s) for private-public participation and financing for conservation of priority forests and ecosystems and reduction of land degradation developed based on on-going experiences in the country in the plantation sector. The model(s) will be based on detailed economic feasibility assessments of alternative business models to enable plantations to become more profitable. Alternative business models would be

premised on being compatible with the goals of biodiversity conservation and sustainable land development and would likely include additional revenue streams from crop diversifications, optimum land utilization, nature-based tourism and other similar possibilities. The need for additional investments might also be addressed through the green-financing initiatives of the Sri Lankan banking sector that is currently being discussed under BIOFIN.

Based on the outcome of Output 2.1, technical support, extension services and capacity development will be provided under Output 2.2 to interested plantation companies to support gradual shifts to alternative business practices aimed at making plantation practices more environmentally-friendly, achievement of LDN, the promotion of new and economical ecotourism-related ventures to supplement loss of revenue from alternative practices, participation in 'greening' programs and entry into niche markets for organic and environmentally-friendly products and production processes and environmentally-friendly management practices. The latter might include: (i) planting of leguminous shade trees within the tea plantations to improve biodiversity, provide a source of firewood, nitrogen fixation; (ii) maintaining ground cover such as tea pruning and leafy material to reduce erosion; (iii) contour planting, improved drainage design, silt pits, grass planting on field edges etc. to control erosion; (iv) sustainable pesticide use and management; (v) chemical free zones near waterways and conservation forests; (vi) optimal nutrient balance, efficiency and application rates; (vii) pest management through possible introduction of integrated pest management measures (IPM); (viii) undertaking soil rehabilitation works prior to tea and rubber re-planting, including growing a leguminous crop to improve nutrients content in soil; (ix) maintaining forest undergrowth to retain moisture and protect forest dwelling species; (x) breaking monocultures in forest plantations; and (xi) establishing multi-layered tree systems in home gardens to enhance species, ecology and provide multiple economic benefits to local people.

Output 2.3 will support the development of investment criteria and guidelines for responsible private sector investment in conservation actions developed at tested in the participating RPCs, while Output 2.4 will support the development and operationalization of incentive mechanisms for recognizing, rewarding and communicating achievements of private plantation companies in sustainable practices. Financial incentives may include a biodiversity credit scheme that financially rewards the industry for its contribution to public biodiversity goods and services. Such a credit scheme is presently being designed by Biodiversity Sri Lanka using an on-going pilot forest restoration activity in the Kanneliya Rainforest supported by ten of its private sector members. In addition, the green lending programs in the banking sector may also be co-designed and made more accessible to the plantation industry. During the PPG stage, the potential for establishing a Plantation Sector Fund for sustainable development will be explored and potentially capitalized through (i) revenue sharing from nature based tourism financed by the Fund and pay-back of a part of the profit, alongside lent capital into the Fund; (ii) levies on beneficiaries of potential ecosystem services such as a reasonably small add-on to hotel room rates in tourism resorts premised in and around the conservation areas; (iii) voluntary contribution by tourists and local conservationists and businesses; and (iv) twinning and collaborative arrangements with similarly motivated nature-based businesses in the more affluent parts of the world through co-financing options.

The project would also explore non-financial incentives for the industry. This Output might also include a system of public recognition and reward for business leadership in conservation and land management, greater empowerment to harness the potential of ecosystem services on the plantation estates (such as for nature based tourism), and a greater role in monitoring and policing the biodiversity assets exposed to illegal exploitation and abuse. In addition, the project will further help companies acquire Rainforest Alliance Certification and Forest Stewardship Certification that encourages sustainable land use and conservation of biodiversity or seek to develop a national certification scheme through Biodiversity Sri Lanka. In particular, it envisages to objectively and independently assess the relevant certification schemes to provide feedback on the robustness of the current assessment process as part of the effort to

improve verification of the audit processes. While, the larger plantations would benefit from Output 2.2, smallholders participation will be facilitated through Output 2.5 by provision of technical support, extension and training to adopt innovations undertaken by the larger companies, as well as helping farmers to adopt environmentally-friendly land management, plantation and production practices (reduction of chemical usage, IPM techniques, improved soil and water use techniques, protection of stream banks, improve net production and soil organic carbon, etc.) and introduction of agroforestry models suited for sloping lands and landslide risk areas to reverse land degradation. In parallel with the biodiversity conservation efforts in Component 1, Output 2.6 will provide technical assistance, training and extension services and best practices to improve compliance to good land management and agricultural practices to enhance soil quality and fertility, improve soil conservation measures, reduce agro-chemical usage and improve water conservation and safeguard and reduce land degradation within buffer zones of priority conservation sites in the pilot plantation areas all with the purpose of promoting efforts to achieve LDN. These efforts will be primarily aimed at increasing productivity of the large and smallholder plantations and small-scale agriculture practices, saving costs in chemical fertilizers, improving productivity and thus increasing profit margins. These interventions are expected to also directly benefit biodiversity and indirectly, improved profits are likely to accrue to the companies', smallholders and farmers to increase their ability and motivation to contribute to biodiversity conservation. Additionally, improvements in water quality and soil fertility will have direct community health and livelihood benefits.

Output 2.7 will focus on providing technical assistance and best practices through private sector and government financing to support introduction of renewable energy technologies such as more efficient biomass use, mini and micro hydro-power and solar alternatives to reduce firewood demand from the natural forest and reduce its usage in tea estates. This will also facilitate smallholders' productivity improvement through better access to energy, soil and water conservation. The intent of the RE technology improvements is to reduce removal of fire wood from the forest and the forest floor, the extraction of which currently causes forest degradation and loss of habitat for endangered species as well as land degradation through exposure of the soil, soil cover and fertility loss and lowering of soil organic content. For the broader community, and especially the labour force in the plantation estates, the project will explore access to cleaner renewable energy to dissuade the use of fuel wood for cooking and heating water that is sourced from natural forest areas so as to reduce impacts on natural forests and its species. In addition, to reducing impacts on natural forests, RPCs will work towards improving management of the fuelwood and timber plantations to enhance fuel wood and timber production (through better silvicultural practices, improved selection of planting stock, fast growing species, etc.) so as to reduce dependency on natural forests that often result in loss of biodiversity and species. The introduction of RE technologies and management of timber and forest plantations will be financed through the co-financing committed by the private sector/government and not use the GEF resources.

Component 3: Increasing capacity for policy coherence, project implementation and monitoring

Under this Component, GEF funds will support the formation of a consortium of participating plantation companies and smallholder tea and rubber estates established to effectively co-ordinate and promote replication of best practices from the Private-Public-Community partnerships in the plantation sector (Output 3.1) with the intent of sharing information and best practices that would be further complemented by Output 3.2 that aims to establish an user-friendly information management system to integrate lessons from private-public-community partnerships. Output 3.2 will be achieved through: (i) development of simplified, standardized and dedicated information management system and its operationalization; (ii) strengthening information support system for consortium of plantation companies and smallholders for sharing good practices; (iii) setting up of standardized information collection parameters; and (vi) cross-agency and cross-sector efforts to collect and digitally catalog existing information to support replication. It is likely that the

information management system may be housed at the Ministry of Plantation Industries or other suitable institution that would be assessed during the PPG stage. Project best practices and lessons learned will be identified, documented and disseminated ([Output 3.3](#)) and will contribute to learning and facilitate replication and scaling up in other plantation districts in the country. This would be achieved through: (i) documentation and dissemination of best practices; (ii) preparation of policy guidance notes to address current gaps; (iii) technical reports, publications and other Knowledge Management products; (iv) national and sub-national workshops to facilitate dissemination and promote replication; (v) preparation of replication and scaling up strategy; and (vi) preparation of an Implementers Manual and Lessons Learned Guide to support replication. The project will also establish an effective M&E system that adheres to GEF requirements, enables effective evaluation of project progress and impact, and that is inclusive of the needs of women and opportunities to strengthen gender mainstreaming through project activities.

4) Alignment with GEF focal area and/or Impact Program strategies:

The project aligns to GEF-7 biodiversity programming directions, specifically BD-1-1 to 'Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors (plantation industry)'. The project will focus on mainstreaming biodiversity into the tea and rubber production sector, which is a key sector negatively impacting biodiversity in Sri Lanka. As part of this effort, the project will focus on improving and changing production practices to be more biodiversity-friendly through capacity building, training and incentives to change current practices that degrade biodiversity. Without the GEF project, it is likely that there will be loss of biodiversity and ecosystem services in the tea and rubber production areas. The project will also establish public-private partnerships with the businesses operating in tea and rubber plantation in these areas, thus, unlocking non-public sources of financing for biodiversity conservations. The outcome of the project would be to: (i) improve management of remaining high value forests within the plantation sector through improved incentives mechanisms that encourage private sector investments and support for their conservation; and (ii) reduce direct loss of critical biodiversity through more sustainable production and environmentally-friendly production practices.

In terms of the GEF-7 Land Degradation programming directions, specially LD-1-3 to "Maintain or improve flows of ecosystem services, including sustaining livelihoods of forest-dependent people through Forest Landscape Restoration (FLR)", the project will focus on enhancing best practices in plantations and surrounding smallholder and agricultural lands to reduce harmful impacts on the land and aquatic systems. The intent of the project is to promote environmentally-friendly silvicultural practices on plantation and encourage smallholders, farmers and others to reduce chemical usage, promote soil fertility improvements, reduce erosion and invasive alien species, promote the efficient use of water, and promote agroforestry models on slopping and landslide prone areas to conserve soil and improve habitat for species. The overall goal of this emphasis is to promote the achievement of neutrality and there is no net loss of natural capital through halting the conversion of forests to other land uses, restoring degraded forests and increasing forest cover (through conservation and forest rehabilitation activities), reducing soil degradation (through improved silvicultural practices on plantation lands and smallholdings), improving land productivity and soil organic content through soil fertility improvements, sustainable pesticide use and other soil and water conservation measures.

On the basis of the UNCCD's Land Degradation Neutrality (LDN) framework, the Government of Sri Lanka has defined the following actions, namely to (i) halt the conversion of forests and wetlands to other land use cover types; (ii) restore and improve degraded forests (80% in dry zone and 20% in wet zone); (iii) increase forest cover from 29% to 32%; (iv) reduce rate of soil degradation and improve land productivity and Soil Organic Carbon (SOC) stocks; and (v) reduce

soil erosion of lands cultivated with annual and plantation crops.[1] This would entail specific efforts that address drivers of land degradation (to be assessed under Output 1.1) that facilitate improvements in land cover, primary productivity and soil organic carbon.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing:

The baseline investments described in Section 2 will contribute in some measure to the conservation of biodiversity and habitats within the plantation sector ecosystems through the promotion of improved conservation practices, restoration of degraded forests, improving conservation outcomes in plantation forests, sustainable and environmentally-friendly practices in tea and rubber plantations and smallholder plots, agroforestry and improved multi-layered vegetation in home gardens. Financing provided by the GEF will help to integrate natural forest within the plantation sector into strengthen the governance framework for biodiversity conservation and its inclusion eventually in a nationally recognized conservation system. The GEF's financing will support technical assistance, training and best practices to enable specific actions towards effective forest conservation and ecological and species restoration, effective conservation and monitoring of threatened species, and the implementation of biodiversity-friendly production practices as part of a strategy for the conversion and substitution of existing production activities that threaten high conservation value forests and their associated ecosystems. The GEF increment will build on the existing baseline activities (as described in Table 4 below) as specifically, actual forest restoration activities will be supported through co-financing.

