Background Analytical Study on Availability of Forest Data in Sri Lanka

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NFI	- National Forest Inventory
NFIRAP	- National REDD+ Investment Framework and Action Plan
NFMS	- National Forest Monitoring System
NRMC	- Natural Resource Management Center
NTFPs	- Non-Timber Forest Products

Executive Summary

1. Background

1.1 Introduction

Sustainably managed forests are crucial for eradicating poverty, combatting climate change, conserving biodiversity, protecting watersheds, and building food and energy security. Forests support the livelihoods of some most vulnerable segments of society, especially the rural poor and indigenous peoples. An estimated 1.6 billion people, or 25% of the global population, rely on forests for their subsistence needs, livelihoods, employment, and income[1]. For centuries, forests have provided socio-economic safety nets for people and communities in times of crises.

The United Nations Strategic Plan for Forests 2017-2030 (UNSPF) was created with a mission to promote sustainable forest management and enhance the contribution of forests and trees to the 2030 Agenda for Sustainable Development. Strategic Plan contains six Global Forest Goals and 26 associated targets which are voluntary and universal. The Goals fully encompass

Of these forest types moist monsoon forests and dry monsoon forests are found in the Dry Zone. The Intermediate Zone accommodates dry monsoon as well as moist monsoon forests

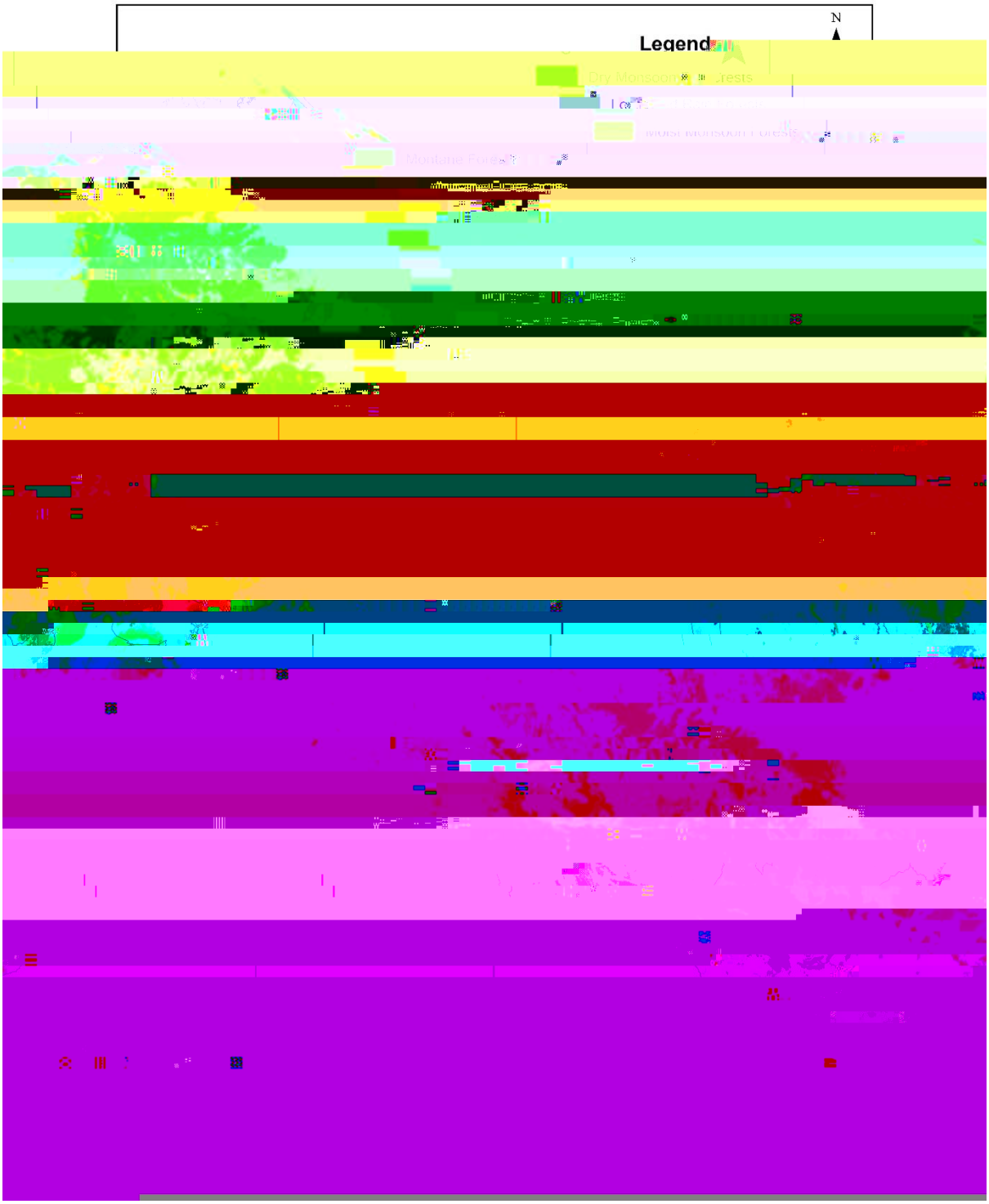

Figure1. Forest Cover Map of Sri Lanka

with the sparse and open forests found across the two zones. The Wet Zone is characterized by species rich lowland rain forests as well as lower montane and montane forests. In all climatic zones, riverine forests are along streams and rivers. Each of these forest types has

inherent characteristics based on their local environment and species composition, playing an important role in biodiversity conservation, hydrology (especially in head waters protection), soil conservation, amelioration of the environment and as a source of raw material for livelihood development.

Different forest types thriving in different climatic zones provide a high level of species diversity. Sri Lanka, along with the Western Ghats is considered one of the world's biodiversity hotspots. In particular the country's floral biodiversity and number of endemic species is extremely high relative to its size.

In order to conserve biodiversity, the Government of Sri Lanka (GoSL), through the two major agencies concerned, the Forest Department (FD) and the Department of Wildlife Conservation (DWC), has undertaken significant efforts by creating a large network of protected areas. The present protected area network of the FD includes 125 Conservation Forests (176,691 ha), 4 International Biosphere Reserves (143,106 ha) and 722 Reserved Forests (1,157,023ha). Due to the presence of unique biodiversity, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has designated 2 World Heritage Sites (Sinharaja - 11,127 ha) and the Central Highlands of Sri Lanka, which is a serial property comprising three component parts: Knuckles Conservation Forest (31,305 ha), Horton Plains National Park (3,109 ha) and the Peak Wilderness Protected Area (20,596 ha)). The DWC is also responsible for a significant number of protected areas targeted towards faunal and floral biodiversity conservation. These include 3 Strict Nature Reserves (31,571 ha), 16 National Parks (738,547 ha), 7 Nature Reserves (101,645 ha), 1 Jungle Corridor (8,777 ha) and 61 Sanctuaries (277,122 ha).

