

Ministry of Mahaweli Development and Environment (MoMD&E)
Ecosystem Conservation and Management Project (ESCAMP)
Component (1). Landscape Planning and Management

Terms of Reference

**Consulting Services for Landscape Management Planning,
Singharaja Forest Range (SFR) Landscape**

1. Project Background:

In Sri Lanka the demand for land and other natural resources for ‘national economic development’ has come on a direct collision course with environmental protection and conservation goals. The country has a long history of conservation of forest resources and protected by legal enactments focusing the conservation of country’s biodiversity and better management of ecosystem services. The all forest resources which are legally protected by enactments are considered as Protected Areas (PA). There are many issues with regard to current planning and management process that threaten the effectiveness of the PA network.

The drivers of environmental degradation are linked in complex ways which transcend administrative boundaries and negligence of environment in development initiatives, therefore formulating effective management responses require balancing conflicting demands of the larger landscape. With the population expansion, launching of largescale irrigation schemes, agricultural development and unplanned human settlements and infrastructure development has given rise to a conflict that undermines the well-being of society and wildlife resulting huge economic and environmental cost. The other key challenges in conservation planning and management are fragmented institutional responsibilities and overlapping mandates, specially prevailing sectoral approaches, despite still being the predominant form of planning has long been recognized as inadequate.

As a result, conservation-directed and development-directed agencies simultaneously develop plans for areas that provide important ecosystem services which are incompatible with each other eventually resulting in ecological losses. Further, environmental decision making in Sri Lanka is largely focused on mitigating direct impacts of individual development projects. This kind of problem solving does not consider the ‘bigger picture’ and provides solutions that are sub-optimal as it lacks a strategic approach in controlling development pressure.

Going forward, it is important for Sri Lanka to recognize that its current approach to biodiversity protection needs to be reviewed and adopt a more integrated planning and development approach that aligns and balances development programs with ecological or environmental priorities. Competing demand on land for development and conservation will only increase in the future, intensified with the deep uncertainties added by climate change.

1.1 Landscape planning as a possible solution:

Landscape level planning and decision making has been gaining prominence and internationally recognized methodology as an alternative conservation approach in the search for solutions to reconcile conservation and development trade-offs. It has been increasingly applied successfully across the globe to conservation as well as production landscapes. While there are many definitions for what a landscape is - it generally constitutes a geographical unit that takes into consideration ecological system with overlapping political, economic and social systems.

More comprehensive and integrated planning is particularly important for development in areas where the country's priority protected areas are located, and the development of a suitable framework is thus needed. It is a dynamic process in which stakeholders (from multiple sectors) decide and agree what future conditions they would desire to see in the landscape, how the lands/resources will be prioritized and managed, how current and future demands would be met while ensuring sustainability of ecological systems that support human needs. It goes beyond the 'narrow sectoral approach' and management based on the confines of 'administrative borders' towards a larger spatial scale where different stakeholder demands can be optimized. At the landscape level, there is better understanding of the trade-offs and potential synergies among competing land claims and use of conservation zones, and will better inform governance and management strategies.

Under the World Bank funded Ecosystem Conservation and Management Project (ESCAMP), a pilot planning process is planned to be initiated in two distinctly different PA dominated landscapes in the country with different types of development pressures, to promote landscape level planning and decision making as means to addressing some of the conservation/environmental challenges experienced.

The process will look at the wider landscape in which the PAs are contained as the ecologically functional planning unit and assess social, political, economic dynamics that give rise to (or will give rise to) land-use conflicts and threaten conservation areas or compromise social needs. This approach is expected to provide a basis for conservation agencies to include conservation priorities with other national planning agencies active in the landscape and to facilitate or influence their spatial plans/policies that may include large infrastructure, agricultural expansion, urban expansion, transport development community settlements etc in being compatible with the surrounding ecosystems. Most importantly, the process will look at minimizing conflicts between conservation and development plans for the landscape by trying as much as possible to draw synergies with current development planning efforts undertaken by national land use planning and development agencies when addressing conservation challenges. At the end of the planning exercise, strategic conservation plan is expected to be produced for the selected landscapes that will define the landscape and prescribe landscape management objectives, its future desired conditions and governance/management strategies that reconciles conservation with that of development within the landscape.

This document outlines the Terms of Reference for preparing the Landscape Conservation Plan for the **Singharaja Forest Range landscape (SFR) in the Rakwana** hilly range in the Wet zone.

2. AIM:

To develop a stakeholder-driven Landscape Management Plan (LMP) for the **Singharaja Forest Range landscape (SFR) in the Rakwana** hilly range.

Please see the Annexure (I) for the boundaries of the project area.