Table 4: Additional Value of GEF Increment

Current Activities	GEF Increment
Component 1: Improving conservation and restoration of High Conservation Value (HCV) forest ecosystems in the Wet and Intermediate Climatic Zones	
National Conservation Review of forest biodiversity undertaken in 1991-1996 only sampled forest 200 hectares (which excluded the smaller forests within the RPCs). There is no composite map of the forests within the plantation areas as well as complete information of species within these forests and no clear information of degradation within the estate lands and location specific drivers of degradation	Develop a GIS based database of tea and rubber plantations that maps remaining natural habitats, species composition and diversity, forest plantations and land degradation (including assessment of drivers of degradation) within the tea and rubber plantations with the intent of spatially defining conservation elements that would complement the National Conservation Review
While the RPCs are voluntarily conservation forests within their plantations, there are limited efforts to develop an	The GEF project will provide technical support to facilitate participatory development of conservation management and financing plans for the priority forest conservation sites with priva

<p>overall management and financial framework to conserve, restore and improve conservation outcomes</p>	<p>te sector, smallholders, communities and other stakeholders (species experts, ecologists, NGOs, government entities). These comprehensive plans are expected to enable the RPCs to make decisions on conservation actions are needed, which degraded tea and rubber lands can be rehabilitated and what measures are needed for the rehabilitation including even conversion to forests or fuelwood plantations and where riparian forest need to be conserved or rehabilitated to improve native species conservation and ecological connectivity.</p>
<p>Conservation measures, while encouraging within the RPC estates through voluntary efforts, there is lack of technical support and best practices to support a more comprehensive invest approach to total conservation and rehabilitation of habitats and species</p>	<p>Through provision of technical support, training, best practices and monitoring support, the project will help identify best approaches for improving conservation management measures; species and methods for supporting assisted natural regeneration of degraded tea and rubber lands, degraded forests and riparian areas, best practices for managing timber and fuelwood forest plantations within tea and rubber estates to enhance species diversity, restoration of rivulets, gullies and stream banks to enhance connectivity corridors for terrestrial and aquatic faunal species. It will also facilitate dialogue with relevant government entities to provide recognition (or even legal or partial legal status with existing legislation) for these small parcels of forests within the RPC lands</p>
<p>There is limited capacity and skills and collaborative mechanisms that support</p>	<p>As a GEF increment, the project will support tailored capacity building and skills development for local government officials, Civil Society Organizations, tea and rubber smallholders, plantation managers, plantation workers and farmers to collaboratively manage priority conservation areas and adopt sustainable land and plantation practices.</p>
<p>Component 2: Innovative Public-Private-Community Partnerships for conservation and sustainable land management established within the plantation sector</p>	
<p>While, some RPCs have provided financial resources for conservation related activities and have shown a great interest and commitment to conserve its natural forests and promote environmentally sustainable activities within the plantation estates, the long-term</p>	<p>Output The GEF increment will build existing RPC efforts, by trying to develop model(s) based on detailed economic feasibility assessments of alternative business models to enable plantations to become more profitable. Alternative business models would be premised on being compatible with the goals of biodiver</p>

<p>in the plantation estates, the long term sustainability of such efforts (given the declining international demand for these products) would require the development and promotion of economically viable plantation models that combine productivity increases with conservation outcomes</p>	<p>sity conservation and sustainable land development and would likely include additional revenue streams from crop diversifications, optimum land utilization, nature-based tourism and other similar possibilities. The need for additional investments might also be addressed through the green-financing initiatives of the Sri Lankan banking sector that is currently being discussed under BIOFIN.</p> <p>Other options that might be supported by the GEF increment might include (a) biodiversity credit scheme that financially rewards the industry for its contribution to public biodiversity goods and services. (b) green lending programs in the banking sector may also be co-designed and made more accessible to the plantation industry; (c) establishing a Plantation Sector Fund for sustainable development will be explored and potentially capitalized and (d) technical support to smallholders to facilitate adoption of innovations undertaken by the larger companies</p>
<p>While, the RPCs are growing forest plantations/woodlots to meet fuel wood demand, there is a need to other energy means to satisfy the demand to energy for cooking and lighting and meeting the tea and rubber product processing energy needs</p>	<p>The GEF increment will provide technical support, extension and best practices to attract private sector and government financing to support introduction of renewable energy technologies (to meet increasing energy demands) such as more efficient biomass use, mini and micro hydro-power and solar alternatives to reduce fire wood demand from the forest and reduce its usage in tea estates, as well as facilitate smallholders' access to productivity improvements in energy, soil and water conservation. The improved management of timber and fuel wood forest plantations for meeting energy and timber needs will be financed through the RPCs.</p>
<p>Component 3: Increasing capacity for policy coherence, project implementation and monitoring</p>	
<p>While there is collaboration between the RPCs in conservation and sustainable land practices, there is limited collaboration between the private and public sector as well as with smallholder associations</p>	<p>The GEF increment will support the formation of a consortium of participating plantation companies and smallholder tea and rubber estates established to effectively co-ordinate and promote replication of best practices. It would also support increased dialogue and cooperation with the public sector with the intent of sharing information and best practices as well as develop mechanisms for sharing of technical assistance, extension services and investment support</p>

	Information services and investment support
Lack of information systems on species, diversity, practices, land degradation and other environmental information that prevents suitable and coordinated actions on-the-ground	The GEF increment will support (i) development of simplified, standardized and dedicated information management system and its operationalization; (ii) strengthening information support system for consortium of plantation companies and small holders for sharing good practices; (iii) setting up of standardized information collection parameters; and (vi) cross-agency and cross-sector efforts to collect and digitally catalog existing information to support replication.
Limited availability of knowledge management products to enable scaling up and replication	The GEF increment will support the development a number of knowledge management products based on current and project-related successes that will be readily available

These actions, which will be implemented during a 5-year period with an investment of \$4,005,251 USD from the GEF and \$28,000,000 USD in co-financing, will be added to the baseline investments delivering the GEBs that are described in the following section. Specific

6) Global Environmental Benefits: Refer Table 5 below:

Table 5: Global Benefits (GEFTF)

Baseline practices	Alternative to be put in place	Project impact
Biodiversity		
<ul style="list-style-type: none"> -Important biodiversity areas located within the plantation sector are not being managed properly and therefore remain out of effective protection -Land use permitting and allocation decisions in plantations management do not adequately capture values of critical biodiversity and threat of loss of ecosystem functions associated with 	<ul style="list-style-type: none"> -High-conservation value forests within the plantation estates identified and protected -Incentives for private sector estates, smallholders and local communities developed and implemented for biodiversity conservation -Capacities and skills emplaced at the national and sub-national levels for restoration of degraded forests, riverine vegetation 	<ul style="list-style-type: none"> -Enhanced conservation of 4,000 hectares of biodiversity rich forests and forested habitats (HCVFs), including riverine forest and aquatic systems within plantations in the wet and intermediate climatic zones to improve species conservation and connectivity. (Actual extent will be confirmed at PPG stage) - Improved status of endemic, vulnerable and threatened faunal and floral

<p>ith them</p> <ul style="list-style-type: none"> -Poor coordination amongst the various conservation authorities and the plantation companies resulting in sub optimal usage of habitats -Little or no recognition for the efforts of plantation companies to conserve the biodiversity within their lands. -Very limited or no engagement of communities in management of biodiversity corridors or high value habitats. -Limited funding or no secured funding supporting biodiversity conservation in and around plantation estates -Production practices on private and communal land are not in line with best practices needed to sustain biodiversity. 	<p>on and improved condition of aquatic ecosystems within and outside plantations</p> <ul style="list-style-type: none"> -Smallholders are actively engaged in ecologically compatible activities in plantation areas. -New financing mechanisms developed to ensure financial flows/ benefits from nature-based tourism and/or other sector activities -Increase productivity of plantations by testing out a new business model with a corresponding increase in the RPC's profits and ability to provide more co-benefits to associated communities and invest in the conservation of the 'included forests' (natural forests occurring on the plantation estates)-tour operators, eco-lodges and environmental camp sites in the targeted area adopt the biodiversity friendly and/or low carbon standards; (ii) at least 50% of hotels in the ecologically sensitive areas meet biodiversity-friendly certification requirements and adopted by the government. 	<p>al species in the pilot priority sites as measured by key freshwater fishes, amphibians, reptiles, birds, mammals and plants (refer Annex E for preliminary list of potential species for monitoring to be finalized at PPG stage)</p> <ul style="list-style-type: none"> -Restoration of 500 hectares of degraded forests managed by Regional Plantation Companies through assisted natural regeneration for improving conservation outcomes and biological connectivity with private sector or non-GEF financing and key species population enhancement (extent of restoration area and key species will be defined at PPG stage). -On average, at least 10% of participating plantation company annual development budgets allocated for achievement of improved conservation and sustainable land management outcomes (number of companies to be confirmed at PPG stage) -At PPG stage, the options for biodiversity-friendly certification (through BIOFIN or a national program) for small and medium hotels and home stays will be assessed and if felt relevant would be included in Table B.
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Land Degradation

<ul style="list-style-type: none"> -Continued agricultural and smallholder production practices without applying best practice community-supported agriculture and SIM techniques 	<ul style="list-style-type: none"> -Improved capacity and extension promoting best practices in smallholder plantations and agricultural lands in the wet and intermediate climatic zones -Enhance the health and diversity of soil 	<ul style="list-style-type: none"> -At least 50,000 hectares of tea and rubber plantation companies and smallholders plantations and agricultural lands employing environmentally friendly land management practices
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<p>agriculture and SEM techniques, resulting in further degradation of land and water resources resulting in soil and biodiversity loss</p> <ul style="list-style-type: none"> -Degrading fertility of soil and agricultural productivity due to unsustainable practices -Limited efforts at enhancing the role of communities in sustainable land and forest management, in particular in promotion of agro-forestry and multiple cropping systems that integrate and enhance biodiversity 	<p>Enhance the health and diversity of soil biota and aquatic fauna through improvement of soil and water quality of the plantation estates and small-holdings</p> <ul style="list-style-type: none"> -Smallholder and Community-based agro-forest and sustainable agricultural and home garden models and stewardship contracts will be promoted to secure broad community support for conservation solutions 	<p>ces (Actual extent will be confirmed at PPG stage)</p> <ul style="list-style-type: none"> -Improved water quality in rivulets, streams and ponds within pilot priority sites in selected estates as measured by: DO; NO₃, PO₄; BOD₂; EC, PH, conductivity, benthic macro-invertebrates, etc. -At least 1,000 hectares of agricultural and community lands under sustainable land and forest management practices, including soil conservation and fertility improvement practices, reduced chemical use, and biodiversity (Actual extent will be confirmed at PPG stage) - About 5,000[2] plantation smallholders, estate workers and community members deriving benefit from improved and sustainable land management and agricultural practices and indirect beneficiaries from improved water and soil conservation is about 60,000 -The direct post project C benefit of 6.189 Mt CO₂ eq. for 20-yr estimate. -Achievement of LDN in plantation lands
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7) Innovation, Sustainability and Potential for Scaling Up

The project will address innovation, sustainability and scaling up as follows:

Innovation: The project will be designed to reflect innovation. It will build on the conservation practices already instituted by certain plantation companies. Innovation will be promoted through: (i) viewing the remaining forest patches within and adjacent to the tea and rubber plantations as part of the island's conservation system, so that these areas get the recognition and priority it deserves; (ii) viewing remaining forests, riverine ecosystems and protected areas as a system in itself, so as to promote opportunities for linkage of habitats to protect as much of the biodiversity of the wet and intermediate climatic zones; (iii) bringing actors from the provinces, markets, private and civil society sectors together to achieve mutual understanding and negotiate and implement mutually agreeable plans for conserving biodiversity, combining top-down and bottom-up approaches; and (iv) promoting an alternate conservation-production based economy in the plantation sector, with value creation and increased and alternative economic benefits; creating green products and testing sustainable financing mechanisms through the private sector.

Financial sustainability will be achieved through (i) promotion of public-private-community partnerships, incentives, best practices and awareness creation; (ii) development and promotion of new business models for plantation, that looks at opportunities for added products (e.g. ecotourism, agroforestry, etc.) and improved ecological services (soil fertility improvements, reduced pollution, reduced soil erosion, etc.); and (iii) facilitating market linkages and expanding on-going programs related to green certification, biodiversity credits, green lending, and potential establishment of a private sector run "Plantation Sector Fund" to improve sustainability and encourage the willingness of the private sector to invest in biodiversity conservation and sustainable use practices that makes good business sense. **Institutional sustainability** will be achieved through systematic capacity development of existing private (Regional Plantation Corporations) and public (forestry and agricultural agencies, provincial government agencies, etc.) agencies, networks of civil society organizations, smallholders, local farmer and community groups, and other relevant sectors in the plantation areas. The project will help establish alliances for public-private-community for conservation and sustainable use of resources that is expected to continue beyond the project period. Capacity building measures will be improved by integrating these programs into the curricula of training institutes. Carefully tailored training and capacity building to enhance the skills of staff of plantation estates, smallholders and local communities in relation to conserving natural forests, improving plantation practices, sustainable agricultural practices, agroforestry, ecotourism will provide institutional sustainability. **Social sustainability** will be achieved through development/strengthening of stakeholder participation mechanisms for the target plantation owners, smallholders and communities. A Knowledge Management and Communication strategy will be developed during the PPG stage to facilitate awareness and enhance stakeholder participation. Extensive consultation will be undertaken at PPG stage to ensure collective decision making regarding project design and that key decisions on forest conservation will undertaken prior to delineation of areas to be set asides for conservation, restoration and protection so as to ensure that there is buy-in from all stakeholders. **Environmental sustainability** will be achieved through a coordinated approach involving improved protection of forest areas, restoration of degraded forests, stream banks and agricultural lands, sustainable land and agricultural interventions, and improved incentives for conservation and community participation.

Potential for scaling up: The project will be designed to build on existing success in the plantation sector to provide demonstration models for up-scaling in the plantation sector in the country. In particular, the capacity building and the development of best practices, guidelines and manuals for each aspect of the project will strongly support up-scaling. Ensuring that activities, impacts and lessons learnt from the demonstration sites are disseminated widely would help

generate a demand for similar activities throughout the plantation sector. The Project's investment strategy will seek to develop synergies among private and public actors with an objective of raising additional investments that will fund and expand models of conservation and sustainable plantation management within and outside of the targeted sites. A financial sustainability and replication strategy will be designed as part of Output 3.3 that would enable scaling up.

1b. *Project Location*

The project will be implemented in the plantations owned and operated by four large Regional Plantation Companies covering around 40,000 hectares that have expressed an interest in collaborating with the project, along with smallholder plantation and agricultural lands in their vicinities. The total area covered by the project will be about 50,000 hectares that includes smallholdings and neighboring agricultural lands and homesteads (to be confirmed at PPG stage). The estates of the four plantation companies are located in the Nuwara Eliya, Kandy, Kegalle, Ratnapura, Galle and Matara districts. The four Regional Plantation Companies expressing interest in the project are the: Kahawatte Plantation Company, Kelani Plantation Company, Talawakele Plantation Company and the Elpitiya Plantation Company. At least 4,000 hectares of forests and riparian areas are located within the estates belonging to these 4 Plantation Companies. Maps 1 and 2 of Annex A shows proposed locations of the above-mentioned plantation company estates (potential project sites) and Table 6, the extents of forests within the RPCs.