The natural forests of the island have not been harvested for timber for the last three decades, with the domestic supply of timber and firewood coming from forest plantations and tree resources outside forests, such as home gardens and community wood lots. Twenty-three Regional Plantation Companies (RPCs) currently manage approximately 9,000 ha of forest plantations in order to supply fuelwood and timber for both private and industrial use. The FD manages approximately 80,000 ha of forest plantations

The high floral biodiversity contributes to the availability of a significant number of Non-Timber Forest Products (NTFPs). These products are utilized by communities living along the forest fringe and also provides them with a significant income. A CSO-led study undertaken in 2016 has identified 38 Non-Carbon Benefits (NCBs) from the conservation of Sri Lanka's forests[2]. These vary with the forest type but provide substantial monetary and non-monetary benefits to forest-user communities.

1.2.2 Drivers of Deforestation and Forest Degradation.

The spatial analysis of forest cover changes between 2000 and 2010 shows that the overall rate of deforestation has slowed to an average of 8,088 ha/year[3] (annual deforestation rate of approx. 0.3%). A significant reduction from the rate of 42,200 ha/year that had occurred

[2] Non-carbon benefits in the context of REDD+ in Sri Lanka, UN-REDD National Programme in Sri Lanka, 2016.

[3] Sri Lanka's Forest Reference Level submission to UNFCCC, January 2017

between 1956 and 1984. Deforestation has also becoming more scattered across the country with rates higher in the Dry Zone than the Wet Zone.

A study carried out in 2015 under UN-REDD Programme (2012 – 2017), showed that deforestation and forest degradation, is due to three direct drivers[4]:

1) Encroachments, for agriculture, settlements and other purposes such as gem mining and coastal shrimp farming.

This policy was approved in 2012 with the objectives to:

i. Periodically sensitize and make communities aware of the country's vulnerability to climate change;

ii. Take adaptive measures to avoid and minimize the adverse impacts of climate change on people, their livelihoods and ecosystems;

iii. Mitigate greenhouse gas emissions in the path of sustainable development;

iv. Promote sustainable consumption and production;

v. Enhance knowledge on the multifaceted issues related to climate change in the society and build its capacity to make prudent choices in decision making;

vi. Develop the country's capacity to address the impacts of climate change effectively and efficiently;

vii. Mainstream and integrate climate change issues in the national development process.