2.1 OBJECTIVES:

- i).** To assess baseline conditions of the SFR landscape with regard to current land use patterns, bio-diversity and socio-economic status & trends and assess current/future demands that is shaping use of land/natural resources within it.
- ii).** To identify serious conservation issues, threats and drivers of change that have and will continue to shape the ecological character and balance within the SFR landscape. The focus should be centred mainly around how these have and will impact the management of PAs and adjacent ecosystems within the landscape.
- iii)** To determine critical ecological networks within the landscape and the economic value of key ecosystem services.
- iv)** To identify key stakeholder groups in the landscape, assess their level of interest and influence on the future of the landscape and identify means of engaging them for improved landscape management
- v)** To study and assess the impact of regional sectoral developments plans on the conservation future of the SFR landscape and propose appropriate amendments and alternatives.
- vi)** To identify appropriate landscape level conservation management strategies that will address significant existing and emerging conservation threats and improve the management of PAs and associated significant ecosystems within the SFR landscape.
- vii).** To facilitate key stakeholders towards the development of a landscape vision for the SFR landscape and pilot a planning process which would promote integrated decision making and management of the landscape through appropriate institutional mechanism.
- viii).** To prepare a Landscape Management Plan (LMP) for the SFR landscape which is acceptable to all key stakeholders including:
 - An integrated land-use plan including a zoning map, restoration area map, threaten area map, proposed conservation area map etc.
 - Recommendations for amending current Land use regulations.
 - Implementation framework
 - Monitoring and evaluation plan
- ix).** To analyse ways & means of mainstreaming conservation landscape planning within Sri Lanka's land-use and conservation planning framework for sustainability
- x).** To provide technical support in training and capacity building of key stakeholders on landscape management planning.

3. KEY TASKS:

TASK 1 : Characterization of the SFR landscape

Carryout baseline studies in the SFR landscape for landscape character description.

1.1 Following key baseline studies covering (i). Land-use, (ii) Socio-economy, (iii) Biodiversity, (iv) Hydrology v) Agronomy, (vi). Environmental economic, (vii) Livelihood and Community development etc¹ the consultant will describe and characterise the SFR landscape. This will be done through the review of available scientific and socio-economic data supplemented with targeted and well-structured field assessments, ground surveys, meetings, stakeholder consultation and other means of information gathering through national and regional planning teams.

1.2

This activity will include the following to provide a description for the entire landscape and each important forest/natural eco-system area.

1.2 Physical features:

- Area and boundaries of each forest/other significant natural ecosystems.
- Location and type of each forest/significant natural ecosystem according to standard classification.
- Locations of other PAs and internationally designated areas (Eg; Cultural and Archaeological, World Heritage and International Biosphere Reserves etc) in the SFR landscape
- Land ownership and institutional jurisdiction
- Site designations with reference to PAs in the landscape.
- Hydrological pattern (e.g. General hydrological characteristics, hydrological input/output, periodicity, extent of flooding etc).

1.3 Ecological features:

- Key eco-systems within the SFR, their conservation status and bio-diversity.
- Spatial distribution of these key ecosystems.
- Important ecological networks within the SFR landscape including ecological importance of small areas that lie outside the PA system.
- Ecological changes taken place during last 2- 3 decades.

1.4 Land-use and socio-economic features:

- Land-use pattern across the landscape
- Population and settlement patterns within the landscape, socio-economic status.
- Forest dependency of buffer zone communities of key ecosystems and trends of natural resource utilization
- Key archaeological and cultural sites distributed across the landscape.

¹ As part of the contract all raw data should be submitted along with coordinates of all survey and transect locations.

1.5 Stakeholder jurisdiction:

- Carryout a stakeholder analysis in the SFR landscape and assess the levels of each stakeholders' interest, influence and importance over natural resources usage in the Landscape. It should include;
 - Stakeholders responsible for land and natural resources usage, planning and management and their responsibilities/interests and influences².
 - All other stakeholders and stakeholder organisations responsible for the implementation of land-use plan and their responsibilities and activities.
 - Name, type, scope and importance of major sectoral and local government economic development plans which may have implications on conservation priorities in the area.

TASK 2: Analysis of landscape level Conservation and Threats and Pressures.

Provide a detail account of significant existing and emerging conservation issues/threats in the landscape, highlighting impact areas and drivers of threats.

- 2.1** Determine factors that will shape the ecological landscape in the future (with PAs at the centre), assess broader, wide ranging conservation trends and influences and identify opportunities for sustainable ecosystem management. This should include an analysis of the present and future development context (key Urban/industrial/infrastructure and business sectors, agriculture and socio-economic development, political environment etc.) and its current and future impacts on the biodiversity conservation in the landscape.

Note: The PA network remains at the heart of conservation within the landscape and as such particular attention should be paid to **issues and challenges** relating directly to the management of PA network and adjacent ecosystems that transcend administrative conservation boundaries. The consultant team will analyse all the issues currently faced by the landscape which will form the fundamental basis on which the LCP will be developed.

TASK 3: Key Ecosystem services & Economic Evaluation

Determine key ecological and ecosystem service zones within the landscape.

- 3.1** Carry out an ecosystem service assessment for a sample of key representative ecosystems (based on the full list of ecosystem services identified within the Millennium Ecosystem Assessment, 2005).
- 3.2** The selection of sample ecosystems for service assessment should be agreed upon with the PMU, Forest Department and the Department of Wildlife Conservation.