Table 6: Forested Areas within Potential Participating Regional Plantation Companies

Regional Plantation Company	Number of Estates within RPCs	Total Extent of Forests[1] (hectares)	Total Extent of RPC estates	% Forest Cover
Elpitiya Plantations	13	1,347.78	8,712.20	15.5
Kelani Valley Plantations	25	1,493.35	11,312.88	13.2
Kahawatte Plantations	17	2,593.0	12,335.95	21.0
Talawakelle Plantations	18	1,327.7	6,491.55	20.4
Total	73	6,7618.3	38,852.58	17.4

[1] Includes both conservation and plantation forests. Exact extents of conservation and plantation forests will be determined at PPG stage

[1] National Voluntary Land Degradation Neutrality Report 2017

[2] This figure includes around 3,500 estate workers (who reside on estate property and will benefit from improved and sustainable chemical applications and use and consequently reduced pollution in water sources (health benefits), renewable energy benefits, improved vegetable plots, supply of nursery plants and potential supplementary income activities (these will be defined at PPG stage), 1,000 tea and rubber smallholders (benefits from improved plantation practices, home garden improvements, small agricultural improvements, etc.) and around 500 vegetable farmers (with improved SLM and agricultural practices)

[3] Includes both conservation and plantation forests. Exact extents of conservation and plantation forests will be determined at PPG stage

1b. Project Map and Coordinates

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

Refer Annex A.

2. Stakeholders

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

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

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

At the time of conception of project idea and during the development of the project proposal, UNDP together with the Ministry of Environment and Wildlife Resources has extensively consulted CSOs and private sectors to seek their commitment and partnership in this project. The list of stakeholders including their role and responsibilities are presented in **Table 7**.

Consultations with CSOs has been undertaken with 12 organizations at the national level and 15 at regional/district level which are included in Table 7. National level consultations were done with organizations with a good track record on environmental conservation and lobbying. The project concept was discussed with them and their concerns were taken into consideration during the PIF development. Given their presence and experience in biodiversity conservation and mitigating land degradation in the wet zone areas, it was agreed that UNDP and the government will fully consult and engage CSOs during the project development. The consultations with the regional/district level CSOs mainly focused on the social and economic impact that the proposed project activities might create, and strategies to mitigate potential adverse impacts on the society were discussed. The discussions were important to identify vulnerable communities in the project landscape which will be further elaborated at the PPG stage.

Number of consultations were conducted with the private sector entities. Biodiversity Sri Lanka (BSL) led the discussions with Regional Plantation Companies on their willingness to participate in the project activities including their co-financing commitment to ensure sustainability of project initiatives. BSL had three rounds of discussions involving eight RPCs. The list of RPCs are included in table 7 and **Annex D** (page 58-61). The second set of consultations were held with the smallholder tea planters who own land in the selected project landscape. Four rounds of discussions were held with participation of 47 smallholders. The consultation was mainly to explain about project concept and seek their commitment to participate in the project activities and sustainability of their practices. The discussions were important to understand concerns of the smallholders in terms of equitable sharing of resource allocation to smallholders and potential conflicts they may face with the RPCs. The third set of consultations were conducted with private sector entities engaged in non-plantation related enterprises at national level and at regional level. Four discussions were held with the representatives and conglomerates (altogether there were 21 participants) with an interest in sustainable biodiversity management. Discussions mainly focused on their willingness and commitment to contribute towards the project activities and incorporate their concerns on the project objectives, strategies and sustainability. The commitment from RPCs are obtained through a letter submitted by BSL (**Annex F**, pg.63).

While the presence of indigenous peoples (Veddahs) are not confirmed at the PIF stage, we have noted this as one of the risks in the pre-SESP screening where they may be directly or indirectly affected by the project if they are not adequately involved in project design. In addition, it is possible that the project can affect land tenure arrangements and customary rights of IP. At the PPG stage, the project development team will have consultations with IP experts in the country to further validate the presence of IPs in the project area, or its area of influence. Accordingly, will assess potential impacts of the project on rights and interests, lands, territories, resources, and traditional livelihoods. Project design team will determine whether FPIC will apply to any project activities, and if so, identify community preferences for giving FPIC. An IPP will be also prepared during the PPG stage, in close collaboration with IP experts and following consultation with any potential affected IP groups.

Table 7: Stakeholder Roles and Responsibilities

Stakeholder	Role and Responsibilities
Ministry of Environment and Wildlife Resources (MEWR)	MEWR is responsible for the management of the environment, land, forests, water, air, biodiversity, and minerals, The Ministry will be the lead implementing entity for the project and would be the convener of the multi-stakeholder committees to coordinate inter-ministerial landscape initiatives. The Ministry prepares policies related specifically to biodiversity conservation, forestry, climate change and natural resources management in Sri Lanka. MEWR has a number of important state conservation agencies that will technically support the project's design and implementation- Central Environmental Authority and Department of Wildlife Conservation (DWLC). The DWLC administers Protected Areas (PAs) including sanctuaries, national parks and strict natural reserves.
Ministry of Plantation Industries	The Ministry has been established to enhance the productivity, profitability and sustainability of the plantation industry. The optimum utilization of plantation lands through multiple cropping and integrated farming, thereby increasing production and employment and matters relating to the development, promotion and research activities of tea, rubber and coconut industries are a part of the mandate of the Ministry. Existing lease agreements between the Government and Regional Plantation Companies are managed by the Ministry of Plantation Industries. The Ministry will support the project design by being the chief liaison between the RPCs and monitor their investments and land management activities.
Finance Commission/ National Planning Department	The National Planning Department coordinates all development projects and allocates government financing for priority projects in all sectors. The Commission is responsible for approving fiscal flows to provinces and has a stake in ensuring that regional development is balanced and not undermined by environmental risks. The project will work with and be guided by advice from the Commission in design of fiscal and other incentives for biodiversity conservation including also increased flows of government funds. Both agencies will contribute during project design to identify and target intervention areas that are most in line with national development objectives and local priorities

	... that are most in line with national development objectives and local priorities.
Planter's Association of Sri Lanka	The general objective of the Planters' Association is to promote, foster and protect the plantation industry of Sri Lanka and the interests of the planting community. It is one of the oldest existing organizations from Sri Lanka's colonial past and remains the apex representative body of Sri Lanka's plantation industry. All the state-owned plantations and the RPCs are members of the association and will be key in the project design and acceptance
Regional Plantation Companies (private sector)	23 Regional Plantation Companies operate on 53-year lease holdings with the Government of Sri Lanka. 20 of these are privately owned whilst three are state-run. These RPCs, particularly those with estates within the Wet Zone of Sri Lanka will be the chief implementers of this project. The project design stage will involve them heavily as well.
Biodiversity Sri Lanka (BSL)	BSL is a completely private sector owned and led platform which is member driven. Established in 2015, it has 85 corporate entities as members to date. Many of the RPCs are members of BSL and operate through a Plantations and agri-business standing committee. Matters relevant to biodiversity conservation and land management are dealt through this standing committee. The partnerships and consortia which are to be established through this project will be chiefly negotiated through this BSL Platform
Tea and Rubber Small Holders	There are approximately 400,000 tea smallholders with approximately 1.6 million dependents. They operate in 14 administrative districts, namely Ratnapura, Galle, Matara, and Kalutara. There is also a concentration in the Kandy, Badulla, Kegalle and Nuwara Eliya regions. Overall, the contribution by the tea smallholders to the national production is 71 per cent. The tea smallholders are a major contributor to the rural economy and will be a major stakeholder in this project. Similarly the rubber smallholders also contribute significantly to rubber production in the country.
Provincial Governments	Responsible for managing affairs under different provinces including natural resource management. Will support the implementation of project activities in selected provinces. During the project design extensive consultations will be conducted with the provincial governments of the southern, western and central provinces
Forest Department	The role of the Forest department is to manage and develop forest resources in accordance with the National Forest Policy and in line with the principles of Sustainable Forest Management; conserve forests mainly for the purpose of soil, water, and biodiversity conservation, enhance and maintain carbon stocks etc. The FD will provide technical support for management of conservation forests and fuelwood forests within the RPC lands. The project will ensure partnership between the RPCs and Forest Department, in particular to locations that plantation forest patches are connected with PAs to improve species surveys and monitoring; planning and monitoring, joint patrolling; and

	reduction of HWC.
Plantation Human Development Trust	The PHDT is a Tripartite Organization consisting of the Government of Sri Lanka, Regional Plantation Companies (RPCs) and Plantation Trade Unions (TU) formed to implement social development programs to enhance the quality of life of the Plantation Community in the Estates managed by the RPCs. The project will solicit the support of the PHDT to better understand the priority and needs of the plantation community
Tea Small Holdings Development Corporation	Its mandate is to develop tea smallholdings through increase in production, marketing activities, improvement in productivity and improving the welfare of small holders. The project will work through the Corporation to enhance best practices in plantations in relation to environmental aspects and species conservation in particular through their Extension Officers
Department of Botanical Gardens	It is the leading institution in the field of botany in the country. The project will work with the Department of Botanical Gardens in terms of inventory of flora, identification of measures for species restoration and management, etc.
Botany and Zoology Departments of Universities	The project will obtain the services of the respective departments to help with species identification and inventory, establishing monitoring protocols and measurement techniques, use their services for monitoring etc.
IUCN	IUCN Sri Lanka is likely to technical implementing partner supporting biodiversity surveys and economic analysis needed for conservation models and innovative financing flows required for the design and monitoring of this project. This will be assessed at PPG stage
Sri Lanka Tourism Development Authority (SLTDA)	Will support (through engagement with BIOFIN) to develop innovative financial solutions, including green lending facilities for a sustainable tourism certification program
Chamber of Commerce	The Chamber of Commerce will play a lead role providing technical support, sharing of information, knowledge and experience, the promotion of best practices through active learning and understanding mechanisms and facilitating dialogue between State and civil society partners and the private sector, advocating biodiversity-friendly policies and positive instruments for conservation
Commercial Banks	The Commercial Banks can support green lending schemes and loans to small holders (this will be further assessed at PPG stage)
Travel agencies and tourism companies	Travel companies and hotels can play an active part in promoting environmentally acceptable tourism and hotel stays that can have multiple benefits, including: (support RPCs to diversify to additional revenue generation methods through targeted bird watchi

	ng, forest tours,
Certification entities	As of now, the RPCs obtain certification through the Rainforest Alliance Certification (RAC) and Forest Stewardship Council (FSC) certification process, both of which encourage sustainable land-use and biodiversity conservation. This will continue until a affordable national certification program can be developed
Energy Efficiency Technology Companies	These companies will provide technical support, extension, equipment and best practices to promote RE options for the tea and rubber estates to reduce use of fire wood from the forests
Spice and other tree crop companies	Can provide technical assistance, extension and nursery development support to promote introduction of high value crops, including species for home gardens and vegetable plots of estate labor. In addition, they can buy back some of the harvests
NGOs and CBOs	NGOs and CBOs that are active and working on issues of natural resource management in the target region will support community mobilization and community initiatives promoted under the project. The involvement of the wider public in sustainable forest and land management and ecosystem conservation through local NGOs and community-based organizations is an important part of this project. To this end, UNDP will catalyze the civil society capacities built during 15 years of GEF Small Grants Project implementation. The project will seek to further strengthen environmental NGOs capacity to implement and also monitor environmental safeguards and concerns of development projects.
Communities (Women and Men)	The project recognizes that women and men use natural resources differently and will be impacted differently by the project. It will pay particular attention to dimension of gender equality and women's empowerment in the design of its interventions. Local communities in general will be key beneficiaries of the project and will be consulted with and involved in the design and implementation of the project. Local community representatives will be involved in the development of livelihood and eco-tourism plans, forestry models, concession models and in the incentive programs such as PES.
Estate labor	Estate workers who reside and work on the plantations will participate in benefits from improved and sustainable chemical applications and use and consequently reduced pollution in water sources (health benefits), renewable energy benefits, including RE investments and energy efficient cooking stoves, improved vegetable plots, supply of nursery plants and potential supplementary income activities (these will be defined at PP G stage),

3. Gender Equality and Women's Empowerment

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

The project will address gender inequalities in the plantation, agriculture and other natural resources sectors and help identify opportunities to support gender mainstreaming through the direct involvement of women in SLM, forest conservation, agriculture and ecotourism activities. During the PPG phase, a gender specialist will be recruited to undertake a full gender analysis to identify the different roles of men and women in the plantation, smallholder and agriculture sector. At the site level, the project will carefully examine local conditions pertaining to local livelihoods, resource access and use and management systems, and factors affecting the livelihoods of women and men in plantation sector and surrounding communities. Consultation sessions will be held to obtain views and inputs of a wide range of local stakeholders, including women, to develop project activities and to inform a robust stakeholder involvement plan with full gender considerations. A corresponding gender mainstreaming plan for the project will be completed and submitted with the project document at time of CEO Endorsement. This will include project approaches and actions to mitigate any negative impacts on rural women and girls (e.g. in terms of benefit sharing, labor division, access to resources, access to technology and skills development.), along with the gender mainstreaming focus that will be integrated across project activities as relevant. Additionally, project design will include specific investments based on women's requirements to ensure that they adequately benefit from project investments as well as capacity building and training activities will be designed into the project to enhance the capacity of women and vulnerable members to take an active part in the planning and decision making process. This attention on gender mainstreaming is recognized in project Component 3 Gender-disaggregated targets and indicators will be included within the project results framework. The project is aiming for at least 50% of direct beneficiaries to be female.