The plan has an operational period of seven years from 2016 to 2022 and provides the strategic approach needed to ensure that Sri Lanka's rich biodiversity is conserved and used in a sustainable manner. The national targets are synergistic with global targets such as the Aichi Biodiversity Targets and the Sustainable Development Goals (SDGs). The NBSAP is also a guiding policy framework for provincial authorities as well as civil society groups and private sector organizations and provides approaches to biodiversity conservation and ecosystems management. The NBSAP has five strategic goals with 20 targets. The strategic Goals are,

i. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;

ii. Reduce the direct pressures on biodiversity and promote sustainable use;

iii. Improve the

to assess the forest cover changes that have taken place between 1983 and 1992. The FD has

Climate Change Secretariat (CCS)	Data provider	Producing historical records on national communications
Central Environmental Authority (CEA)	Data provider	Providing data on environmentally sensitive and protected areas under the National Environmental Act
Natural Resource Management Center (NRMC)	Data provider	Producing maps of soil, watersheds and agro-ecological zones/regions
Forest user communities	Feedback / information / alert provider	Sharing information on hazards affecting forests such as fires and other illicit activities

The development of the NFMS system and geoportal was designed with a data sharing agreement, signed in 2014, between the FD, SD, DWC, CEA, CCS and the Food and Agriculture Organization of the United Nations (FAO). The data sharing agreement is expected to be updated in the future to accommodate new data acquired by these departments to update the geo-portal.

transitions between density classes, thus allowing the measurement of forest degradation and restoration after 5 years.

Sri Lanka did not have a system of regular forest inventory at the national scale, a network of permanent sample plots (to generate data on land and forest cover, forest dynamics and biomass), or a historical record of managing natural forest areas. The readiness efforts therefore focused on building understanding and capacities of GoSL staff on NFI methodologies and design by conducting piloting and capacity development activities.

NRIFAP implementation will thus focus on the completion of a full NFI cycle using the approach piloted during the readiness phase. This will include full-time technical assistance during the cycle, and regular training and mentoring.

One central and five regional NFI units have been established for implementation of the NFI, and for institutionalization of the NFI within the FD and DWC. In addition, a dedicated database management team has been set up and trained to manage, interpret and present NFI data for both technical planning and policymaking purposes. National-level management plans will be prepared for natural forests, based on the data produced through the NFI, along with updating of management plans for forest plantations.

Sri Lanka's forest area will be classified into specific strata based on information available prior to NFI, and these strata will be revised and updated on the basis of data collected during the first NFI cycle. Key tree species will be identified and allometric equations will be identified/ developed for these key species and key forest types (strata). As required, research and

Sri Lanka's SIS is based on an extensive assessment process carried out during the UN-REDD National Programme which set the goal and scope of the SIS as well as reviewing Sri Lanka policies, laws and regulations (PLRs) against the REDD+ safeguards laid out in the Cancun

A total of 12 participants attended the virtual national workshop representing relevant government stakeholder agencies. (see Annexure v for list of participants). After a brief presentation on the assessment process followed in the study, the findings of the study were presented to the participants. They were then invited to provide their comments either as verbal interventions or as written submission within a stipulated time period.

5. Results and Discussion

Data requirement for Global core set of forest-related indicators and availability of these data were identified. The final Assessment Table after incorporating all relevant stakeholder comments and inputs is attached to this report as Annexure i and Annexure iv. The summary of the analysis is presented with brief description in the following section.

5.1 Description of data/information needs for Global Forest Goals indicators.

This indicator measures Target 1.1 of the Global Forest Goal 1. This indicator needs Forest Cover assessment data of Sri Lanka. Forest cover assessment is done in Sri Lanka in Five-year intervals by the Forest Department of Sri Lanka. Data is available for 1992, 1999, 2010 and 2015 and forest cover assessment of 2020 is currently ongoing and will be ready in 2022. Spatial data is available as shape files. The data can be obtained on request from the Forest Department of Sri Lanka.