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

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

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

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The private sector is the key stakeholder in the project. The Sri Lanka Business and Biodiversity Platform of Biodiversity Sri Lanka (a national platform owned and driven by the private sector, including the 4 participating Regional Plantation Companies) have indicated that the 4 plantation companies are able and willing to design and implement initiatives in collaboration with the project. The plantation companies have also indicated willingness to commit to co-financing, the level of which will be assessed at the PPG stage. In fact, these plantation companies are already supporting investments on their estates such as - for energy conservation, water resources management, soil conservation, conservation practices under the Rainforest Alliance and Forest Stewardship Council certification, sustainable agriculture and solid waste management as part of their core business activities. BSL provides technical support; sharing of information, knowledge and experience; promotion of best practices through active learning and understanding; and facilitates dialogue between State and civil society partners. While RPCs are the main focal point for the project, private sector banks, travel and tourism companies and other private sector actors involved in the value chains (certification companies, energy efficient technologies, spices and other tree crops) will play a significant role in the project. In terms of travel and tourism companies, the project will build on the work that BIOFIN is already doing with the Central Bank of Sri Lanka and Sri Lanka Tourism Development Authority (SLTDA) to develop innovative financial solutions for biodiversity management. Green lending facilities are promoted with the financial institutions of the country, and with the SLTDA a sustainability tourism certification program has been also introduced for the tourism accommodation sector. During PPG stage, the project will initiate discussions with companies that are involved in energy efficient technologies, spices and other tree crops, and assess the extent to which these companies can be involved in the project to provide technical and extension support, equipment and best practices.

At the pilot sites, private sector companies will design and demonstrate approaches and tools to incorporate conservation and environmentally sustainable land management practices as part of a new and resilient plantation business model. The joint project implementation with private sector is expected to influence the Government's policies in a significant way to support the evolving business models based on strategic use of natural capital and heritage in the country, with potential for replication and up-scaling outside the project areas. To facilitate, the project plans, the Chambers of Commerce and Biodiversity Sri Lanka (BSL) will play a lead role providing technical support, sharing of information, knowledge and experience, the promotion of best practices through active learning and understanding mechanisms and facilitating dialogue between State and civil society partners and the private sector, advocating biodiversity-friendly policies and positive instruments that campaign for the conservation of Sri Lanka's fragile environment. The project will focus in capacitating small and medium business for improved services and products in the project areas by linking with large operators who are linked to global trade and marketing networks. It is anticipated that while the GEF funds will provide technical support for identifying and promoting best conservation and sustainable plantation practices and create the information base, coordination platforms and monitoring mechanisms, major investments for on-the-ground investments will come from the private sector and non-GEF sources of funding. During the PPG stage, UNDP will undertake due diligence process for all the participating companies to assess any risks before conforming engagement with them.

5. Risks

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

The following Table 8 identifies potential risks at the PIF stage. While, the overall risk at PIF stage is classified as “High”, during the PPG stage, these risks will be reassessed and further developed, along with other risks that might be identified.

Table 8: Risks and Risk Management

Risks	Rating	Preventive Measures
1. The limited experience and lack of practical methods for public-private partnerships in natural resources management	Moderate	During the PPG stage, government and plantations (RPCs) will continue in dialogue leading to co-design of the project with all parties at the table (government, private sector and civil society). Providing a neutral coordination platform (BSL)- which has representation from government and private sector and UN/IUCN) and resources for capacity building, including in related skills and approaches both at the project level as well as in the respective partner-organization will be pursued. Through IUCN and UNDP, at PPG experiences of such co-management from other countries in the region and beyond will be shared. Project design will ensure that project activities are phased in a way that allows the project to gain from the capacity building and experience sharing.
2. Private sector involvement and financing for the core project activities may be hampered as the tea and rubber industry is currently facing an economic crisis	Moderate	The project activities require the industry (and the government) to take a long-term view of the plantations and the land in their control. Long-term forest restoration will impact the main crop (tea or rubber) by stabilizing the micro-climate, mitigating rainfall variability and temperature rise caused by climate change. The participating RPCs are already financing investments in conservation and land management of their estates (refer Annex D) and have collectively indicated a willingness to participate and finance investments in collaboration with the GEF project (Annex F). The challenge is to work with the industry to invest in models where the return is necessarily long-term. As such, the project will encourage a mix of financing models tied to a broad basing of the core businesses (eco-tourism, tree crops, sustainable fuel wood) that provides both long term and short-term gain. Working with banks to facilitate this transformation through green lending programmes is envisaged with the su

		pport of BIOFIN's Phase 2.
3. Improved management of the forests in tea and rubber plantations might have an unintended impact on plantation workers' livelihoods, including restriction of access to fuel wood and forest resources, potentially causing economic displacement	Moderate	<p>During the PPG phase consultation will be held with the potentially affected individuals (including estate labor, smallholders, etc.) and local communities (vegetable growers) to assess impacts on current levels of access and use, in particular for fuel wood and forest resources. Based on this consultation, an Environment and Social Management Framework (ESMF) covering this risk and all others, will be prepared during the PPG to ensure preparation of the Environmental and Social Impact Assessment (ESIA) and Environment and Social Management Plan (ESMP) during the project implementation, if confirmed necessary during PPG-stage assessments.</p> <p>A project grievance redressal mechanism (GRM) will be developed at PPG stage to provide a mechanism to address any specific labor concerns during project implementation.</p>
4. Women (plantation workers and other disadvantaged groups) may not be fully involved in planning, implementation and monitoring of project interventions and getting benefits from such initiatives, rather influential leaders and/or groups may have more control on local level decision making.	High	<p>A Gender Specialist will be assigned during the PPG stage to undertake a Gender Analysis of the proposed project interventions and develop a Gender Mainstreaming Action Plan to identify measures to ensure that the project contributes to gender equality and creates equitable opportunities for women and men at all levels of engagement.</p> <p>Development of a Comprehensive Stakeholder Engagement Plan at PPG stage that will identify key institutions in the country that can provide guidance for the preparation of the gender assessment and action plan, as well as oversee gender mainstreaming during the project period.</p> <p>Project design will include special investments based on women's requirements to ensure that they adequately benefit from project investments;</p> <p>Capacity building and training activities will be designed into the project to enhance the capacity of women and vulnerable members to take an active part in the planning and decision making process</p>

<p>5. Natural disasters and climate change may affect the implementation and results of project initiatives. Climate change may result in changes in production of tea and rubber estates and raise the threat of Invasive Alien Species (IAS) by decreasing ecosystem resilience and creating conditions where IAS can more easily become established.</p>	<p>Moderate</p>	<p>Further assessment will be undertaken during PPG to consider potential climate change impacts on project activities in short-term and longer-term and to ensure that measures are reflected in project design to support climate-proofing and resilience of project activities and impacts as much as possible. It will also assess institutional capacity and information needs to enhance resilience to potential climate change impacts. (Refer Annex H for additional information on climate change impacts and mitigation)</p> <p>However, any potential climate change impacts will be addressed in the project specific Social and Environment Screening Procedure (SESP) or ESMF, as relevant during the PPG stage that will identify specific management measures in design of the project to ensure that activities are environmentally sustainable and supporting best practices managed for their climate risks and improving protection and management of critical watersheds and ecosystems to help to increase the overall resilience of the natural systems to climate risks in the areas compared to business as usual.</p> <p>The monitoring plan for the project will also include specific indicators to monitor the condition of sensitive ecosystems as it relates to climate change</p> <p>A Knowledge Management and Communications strategy will be prepared at PPG stage with the aim of improving awareness of climate related impacts and promote measures to improve climate resilience.</p> <p>Climatic parameters will be included into activities and resulting plans. Planning evaluation and adaptive measures will be fully integrated into project investments</p>
<p>6. Development interventions in terms of habitat and stream restoration, community livelihoods and community</p>	<p>Moderate</p>	<p>Further assessments of this risk (and all others) will be undertaken during the PPG, in the course of designing the project, including in particular the effectiveness of existing conservation programs being undertaken by the plantation companies. This assessment will lead to the develop</p>

<p>-based enterprises (e.g. ecotourism and natural resources based value addition, etc.) can have adverse impacts on species and habitats if not well designed and implemented.</p>		<p>ment of an ESMF during the PPG stage to cover this and all other risks. Relevant experts will be involved in the design of the project.</p> <p>Monitoring indicators will be selected to monitor the health of species and ecosystems.</p> <p>In terms of community-based enterprises, the ESMF will include specific criteria and procedures that will be used to assess potential impacts from any livelihood investment activities and define management responses before these activities are financed</p>
<p>7. The conservation focus of the project landscapes within the proposed plantation areas could exacerbate any existing conflicts in resource use if the activities are not well implemented or stringent enforcement measures are instituted</p>	<p>Moderate</p>	<p>Further assessments of this risk (and all others) will be undertaken during the PPG, in the course of designing the project. In addition an ESMF will be developed at PPG to cover this and all other risks.</p> <p>A project's grievance redress mechanism or GRM system will be developed at PPG that will be applied to address any specific community concerns and help resolve conflicts.</p> <p>A Comprehensive Stakeholder Engagement Plan will also be developed.</p>
<p>8. Smallholders and vegetable farmers, will likely continue to cultivate in steep and landslide prone areas causing land degradation and biodiversity loss mainly in aquatic systems</p>	<p>Moderate</p>	<p>Project design will include specific models and incentives to encourage smallholder and farmer engagement that allows for practice change (better agricultural practices, high value crops and value addition, agroforestry, etc.) rather than dedicate land for conservation. This will be assessed during the preparation of the ESMF</p> <p>During PPG stage, an assessment will also be made on the potential for attracting investments in water and soil conservation infrastructure in investments through the World Bank-funded Watershed Management project that could help smallholders and vegetable growers in the project area in carrying out sustainable practices without additional economic costs</p>

<p>9. Risks associated with RE projects (micro-hydro etc.) – could cause indirect risks on extraction and diversion of water for agricultural and other uses, and may raise certain environmental risks and risks to biodiversity</p>	High	<p>At PPG stage, an assessment will be made of the potential for any Renewable Energy (RE) projects, including new and existing micro-hydro schemes. The ESMF will include specific measures to address potential impacts on downstream water availability, risks to biodiversity, etc., if the potential for micro-hydro exists. At the PPG stage, consultation will be held with environmental authorities, environmental NGOs and downstream local communities to assess the ecological feasibility of such investments as well as statutory national requirements for Environmental Impact Assessment (EIAs) for micro-hydro investments that will be incorporated into the ESMF.</p>
<p>10. The continued use of chemicals in the plantation and annual vegetable cropping areas could pose a significant health hazard to plantation labor and farmers as well as to the environment</p>	High	<p>An assessment will be made during the PPG stage on the effectiveness of current progress made by the Private Plantation Companies to reduce chemical usage and improve the storage, transport, handling application and disposal of chemicals so as to reduce health related impacts. Based on the assessment, the ESMF will include additional measures, if necessary to further reduce the health and ecological hazards associated with chemical use.</p> <p>A similar assessment will be undertaken in relation to chemical use in small vegetable growers and the ESMF will include specific measures to address this.</p> <p>Project design will include additional measures to be introduced in the plantation lands to restrict use of chemicals in areas close to streams and human habitations, as is currently practiced in some of the estate plantations</p>
<p>11. Indigenous peoples (Veddahs), if present within and adjacent to the project area, may be directly or indirectly affected by the project if they are not adequately involved in project design and therefore not engaged in, supportive of, or benefitting from project activities. Some project</p>	High (if present in project area)	<p>During the PPG stage, the project will have consultations with Indigenous Peoples (IP) experts in the country to further validate the absence or presence of IPs in the project area, or its area of influence. In case, it is determined that IPs are present, an Indigenous Peoples Plan (IPP) will be prepared during the PPG stage, in close collaboration with IP experts and following consultation with any potential affected IP groups</p>

ject activities. Some project activities may require FPIC and this has not yet been obtained.		
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6. Coordination

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

As a nationally implemented project, the overall project management responsibility will rest with a National Steering Committee (NSC) co-chaired by the Secretary of the Ministry in-charge of the subject of Environment (GEF OFF, Biodiversity Focal Point) and Secretary of the Ministry in charge of Plantation Industries. Members of the private sector will be represented through Chamber of Commerce, BSL and individual companies as required. The Department of National Planning; Department of External Resources, Ministry of Finance and Provincial Councils and Ministry of Mahaweli Development will be represented as required. A project management unit will be established with technical and project management expertise funded by the project. UNDP, as GEF agency for the project will be responsible for reporting to GEF and Quality Assurance of project's delivery and results. A National Project Director will be designated by the NSC and will provide the oversight function to the Project Management Unit (PMU). PMU will coordinate closely with complementary projects, stakeholder entities and relevant private sector to enhance synergy and avoid duplication. PMU will maintain a strong communication focus and provide briefs to media and advocacy to policy makers on project outputs will be provided. A national Technical Advisory Committee (TAC) consisting of technical staff of the Ministry of Environment and Wildlife Resources, Ministry of Mahaweli Development, Ministry of Plantation Industries, RPCs, BSL, Ministry of Agriculture, and other technical agencies will guide and advise the PMU in the implementation of the project as well as ensure coordination and collaboration across the agencies that are involved in development activities and donor financed projects in the GEF 7 project areas. At the local level, project activities will be coordinated through the District Agricultural Committees (DAC) that consists of local representatives of district agencies of agriculture, irrigation, land management, smallholder plantations, local government, forestry, etc. This mechanism will facilitate coordination of inter-agency activities.

The project will also closely coordinate with the following GEF projects:

- The project will use stakeholder coordination mechanisms established under UNDP's GEF 6 and 7 projects, the landscape management projects in GEF 5 and 6 implemented by UNDP, IUCN and UNEP to provide the tools, processes and approaches for effective co-management of areas outside of protected areas that contain high biodiversity value
- The second phase of the Biodiversity Finance Initiative (BIOFIN) implemented by UNDP will support an assessment of private sector financing to achieve the country's National Biodiversity Strategy and Action Plan (NBSAP) and develop instruments for private financing of conservation.
- The GEF-UNDP SGP program has been 'upgraded' in the GEF 6 operational phase as a project focused on community engagement in landscape management. The current project works to promote biodiversity compatible social development in three landscapes one of which overlap with the proposed project area. The capacity of non-governmental organizations and civil society built in the implementation of the GEF Small Grants Projects and its current focus on sustainability of non-governmental initiatives through private sector partnerships will be a critical learning for this project.

7. Consistency with National Priorities

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

Yes

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

Table 7: Consistency with National Strategies and Action Plans

National Biodiversity Strategy and Action Plan (2016-2022)	<ul style="list-style-type: none"> · Ensure long-term conservation of biodiversity · Promote sustainable use of biodiversity · Conservation of agro-biodiversity · Promote equitable sharing of benefits from biodiversity · Improve human well-being through ecosystem approach 	<ul style="list-style-type: none"> · Conservation of biodiversity rich remnant forests within tea and rubber plantations · Improve connectivity between natural forest patches, riverine vegetation and Protected Areas · Restore degraded forest to improve habitat for key species · Improve conservation practices in forest plantations to enhance biodiversity values and species improvements · Improve plantation management to reduce chemical use and run-off to improve habitat for aquatic species · Promote agroforestry and multi-stratified home gardens in smallholder plantation areas to improve biodiversity · Promote alternative sustainable ecotourism incentives to encourage private plantation investment in conservation
Sixth National Report to the CBD (2019)	<p>The key recommendations relevant to the GEF project are:</p> <ul style="list-style-type: none"> · Habitat loss, degradation and fragmentation are significantly reduced 	<ul style="list-style-type: none"> · Promotion of key HCV forests, species and ecosystem conservation within tea and rubber plantations · GIS based mapping to identify HCV forests

	<ul style="list-style-type: none"> · Inventorying species (taxonomy, conservation status), ecosystems (structure, function, composition and distribution), their services and values to inform conservation planning and decision making · Loss of species is significantly reduced · Sustainable agricultural practices are promoted and established · Innovative financing mechanisms developed to promote sustainable self-financing for biodiversity and ecosystem services 	<ul style="list-style-type: none"> · Assess species conservation and diversity, degree of land degradation and establishment of an information management system to document and disseminate information · Restoration of degraded forests and riparian areas to improve connectivity of habitats and reduce species losses · Improved and sustainable agricultural and small holder multi-cropping systems · New financing for private investment in conservation in the plantation sector
National Voluntary Land and Degradation Neutrality Report 2017	<ul style="list-style-type: none"> · Halt the conversion of forests and wetlands to other land use cover types · Restore and improve degraded forests (80% in dry zone and 20% in wet zone) · Increase forest cover from 29% to 32% · Reduce rate of soil degradation and improve land productivity and Soil Organic Carbon (SOC) stocks · Reduce soil erosion of lands cultivated with annual and plantation crops 	<ul style="list-style-type: none"> · Restoration of degraded forests and conversion of degraded tea lands to forests · Provision of protection to natural forests within plantations to improve soil conservation · Adopt soil and water conservation measures in annual and plantation crops · Sustainable use of pesticides and organic alternatives in the cultivation of annual crops in steep lands and facilitate conversion of such lands to perennial crops · Promote agroforestry in steep and landslide risk areas · Encourage adaptation

In terms of Sri Lanka's response to the objective of UNCCD, the LDN process being supported by the Government of Sri Lanka is reflected in previous section on **"The baseline scenario and any associated baseline projects"**

The project will contribute to the following Aichi targets: Strategic Goal A “Address underlying causes of biodiversity loss and mainstream biodiversity across government and society” Reduce direct pressure on biodiversity and promote sustainable use” Targets 1, 3 and 4; Strategic Goal B “Reduce direct pressure on biodiversity and promote sustainable use” Targets 5 and 8; Strategic Goal C “Improve status of biodiversity by safeguarding ecosystems, species and genetic diversity” Target 11; Strategic Goal D “Enhance benefits to all from biodiversity and ecosystems” Target 14; and Strategic Goal E “Enhance implementation of participatory planning, knowledge management and capacity building” targets 19 and 20.

In terms of the Sustainable Development Goals (SDG), the project in particular will address SDG 15 “Life on Land” and the following targets: Target 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements; Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally; Target 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species; Target 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species; and Target 15A Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems. The project will also support Sustainable Development Goal 5 “Gender Equality”, namely Target 5.5 Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life, as well as Sustainable Development Goal 13 “Climate Action” Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

8. Knowledge Management

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

Knowledge management will be addressed through a number of activities (under sub-component 3.3), namely: (i) documentation and dissemination of case studies, best practices and lessons learned from the project; (ii) building capacity for conservation of forests and management of land degradation in plantations in the wet and intermediate climatic zones; (iii) development of guidance notes that addresses current constraints and gaps to improve private sector engagement in conservation; (iv) Technical reports, publications and other knowledge management products (including popular versions for use by smallholders and community groups in local languages and accessible to women) documented and disseminated via mass media; (v) workshops to facilitate dissemination of field lessons and help inform policy and practice relevant to conservation and sustainable land management; (vi) institutionalization of some of the best practices through promotion of access to finance for replication and up-scaling, including collaboration with the private and public sector financial institutions; (vii) capacity building and technical support for dissemination and upscaling of project best practices to facilitate integrated conservation planning in plantation and smallholder programs; (viii) inclusion of public engagement pages on national websites and social media platforms that link to information about the project and its products, including development of a specific public information sharing platform; (ix) preparation of a financial strategy based on project experiences and best practices for promotion of integrated plantation management; (x) preparation of an Implementer's Manual and Lessons Learned guide that captures the process of project implementation, and (xi) end of project national seminar on outcomes of public-private-community conservation.. The project will use existing knowledge sharing platforms of the Ceylon Chamber of Commerce and BSL to further discuss project learning and advocate for system-wide transformation. Finally, the project will also support local and provincial level fora or platforms for knowledge sharing and management in local languages involving officials, communities and local scientists to promote exchanges of experiences and lessons from the field and academia.

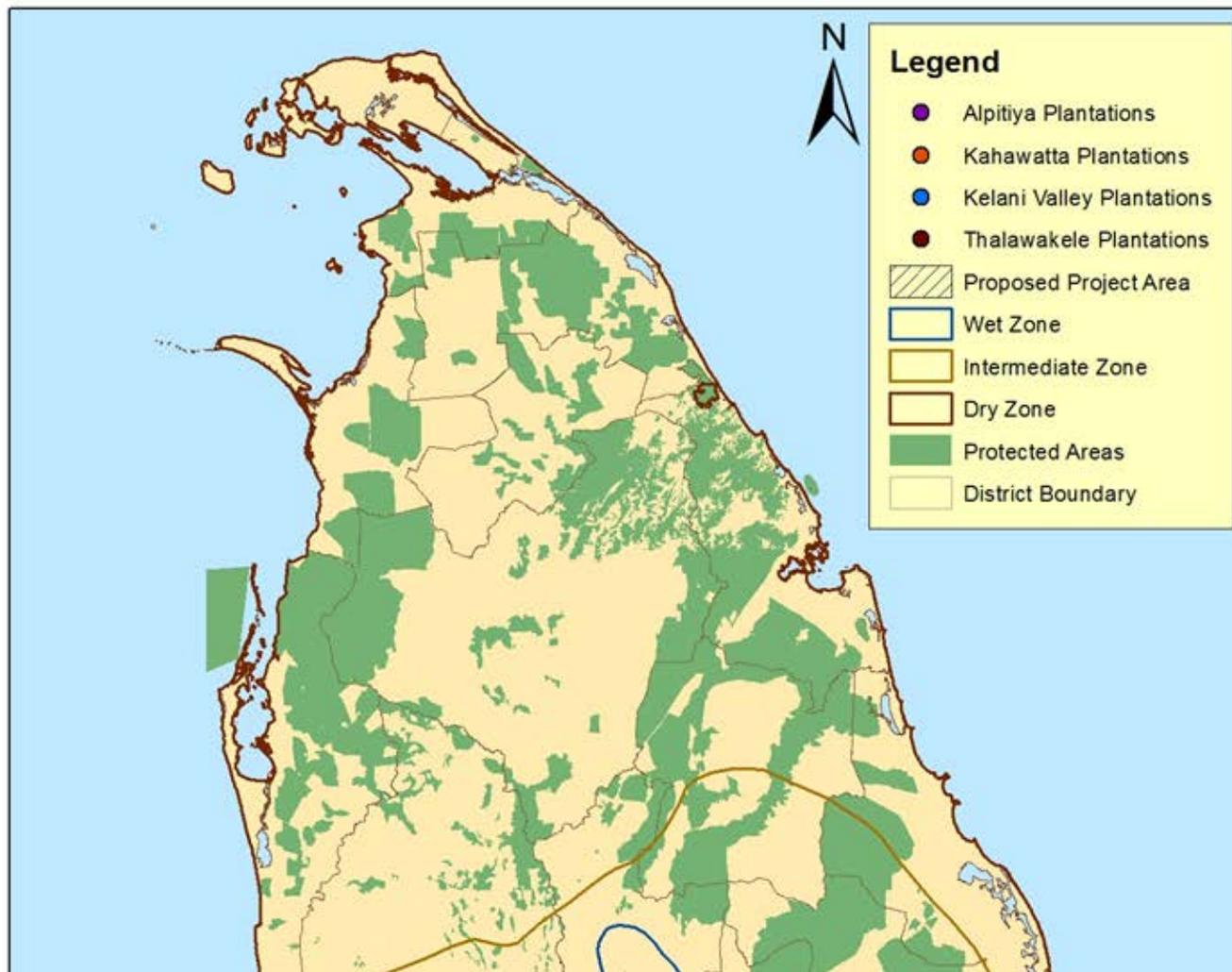
Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

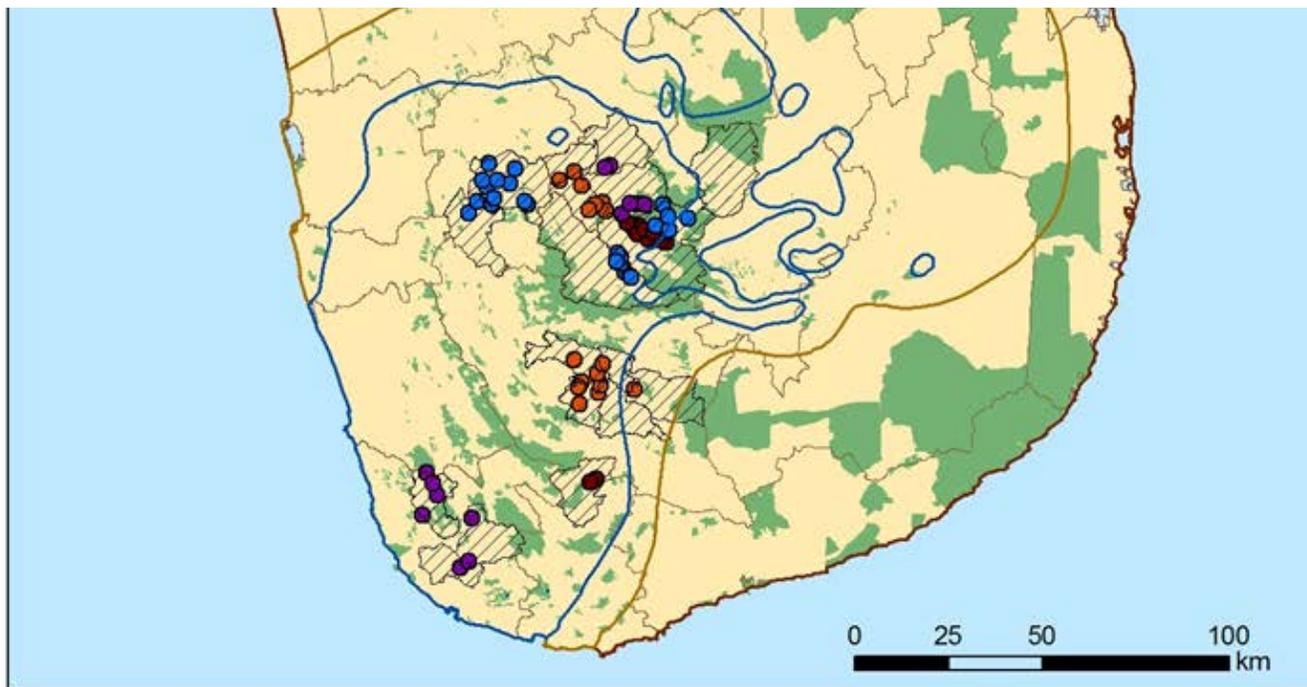
A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
A.H.S. Wijesinghe	Secretary & GEF Operational Focal Point	Ministry of Environment and Wildlife Resources	3/4/2020