Target 1.1 of the Global Forest Goal number 1 is measured by this indicator. Forest area of the country in the reporting year and forest area in the reference year

in Sri Lanka. Comparison of the estimate of each forest types with the previous estimate, deforestation of different forest types can be estimated.

ii. Emission Factors of different forest types

Emission factors of different forest types has not been estimated in Sri Lanka. Therefore, emission factors developed by the IPCC should be used.

iii. Extent of forest area restored annually

Forest Department and Department of Wildlife Conservation undertake forest restoration activities annually. These records are available in the respective departments and available on request. Department of Wildlife Conservation

departments. These data can be obtained by an official request. Illegal forest clearings are recorded as forest offences and available as official documents and can be obtained upon official request. However, this data may not accurately depict total deforested area due to reporting errors. In addition, some forest lands that are currently hold by the Land Reform Commission are converted in to non-forest lands

The area of forest partially loss can be estimated using the illegal felling records. Both Forest Department and Department of Wildlife Conservation collect illegal felling information in terms of number of trees. Therefore, these records do not provide information about area illegally felled. It is proposed to collect more precise information in future on area affected by illegal felling.

iii. Area of Forest Fragmented.

Major causes of forest fragmentation are due 0 eo*nBT/F1 11ti04

Under the UN

This indicator measures Target 5.4 of Global Forest Goal Number 5. The National Land Use Policy has been formulated and it is available in the website of the Land Use Policy Planning Department.

Although the National Land use Policy is formulated and approved by the government, it is implementation is hampered by the delay in drafting an appropriate legislation.

This indicator measures Target 6.1 of Global Forest Goal Number 6. National Forestry Action Plans of relevant agencies should include Global Forest Goals and targets. All forestry stakeholder agencies develop their action plans under different forest-related programs. However, they are not fully aligned with global forest goals and targets, although they cover some of the goals and targets. It is proposed to update the National Forestry Action Plans to be in line with the Global Forest Goals and targets.

This indicator measures Target 6.2 of Global Forest Goal Number 6. Similar to the Indicator 37, National Forestry Action Plans of relevant agencies does not fully integrate Sustainable Development Goals and targets. It is proposed to update the National Forestry Action Plans of all the agencies to be coherent and complementary to contribute to 2030 Agenda for Sustainable Development.

This indicator measures Target 6.3 of the Global Forest Goal Number 6. As described previously, currently there is no national level cross-sectoral coordination mechanism in place to promote sustainable forest management and halt deforestation. It is proposed to establish such mechanism to ensure that the forestry organizations are coordinated effectively to halt deforestation and achieve sustainable forest management goals.

This indicator measures Target 6.4 of the Global al6 1 61.89 10(o)16( )]TJETQ92 reW*nBTtry

Even though some important data and information available in the country to monitor the achievements of the Global Forest Goals and targets, they are mostly scattered and entails official written requests and approvals for access.

There is no proper data sharing mechanism exist among the key forestry authorities. The data sharing agreement, signed in 2014, between the FD, SD, DWC, CEA, CCS and the Food and Agriculture Organization of the United Nations (FAO) under the UN-REDD Project does not function due to lack of follow up action after the completion of the project.

Some important information collection mechanisms such as National Forest Monitoring System and Safeguard Information System introduced by the UN-REDD Project are not functioning to the expected level due to lack of follow up actions.

Forest Management activities are not adequately coordinated due to the absence of a strong coordination mechanism at National as well as Sub national level. Some stakeholder platforms established under the UN-REDD Project such as the CSO Forum and IP forum are not adequately being followed up after the project period.

Based on the findings of this study, following recommendations can be made to develop a comprehensive and efficient system for monitoring progress towards Sustainable Forest Management in Sri Lanka.

Global Forest Goals and Targets should be applied and institutionalized in Sri Lanka to develop national strategies to ensure sustainable forest management.

Initiate a dialog among forest related stakeholder agencies facilitated by the Government of Sri Lanka to develop programs and to realize national targets to be in line with the Global Forest Goals and its targets.

Establish/Strengthen National and Sub-National Coordination bodies to ensure effective coordination among various sectors to achieve Global Forest targets. If existing mechanism are used, take appropriate measures to develop the capacity of these existing structures.

Establish three stakeholder forums to obtain the participation of the Civil Society, Indigenous People and Private Sector. The forums established under the UN-REDD Project can be used as an entry point.

Nominate and appoint a central organization to monitor and report the achievements of Global Forest Goals and targets. It is recommended

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Revisit the data sharing agreement signed in 2014 between the FD, SD, DWC, CEA, CCS and the Food and Agriculture Organization of the United Nations (FAO). Take appropriate measures to revitalize the data sharing mechanism and accommodate new data acquired by these departments to update the geo-portal.

Reassess the implementation of