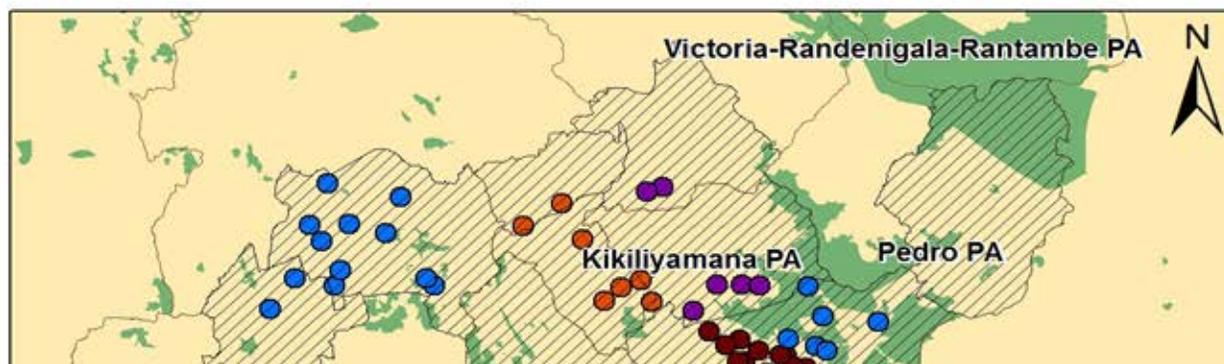
ANNEX A: Project Map and Geographic Coordinates

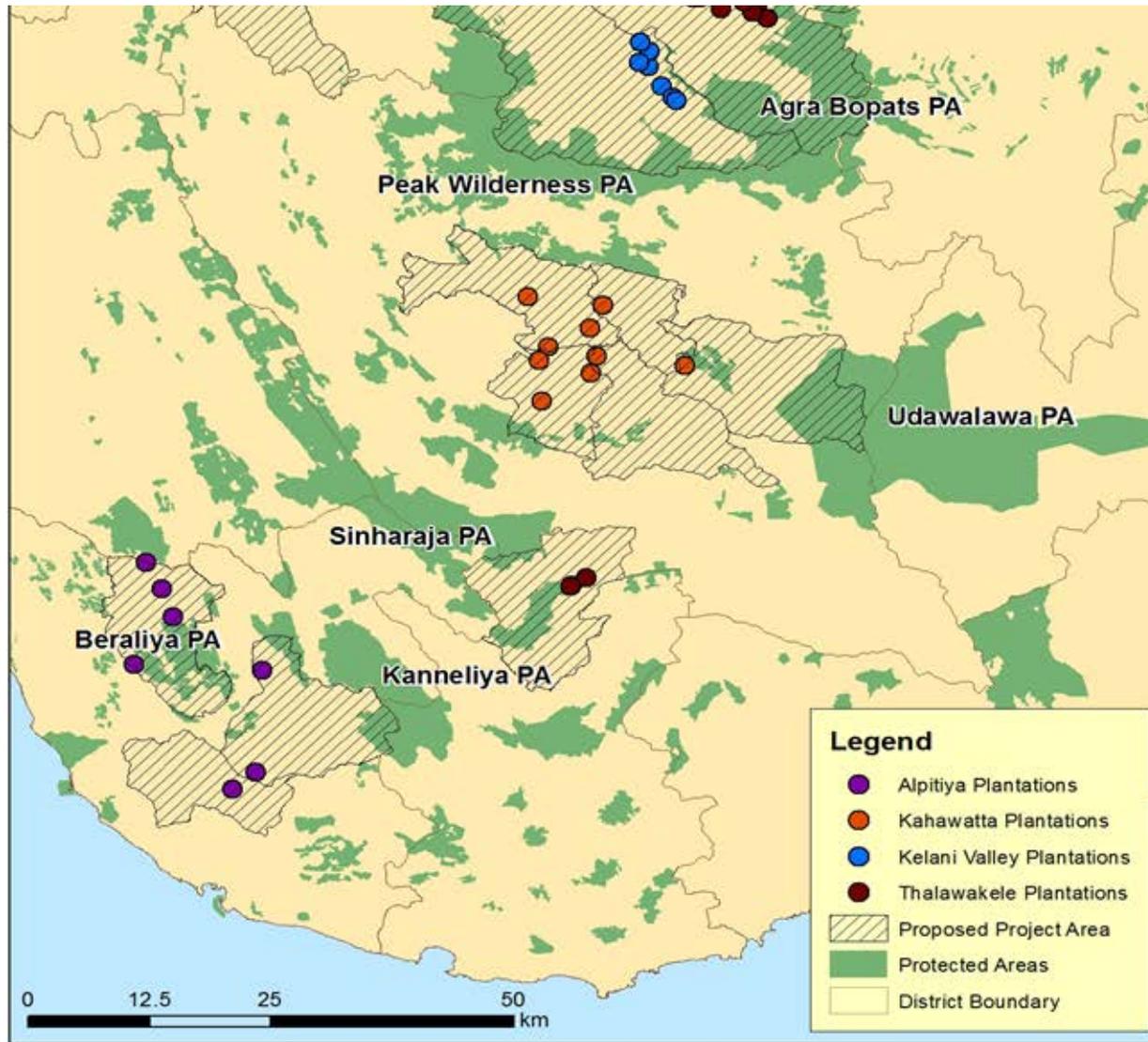
Please provide geo-referenced information and map where the project intervention takes place

Annex A**PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES****Map 1: Location of Proposed project Areas and Climatic Zones**



Map 2: Detailed Map of Location of Potential Participating Regional Plantation Company Estates





Annex B



GEF 7 Core Indicator Worksheet

Core Indicator 1		Terrestrial protected areas created or under improved management for conservation and sustainable use				<i>(Hectares)</i>	
		<i>Hectares (1.1+1.2)</i>					
		<i>Expected</i>			<i>Achieved</i>		
		PIF stage	Endorsement	MTR	TE		
Indicator 1.1		Terrestrial protected areas newly created					
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Indicator 1.2		Terrestrial protected areas under improved management effectiveness					
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score			
				Baseline		Achieved	
				Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Core Indicator 2		Marine protected areas created or under improved management for conservation and sustainable use				<i>(Hectares)</i>	
		<i>Hectares (2.1+2.2)</i>					
		<i>Expected</i>			<i>Achieved</i>		
		PIF stage	Endorsement	MTR	TE		
Indicator 2.1		Marine protected areas newly created					
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Indicator 2.2		Marine protected areas under improved management effectiveness					

Name of Protected Area	WDPA ID	IUCN category	Hectares	METI Score			
				Baseline		Achieved	
				PIF stage	Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
Core Indicator 3	Area of land restored						(Hectares)
	Hectares (3.1+3.2+3.3+3.4)						
	Expected		Achieved				
	PIF stage	Endorsement	MTR	TE			
	1,500						
Indicator 3.1	Area of degraded agricultural land restored						
	Hectares						
	Expected		Achieved				
	PIF stage	Endorsement	MTR	TE			
	1,000						
Area of degraded agricultural land restored							
Area of			500				

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degraded forest restored							
Indicator 3.2	Area of forest and forest land restored						
	Hectares						
	Expected		Achieved				
	PIF stage	Endorsement	MTR	TE			
Indicator 3.3	Area of natural grass and shrublands restored						
	Hectares						
	Expected		Achieved				
	PIF stage	Endorsement	MTR	TE			

		Hectares			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored				
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)				<i>(Hectares)</i>
		Hectares (4.1+4.2+4.3+4.4)			
		Expected		Expected	
		PIF stage	Endorsement	MTR	TE
	4.3 Area of landscape under SLM in production systems	50,000			
	4.4 HCVPs loss avoided	4,000			
		54,000			
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity				
		Hectares			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations				
Third party certification(s):		Hectares			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems				
		Hectares			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Area of tea and rubber plantations, smallholder plantations and agricultural and home	50,000			

gardens under improved land management						
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practices						
			50,000			
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
Area of HCVF (biodiversity rich forests and riparian areas) within tea and rubber plantations	Hectares					
	Expected		Achieved			
	PIF stage	Endorsement	MTR	TE		
	4,000					
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity					<i>(Hectares)</i>
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):	Number					
	Expected		Achieved			
	PIF stage	Endorsement	MTR	TE		
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
	Number					
	Expected		Achieved			
	PIF stage	Endorsement	MTR	TE		
Indicator 5.3	Amount of Marine Litter Avoided					
	Metric Tons					

		Expected		Achieved		
		PIF stage	Endorsement	MTR	TE	
Core Indicator 6	Greenhouse gas emission mitigated					(Tons)
		Expected metric tons of CO ₂ e (6.1+6.2)				
		PIF stage	Endorsement	MTR	TE	
	Expected CO ₂ e (direct)	6.189 Mt CO ₂ eq for 20-yr estimate.				
	Expected CO ₂ e (indirect)					
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
		Expected metric tons of CO ₂ e				
		PIF stage	Endorsement	MTR	TE	
	Expected CO ₂ e (direct)	6.189 Mt CO ₂ eq for 20-yr estimate.				
	Expected CO ₂ e (indirect)					
	Anticipated start year of accounting					
	Duration of accounting					
Indicator 6.2	Emissions avoided Outside AFOLU					
		Expected metric tons of CO ₂ e				
		Expected		Achieved		
		PIF stage	Endorsement	MTR	TE	
	Expected CO ₂ e (direct)					
	Expected CO ₂ e (indirect)					
	Anticipated start year of accounting					
	Duration of accounting					
Indicator 6.3	Energy saved					
		MJ				

			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					(Number)
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE

Core Indicator 8		Globally over-exploited fisheries Moved to more sustainable levels				(Tons)
Fishery Details		Metric Tons				
		PIF stage	Endorsement	MTR	TE	
Core Indicator 9		Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products				(Tons)
		Metric Tons (9.1+9.2+9.3)				
		Expected		Achieved		
		PIF stage	PIF stage	MTR	TE	
Indicator 9.1		Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)				
POPs type		Metric Tons				
		Expected		Achieved		
		PIF stage	Endorsement	MTR	TE	
(select)	(select)	(select)				
(select)	(select)	(select)				
(select)	(select)	(select)				
Indicator 9.2		Quantity of mercury reduced				
		Metric Tons				

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		Expected		Achieved		
		PIF stage	Endorsement	MTR	TE	
Indicator 9.3		Hydrochlorofluorocarbons (HCFC) Reduced/Phased out				
		Metric Tons				
		Expected		Achieved		

			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.5	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
			Number			
		Technology	Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.6	Quantity of POPs/Mercury containing materials and products directly avoided					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	PIF stage	Endorsement
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	2,500			
		Male	2,500			
		Total	5,000			

**Annex C****Project Taxonomy Worksheet****Annex D****On-going Private Sector and Regional Plantation Company Programs in Conservation and Sustainable Resource Use in the Wet and Intermediate Climatic Zones**

The private sector has also created, nurtured and established the Sri Lanka Business and Biodiversity Platform also known as Biodiversity Sri Lanka. This entity is now registered as a not for profit company limited by guarantee under the Companies Ordinance of Sri Lanka. Initiated by the Ceylon Chamber of Commerce, IUCN and Dilmah Conservation, the Platform currently boasts of 85 members. Among the various private sector organizations, several Regional Plantation Companies (RPCs) have already taken membership and have aligned themselves into a Plantations and Agribusiness Standing Committee in order to work together on common conservation issues. The Platform serves to coordinate their efforts in biodiversity conservation, build related capacities, and facilitate the implementation of biodiversity conservation activities that its members wish to undertake in the field individually or together. It has earned the

recognition of the donor community in Sri Lanka. This offers a great opportunity as a foundation on which an institutionalized structures can be built for: (a) co-ordinating and synergizing the private sector contributions to conservation, (b) liaison with the public sector; and (c) serving as a pivotal hub and secretariat for public-private partnerships to enhance the conservation of biodiversity in Sri Lanka.

Inspired by the demonstrated success of these initial set of interventions, the private plantation sector aims to continue and upscale these conservation efforts. Physical conservation interventions planned cover activities to enhance watersheds, including construction of check dams to reduce erosion, improving or creating retention ponds and wetlands to capture the rainwater and also to recharge groundwater. Ecological restoration plans include habitat restoration and the establishment of plant nurseries for reforestation efforts to improve the connectivity between natural habitat areas. Furthermore, long-term plans have been developed to establish riparian buffer zones. Work is also underway to promote responsible tourism and recreational activities along with the establishment of educational nature trails. These pilots to assess, understand and conserve the natural and semi-natural habitats of the estate sector is an important milestone in the efforts towards long-term conservation of Sri Lanka's biodiversity. The initiative and follow up actions are expected to improve Sri Lanka's competitiveness in the global marketplace as an eco-destination, in addition to the further consolidation of the goodness of "Ceylon Tea."

Private Sector Agencies	Conservation and Environmentally Sustainable Activities
Private Sector Cooperation and Networks	
Biodiversity Sri Lanka	The organization and hosting of networking and learning events is a medium by which it encourages dialogue and sharing of best practices whilst harnessing the potential for collaborative work. Events provide opportunities for members to showcase their activities connecting them to wider local and international networks and fora. www.biodiversitysrilanka.org
Dilmah Conservation	Through the Rainforest Alliance Program, Dilmah Conservation has identified 244 hectares as biodiversity conservation areas and necessary initiatives have been implemented to protect and conserve these blocks to enrich the biodiversity value of the Estates.
	All estates have undertaken biodiversity surveys by professional bodies and are aware all faunal and floral species available within estates. The studies have revealed that habitats within estates provide unique niches and support maintenance of natural diversity of estates.
	In another key initiative of the Rainforest Alliance Program, 82 wastewater purification systems with sedimentation and filtration tanks have been constructed on all estates to treat factory and domestic wastewater. These systems have enabled the factories to treat wastewater prior to discharge.

	<p>ging as well as to purify domestic wastewater generated.</p> <p>Since 2015, has carried out research work in 34 estates/divisions covering 750 km², ranging from Hapugastenna in the west to the Bogawantalawa Valley in the east and Castlereigh in the north to the inside edge of the Peak Wilderness in the south. Dilmah Conservation together with The Wilderness and Wildlife Conservation Trust has established a Leopard Conservation Station at Dunkeld Estate.</p> <p>Dilmah Conservation has long term commitment to establishment a much larger corridor with the Kahawatte Plantation Company in the Nuwara Eliya district in the higher elevation of the central highlands to link forests in the Kataboola, Westhall, Barcaple and Queensberry estates</p> <p>Dilmah Conservation has promoted bioremediation through conservation of natural vegetation as well as by planting recommended species such as <i>Canna generalis</i> (Canas), <i>Tithonia diversifolia</i> (Wild Sunflower), <i>Vetiveria zizanoides</i>, <i>Wedelia trilobata</i> in channels through which wastewater is flowing. These initiatives ensure that factories and domestic wastewater generated on estates is adequately purified before releasing to the natural water bodies and this aspect is verified by annual laboratory testing of samples for required parameters.</p>
Regional Plantation Companies	
Kelani Valley Plantations PLC	Actively working to protect the fauna and flora on its landholdings over the last decade, with detailed biodiversity surveys of all its estates being carried out by scientists from as far back as 2008, as well as to identify areas of HC VFs.
	GIS mapping undertaken to demarcate areas for forest conservation (HC VFs), protection of water bodies and wetlands, wetland areas, and other special areas
Kahawatte Plantations PLC	Kahawatte Plantations PLC has adopted best practices in all its estate day-to-day activities. These include comprehensive experiments with Bio-char, which is a soil additive produced from biomass, which is widely believed to help mitigate climate change through 'carbon sequestration' or negative carbon dioxide emissions. Biochar increases the fertility of soil, absorbs fertilizers and releases them over long periods, and increases agricultural productivity. The estate has also focused on the production of compost in large quantities. to reduce on the usage of synthetic fertilizers.

Kahawatte Plantations PLC is planning the establishment of a larger biodiversity corridor (1.5km long) to link large forest patches on several divisions of the Queensberry estate with those in other estates (Kataboola, West hall, and Barcaple) with the Sinharaja Forest Reserve. The project links W along Kanda, an isolated hillock that contains many endangered and endemic species in the outskirts of the Sinharaja rainforest. Kahawatte Plantations has dedicated a project manager to work exclusively to development of the biological corridor that would entail restoration of degraded forests and degraded tea lands with native species to enhance biological connectivity.

To enhance the sustainability of biological resources in the watershed of Hunuwella Estate, and in particular the six selected streams within its property is conserved to support the protection of two endangered dragonfly species. Small 'check dams' have been erected at strategically situated sites on the streams, in order to slow the flow of water, making a series of cascading pools on each stream, and creating a more suitable habitat for dragonflies to lay eggs.

The extent of shade along the streams is being increased in stages on a 5-metre wide belt on the banks of the streams with introduction of endemic and native forest species.

The water quality of the streams is being monitored for such aspects as pH, dissolved oxygen, electrical conductivity, temperature and total dissolved solids. Chemical-free buffer zones have been created in the proximity of the streams, to further enhance water quality and reduce chemical risks to both fauna and flora.

Extensive awareness programs have also been carried out for estate workers, which serve both their own safety, and the importance of protecting biodiversity.

The establishment of the One Earth Center for Climate Change Research and Adaptation Station at Queensberry Estate. The Station is expected to play a vital role for research that will have immediate and long-term practical implications, that would guide planters and farmers in building resilience to the extreme weather that is becoming commonplace. It is in itself a perfect example of teamwork between industry and science, being a joint venture between Dilmah Conservation and the University of Colombo.

As part of the effort to establish a Endana - Kahawatta plantations biological corridor through secondary forest patches on these estates, plant nur

	<p>series were established to raise 1,700 indigenous species, including improving home gardens through community engagement to mitigate against landslides</p> <p>Following a biodiversity assessment done by Dilmah Conservation partnered with University of Colombo and IUCN, Sri Lanka, the Hunuwela estate forests were identified as an important repository for its rich biodiversity. About 20 endemic species and about 200 faunal species were identified in the assessment, including two species of globally threatened dragonflies.</p> <p>With the intention to protect the biodiversity, a program for enhancing watershed management in Hunuwela and Rilhena Estates was initiated. Under the program, catchment areas were restored by reforestation with native species.</p>
Watawala Plantations PLC	<p>Measures to protect the bat species, and has a comprehensive conservation program in place. This includes the adoption of environmentally-friendly methods of agriculture such as the restriction of usage of chemicals, a crackdown on illegal hunting, the planting of trees to encourage the expansion of forest cover in identified sections of the estates, and the declaration of marshy areas along streams as restricted.</p> <p>The unique natural control of Tea Tortrix at Lippakelle and Waltrim has led to efforts to protect the bats and wasps, principally by ensuring that they are undisturbed by human activity as far as possible, and efforts are being made to gather more information on their activities.</p> <p>The unique natural control of Tea Tortrix at Lippakelle and Waltrim has led to efforts to protect the bats and wasps, principally by ensuring that they are undisturbed by human activity as far as possible, and efforts are being made to gather more information on their activities.</p> <p>All 16 estates belonging to the Watawala Plantations have obtained the important Rainforest Alliance certification for sustainable agriculture practices, and are regularly audited for compliance. The estates have controlled Tea Tortrix with both the bat species and the wasp species that has been an eye-opener in the effectiveness of natural control of this serious pest, and has been a lesson in the fine balance that nature maintains in various ecosystems</p> <p>Elgin Estate: Surveys carried out in the rocky area noted its special import</p>

	<p>ance in providing refuge to a large number of amphibians, reptiles such as lizards, skinks, pit vipers and bats for which this habitat appeared to be essential. The survey recommended restricted usage of agrochemicals, and use of manual labor operations in and around the rocky area to enhance this ecosystem, which have been adopted by the estate management.</p>
<p>Talawakelle Tea Plantation PLC</p>	<p>TTE PLC Estates has introduced a ranking system among estates to encourage Energy Efficiency. Each estate's energy usage is measured and monitored on a monthly basis. Demonstrating the commitment towards reducing the carbon footprint, Greenhouse Gas emissions of each estate and the company is measured and monitored to achieve continuous improvements. The company has also focused on the production of clean energy, and has set up three mini-hydropower plants on Radella, Somerset and Palmerston estates, which generates 1.8 megawatts of power and supplement the national grid.</p> <p>Promotion of environmental management norms in accordance with Rain forest Alliances program. As part of this effort, environmental goals have been established and the achievements during the year are compared with goals as well as previous year's achievements. The objective is to identify implementation gaps and continuously improve performance on the estates</p> <p>The Talawakelle Tea Plantation Company has developed an Integrated Water Resources Management program that comprehensively covers all aspects relevant to water conservation and management, such as (i) protection of all water sources within the estates (so far 147 water sources are protected with live/ mechanical fences and tree planting; (ii) rainwater harvesting is practiced on many estates; (iii) creation of chemical free buffer zones and vegetative barriers around all water sources and water bodies to prevent contamination from agricultural operations; (iv) agrochemical usage is strictly monitored and reduced and (v) water quality of drinking water sources are tested for required safe standards annually</p> <p>Another major effort launched for the protection of the Kikiliyamana Forest Reserve, which directly borders several of the company's estates. The company has enlarged the forest area of Kikiliyamana, by reserving a 32-hectare plot from Great Western estate located directly below the forest reserve, creating a forest reserve of its own.</p>

	<p>The main driving factor in conserving biodiversity has been a set of stringent measures to reduce the usage of agrochemicals. At present, only five agrochemicals are used on the company's estates, and even these are highly regulated in order to minimize the usage. The danger posed by agrochemicals is driven home to estate workers, not only through continuous awareness programs, but also by the construction of designated chemical storerooms and washing rooms in every division, which includes separate areas for storage of agrochemicals and Personal Protective Equipment (PPE). Chemical free buffer zones have been established around all water bodies, ecosystems, frequently travelled roads and areas of human habitats to ensure protection of people and the environment within estates.</p>
Elpitiya Plantations PLC	<p>Elpitiya Plantations PLC is transforming its comprehensive sustainability program at</p> <p>Talgaswella Estate in the Southern Province into a growing site for ecotourism. The estate has Black Ruby barb (<i>Puntius nigrofasciatus</i>) and the Two spotted barb (<i>Pethia cumungii</i>), Sri Lanka wolf snake (<i>Ceraspis coniatus</i>) and 5 endemic reptile species, one endangered gecko and 3 vulnerable species. The estate is also home to no less than 20 species of snakes, 4 lizard species, 7 gecko species, 2 species of skinks, and 2 species of monitors and 28 species of land snails (6 endemic, 6 threatened).</p> <p>The Talgaswella Estate is integrating conservation with sustainable plantation management. A key factor in the success of the Talgaswella Estate's conservation program has been the integration of the estate's workforce and the entire estate community into the effort, a serious effort given that the estate community has a population of 1,800. The Estate has carried out several programs to educate the estate community and residents of nearby villages on the need for conservation. These programs teach the need to protect forest areas, and inculcated general behavior patterns on respecting nature, including reducing pollutants, recycling all possible materials, etc. Evidence of the remarkable level of success of the integrated conservation program is seen in the complete lack of polythene on the estate. Also planned is an ambitious program to reintroduce Hog Deer (<i>Axis porcinus</i>) to the estate forest area. As one of the most profitable of Elpitiya Plantations, Talgaswella is source of much pride for the company. The estate is a model plantation in many respects, containing all five major export crops – Tea, Rubber, Coconut, Cinnamon and Oil Palm – all grown in commercial quantities. The estate is now being marketed increasingly</p>

	as an ecotourism destination While the sustainability program encompasses all aspects of operations on this estate, the major attractions for tourists are centered on Talgaswella Lake, a permanent water body of 17 acres that is teeming with avian and aquatic life, and a small surrounding forest area.
	An open pond project has resulted in creation of 52 ponds across the estates to harness 180 million liters of rainwater
	As part of a composting project, 3,000 tons of compost have been added to less productive lands
	Formulation of the Company's Sustainability Strategy that is embedded in the Company's Strategic Business Plan

Enhancing Connectivity

In terms of establishment of connectivity or corridors, the following initiatives are planned or underway (in addition to ongoing efforts listed in the Table above): good news for

Number	Connectivity/corridor programs
1	The Friends of Horton Plains initiative to identify options for connectivity in 22 tea estate
2	Connectivity between Sinharaja Rainforest and Kanneliya-Dediyagala-Nakiyadeniya (KDN) forest complexes in the south of the country
3	The Hiniduma Bio-link project which aims to establish a biodiversity corridor between two large remnant vastly disturbed rainforest patches – Sinharaja UNESCO World Heritage Site and Kanneliya International Man and Biosphere reserve
4	Biodiversity Corridor in Halgolla Tea Estate

**Preliminary List of Potential Species Indicators
(To be confirmed at PPG Stage)**

1. Elpitiya Plantations

Freshwater fish: *Rasboroides vaterifloris* (EN), *Puntius titteya* (EN), *Devario pathirana* (EN), *Rasbora wilpita* (EN), *Belontia signata* (NT).

Amphibian species: *Nannophrys ceylonensis* (VU), *Hylarana aurantiaca* (VU), *Ramanella nagaoi* and a host of shrub frog species.

Dragonflies: *Libellago corbeti*, *Libellago greeni*, *Drepanosticta lankanensis*, *Drepanosticta nietneri*

2. Kahawatta Plantations (Pelmadulla cluster)

Dragonflies: *Gomphidia pearsoni*, *Macrogomphus wijaya*

Freshwater fish: *Puntius pleurotaenia*, *Belontia signata*

Birds: Sri Lanka Legge's Flowerpecker (*Dicaeum vincens*)

Mammals: Highland shrew (*Suncus montanus*) Purple-faced leaf monkey (*Semnopithecus vetulus*), Fishing cat - *Prionailurus viverrinus*, Rusty-spotted cat - *Prionailurus rubiginosus*)

3. Kahawatta Plantations (Nanu Oya Cluster) & Kelani Valley Plantations (Wee Oya cluster)

Plants: *Vatica lewisiana*, *Stemonoporus gracilis* and *Stemonoporus revolutus*

Frogs: Number of shrub frog species are recorded in these estates

Reptiles: Rhino-horn lizard (*Ceratophora stoddartii*)

Birds: Sri Lanka Whistling Thrush (*Myophonus blighi*), Sri Lanka Scaly Thrush (*Zoothera imbricata*), and Sri Lanka White-faced Starling (*Sturnus albofrontatus*)

Mammals: Giant flying squirrel (*Petaurista philippensis*), Sri Lanka red slender Loris (*Loris tardigradus*), and the Painted bat (*Kerivoula picta*)

4. Kelani Valley Plantations (Nuwara Eliya Cluster) and Thalawakele Plantations

Frogs: Number of shrub frog species are recorded in these estates

Reptiles: Rhino-horn lizard (*Ceratophora stoddartii*)

Birds: Sri Lanka Whistling Thrush (*Myophonus blighi*), Yellow eared Bulbul, Bush Warbler, Sri Lanka White eye

Mammals: Sri Lanka red slender Loris (*Loris tardigradus*), and Purple-faced leaf monkey (*Semnopithecus vetulus*)

Annex F

Letter Indicating Participation of Regional Plantation Companies

BIODIVERSITY SRI LANKA

14th February 2020.

Ms. Tharuka Dissonalke
Policy Specialist
United Nations Development Programme
202-204, Baudhaloka Mawatha,
Colombo 07.

Dear Tharuka,

SUB: CO-FINANCING BY REGIONAL PLANTATION COMPANIES (RPC) FOR PROJECT UNDER GLOBAL ENVIRONMENTAL FACILITY (GEF) CYCLE 7

Further to our discussions, we wish to inform you that Regional Plantation Companies (RPC) selected as key stakeholders of the above project – namely, Elpitiya Plantations PLC, Kahawatte Plantations PLC, Kelani Valley Plantations PLC and Talawakelle Tea Estates PLC – are all Members of Biodiversity Sri Lanka (BSL) and its Plantations and Agribusiness Sectoral Standing Committee which functions under a structured Terms of Reference approved by the Board of Directors of BSL.

With the coordination and technical support of BSL, the above member companies are able and willing to design and implement initiatives in line with the above project. As the plantations falling under the jurisdiction of these RPCs are located in the same geographical area as described in the above project, it will increase opportunities available for same to promote and augment ongoing engagements in biodiversity conservation.

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This letter, therefore serves to confirm that these RPCs have the ability and willingness to commit to in-kind and monetary co-financing, based on mutual consultation. This co-financing will reflect counterpart involvement of ongoing private sector funded activities on biodiversity conservation that will complement the approach and investments envisaged in the above project. These activities may amongst others, include the following core business and CSR-related activities:

- Energy conservation
- Integrated Water Resources Management (IWRM)
- Soil enrichment and conservation
- Adherence to Rainforest Alliance (RA) and Forest Stewardship Council (FSC) certification requirements
- Adherence to other sustainable agriculture standards
- Solid waste management

Thanking you,
Yours sincerely,



H. M. Harshini de Silva Pandithasekera
Programme Manager

Cc: *Roshan Salinda Norasinghage - Programme Officer, Biodiversity Sri Lanka*



EX-ANTE CARBON-BALANCE TOOL - EX-ACT										Select GWP for calculation						
Food and Agriculture Organization of the United Nations										Last Update for GWP100 (IPCC-2013)						
Start	Description	Land Use Change	Crop production	Grassland Livestock	Management Degradation	Coastal Wetlands	Inputs Investments	Fisheries Aquaculture	Detailed Results							
Project Name		Partnerships and Innovative...		Climate	Tropical (Moist)		Duration of the Project (Years)		20							
Continent		Asia (Indian subcontinent)		Regional Soil Type	HAC Soils		Total area (ha)		53500							
Components of the project	Gross fluxes			Share per GHG of the Balance					Result per year			Production		Gross emissions intensity		
	Without	With	Balance	All GHG in tCO2eq			N ₂ O	CH ₄	Without	With	Balance	Without	With	Without	With	
Positive = source / negative = sink																
Land use changes				CO ₂												
Deforestation	124,508	0	-124,508	-100,618	-23,774		-116	0	6,225	0	-6,225					
Afforestation	0	0	0	0	0		0	0	0	0	0					
Other LUC	0	0	0	0	0		0	0	0	0	0					
Agriculture				Biomass												
Annual	0	-38,239	-38,239	0	-48,825		10,586	0	0	-1,912	-1,912					
Perennial	0	0	0	0	0		0	0	0	0	0					
Rice	0	0	0	0	0		0	0	0	0	0					
Grassland & Livestocks				Soil												
Grassland	0	0	0	0	0		0	0	0	0	0					
Livestocks	0	0	0	0	0		0	0	0	0	0					
Degradation & Management				Other												
Forest degradation	4,001,023	-2,025,627	-6,026,650	-4,316,608	-1,710,042		0	0	200,051	-101,281	-301,332					
Peat extraction	0	0	0	0	0		0	0	0	0	0					
Drainage organic soil	0	0	0	0	0		0	0	0	0	0					
Rewetting organic soil	0	0	0	0	0		0	0	0	0	0					
Fire organic soil	0	0	0	0	0		0	0	0	0	0					
Coastal wetlands	0	0	0	0	0		0	0	0	0	0					
Inputs & Investments	0	0	0	0	0		0	0	0	0	0					
Fishery & Aquaculture	0	0	0	0	0		0	0	0	0	0					
Total	4,125,531	-2,063,865	-6,189,396	-4,417,226	-1,782,540	0	10,471	0	206,277	-103,193	-309,470					
Per hectare	89.3	-34.7	-104.0	-74.2	-30.0	0.0	0.2	0.0								
Per hectare per year	3.5	-1.7	-5.2	-3.7	-1.5	0.0	0.0	0.0	3.5	-1.7	-5.2					

Assumptions

- 50,000 ha of plantations under improved management: it is assumed that the area is low degradation and end results of no degradation
- 4,000 ha: This is existing natural forests (initial state: moderate), to low with avoided C loss
- 500 ha forest restored (initial state degraded) to low degradation
- 1,000 ha agricultural lands (moderate degradation) to low degradation state

Hence, the carbon balance is: -6,189,396 tCO₂ eq for 20-yr estimate. The direct post project benefit is 6.189 Mt CO₂ eq for 20-yr estimate

Introduction

The tea industry is Sri Lanka's main net foreign exchange earner and source of income for the majority of laborers. Tea yield is greatly influenced by weather, and especially by droughts, which cause irreparable losses because irrigation is seldom used on tea plantations. At the other extreme, heavy rains erode topsoil and wash away fertilizers and other chemicals. It is reported[1] that the island show an increase in temperature by 2070 will be in the range of +0.4 °C to +3.0 °C. As per the rainfall predictions, the Wet Zone will record 10% increase per year in both dry and wet seasons. Moreover, the CO₂ level in the atmosphere is predicted to be approximately in the range of 600-700 ppm by the year 2100. Thus both drought damages and soil losses in tea production areas will increase in the years to come. An analysis of the results of field experiments with weather data shows that increases in temperature, soil moisture deficit, and saturation vapor pressure deficit in the low elevations will adversely affect growth and yield of tea. Reports have also shown that about 30 cm of soil has already been eroded from upland tea plantations. Under these circumstances, the tea industry in Sri Lanka is clearly vulnerable to predicted climate changes, and subsequently greater economic, social, and environmental problems.

Impacts and Management

Suggested management options that would be considered could include specific adaptation measures. Although beneficial effects in tea plantations due to climate change is masked by the rising temperatures and dry weather conditions in the majority of tea plantations, mainly at low elevations when compared to the wet and intermediate zones, it becomes necessary to implement suitable adaptation measures with proven cost-benefits to minimize such adverse effects of global warming and harness maximum benefits of CO₂ rise. Some of the "no regret strategies" which could be implemented to minimize adverse consequences of rising temperatures and of dry weather would be aimed at improving crop, soil and aerial environmental conditions. Nevertheless, very low yielding tea lands with poor soil conditions would be economically best diversified into fuel wood or timber plantations. Marginal tea lands can also be converted to 'thatch banks' (planting of rehabilitation grasses) and used as a source of green manure for improving soils in the potential tea fields.

Other mitigation measures suggested[2] might include the use of drought tolerant cultivars and grafted plants with drought tolerant characteristics in drought prone regions and intercropping tea with other tree crops (cash crops) such as rubber and coconut are among the most suitable adaptation measures. High intensity intercropping systems will reduce the ambient temperature around tea bushes and also increases the land utilization efficiency ensuring better returns. Soil improvements aimed at soil and soil moisture conservation, addition of organic matter and reducing soil temperature, minimize adverse effect of dry weather and high temperatures are other potential measures. They include soil conservation measures, in situ generation of compost and incorporation into soil, establishment of SALT (Sloping Agriculture Land Technology) hedge rows, envelope forking (loosening the soil without turning), burying of pruning, mulching in young tea and irrigation. Planting and management of a good stand of shade trees reduces ambient temperature, increase relative humidity and adds organic carbon to soil. Shade trees in tea lands can reduce ambient temperature by about 2-3 °C thus attenuating the adverse effects of higher temperatures on growth of tea especially in the low elevations.

A study done by the Meteorological Department of Sri Lanka to assess the impact of climate change on productivity of tea plantations in Sri Lanka. The study resulted in the following conclusions.

1. The optimum temperature for cultivation of tea was found to be about 22 °C.
2. Reduction of rainfall by 100 mm per month was found to reduce the productivity by 30 - 80 kg of 'made' tea/ha/month in different regions. The optimum rainfall for tea cultivation varied from 223 to 417 mm per month.
3. Increase in ambient CO₂ concentration from the current level (around 370 ppm) to 600 ppm, will increase tea yield by about 33-37%.
4. Yield projections for the year 2050 given by the crop model based on synthetic scenarios showed that increasing temperatures are likely to reduce tea yields in Intermediate Upcountry (IU), Wet Zone mid-country (WM) and Wet zone low country (WL) regions while increasing the yield in Wet Zone Up country (WU) region.
5. Reduction in rainfall reduces the yield in all tea growing regions. Although increase in CO₂ increases tea yield, this effect of CO₂ fertilization is nullified by high temperatures at low elevations.
6. The GCM based climate scenarios also predict that tea yields are likely to increase at high elevations due to climate change. In contrast, the productivity of tea plantations at low elevations are likely to be reduced. As low and mid elevations are more vulnerable to the adverse impact of climate change, growers need to pay more attention to implement adaptation measures to minimize such adverse effects.

Proposed Assessment and Management Responses

During the PPF stage, a Further assessment will be undertaken to consider potential climate change impacts on project activities in short-term and longer-term and to ensure that measures are reflected in project design to support climate-proofing and resilience of project activities and impacts as much as possible. It will also assess institutional capacity and information needs to enhance resilience to potential climate change impacts. Potential climate change impacts will be addressed in the project specific Social and Environment Screening Procedure (SESP) or Environmental and Social Management Framework (ESMF), as relevant during the PPG stage that will identify specific management measures in design of the project to ensure that activities are environmentally sustainable and supporting best practices managed for their climate risk management, improving resilience. This might include improving protection and management of critical watersheds and ecosystems to help to increase the overall resilience of the natural systems to climate risks in the areas compared to business as usual as well as plantation practices as mentioned in the section of impacts and management above. The project will include a monitoring plan with specific indicators to monitor the condition of sensitive ecosystems as it relates to climate change, a Knowledge Management and Communications strategy that will be aimed at improving awareness of climate related impacts and promote measures to improve climate resilience as well as climate actions integrated into project activities and plans. Planning evaluation and adaptive measures will be fully integrated into project investments

- [1] Wijeratne, M.A (1996) Vulnerability of Sri Lanka Tea Production to Global Climate Change. Water, Air and Soil Pollution Volume 92
- [2] M.A. Wijeratne, A. Ananda Coomaraswamy , M.K.S.L.D. Amarathunga, Janaka Ratnasiri, B.R.S.B. Basnayake and N. Kalra (2007). Assessment of impact of climate change on productivity of tea (*Camellia sinensis* L.) Plantations in Sri Lanka National Science Foundation of Sri Lanka Volume 35