². Each stake holder should identify their roles, responsibilities, interests and influences on the landscape

3.3 Assess the economic values and opportunity cost of ecosystem services for each different ecosystem type in the representative sample identified in 3.2 Particular attention should be paid to important ecosystems outside the PA network as input in to GoSL decision making on landscape interventions.

TASK 4: Landscape Conservation and Management Plan (LCP) Development for the SFR Landscape

- The landscape management plan for the SRL will be the main output of this assignment. The plan will describe the approach to building social, economic, and ecological resilience in the SRL by supporting stakeholder agencies and community to use landscape resources in a sustainable way based on adaptive management for maximum local/regional benefits. The development of the LMP should be in line with the fundamental principles of (i) wise use and management & (ii) that the environment and biodiversity contribute to quality of life and thus constitute a fundamental component of human well-being.

4.1 Develop a shared vision for the SFR landscape

- Assess stakeholder aspirations on key landscape conservation benefits that would need to be maintained in order to ensure human well-being at present and in the foreseeable future.
- Develop a landscape planning vision and the set of specific and feasible landscape planning and management objectives that will set direction for the LMP.

4.2 Identify and categorize time based priority requirements (Short/middle/long) term for ecological sustainability in the landscape.

- Suggest a potential macro zoning system based on economic potentials, and biological and watershed needs in distinct geographical parts of the SRL based on conservation/land management challenges identified.
- In doing so, assess the effectiveness of the PAs in conserving the full range of ecosystems in the landscape and in maintaining the ecological viability, resilience and integrity of these ecosystems.
- Identify spatial gaps in the present PA network and highlight opportunities for further PA expansion and for integrating PAs into an effective ecological network. The assessment should particularly highlight the;
 - Habitat needs of flagship species and connectivity of forest.
 - Critical wildlife habitats/corridors/roosting sites etc.
 - High quality and conservation value ecosystems outside of PAs,
 - Important ecosystems to be amalgamate to existing PAs.
- Identify viable land management strategies and guidelines for identified macro ecological zones.
- Develop guidelines and management principles for conservation of identified critical ecosystems outside the designated PA network to guide/influence national development projects and programs.

4.3 Stakeholder engagement in the LMP development for the SFR landscape

The development of the LMP will need to be participatory in nature and built on stakeholder consensus. As such, the consultant would be required to forge strong

multi-stakeholder engagement and cross-sectoral dialogue development and implementation of the zoning plan.³

- Assess key stakeholder aspirations in terms of the landscape resources/benefits and preference for different landscape management interventions.
- Develop a Stakeholder Engagement Plan (SEP) targeting
 - effective and continued engagement of key stakeholders in developing and implementing the LMP and
 - improved collaboration between multiple management authorities and agencies
- Develop a stakeholder negotiation framework for ‘**collective decision making**’ with regard to
 - Identifying potential land management strategies to address key conservation issues
 - Integrating sectoral priorities in to the LMP and agreeing on resource-use trade-offs and in particular;
 - Achieving tasks listed in 4.5.2 in the development and implementation the LMP.

4.4 The enabling environment

- Carryout a SWOT analysis to identify current status and opportunities for planning.
- Identify opportunities to mainstream landscape level planning in the country’s physical planning framework.
- Identify policy, regulatory, socio-economic, institutional, technical and knowledge barriers landscape level planning and management and recommend measures to address these gaps.

4.5 Draft the Landscape Conservation Plan for SFR landscape.

The following elements should be included in the final LMP for the **SFR** landscape.

- **Final Landscape boundary** – the boundary of the landscape which has been broadly defined (refer map in annex) should be reviewed and refined ⁴based on study outputs.
- **Integrated macro land use zoning map** – Development of an integrated macro land-use zonal map indicating the strategic role the PAs and other significant natural ecosystems play in the landscape’s ecological and economic sustainability. This should be developed within a GIS platform with information on ecosystem services as much as possible.
- **Management prescriptions for each macro land-use zone**
- **Implementation plan** - Develop a prioritised, time-bound implementation plan including sustainable, institutional and finance models for ongoing management.

³ The stakeholder forums will be set up by the ESCAMP/ PMU and stakeholder analysis has to be carried out by the Consultancy firm hired.

⁴ The landscape

- **Monitoring and evaluation plan** - Develop a long-term monitoring and evaluation plan with key indicators to assess LMP implementation.

4.6 The report structure, draft LMP and the final LMP combining all tasks and outputs outlined above will need to be agreed by the PMU.

TASK 5: PILOT IMPLEMENTATION OF THE LMP

Identify pilot sites and priorities for interventions by ESCAMP that is in line with the landscape management and conservation strategies proposed in the LMP. This should include demonstration projects show casing conservation oriented developments, where appropriate, among other interventions.

TASK 6: TRAINING AND INSTITUTIONAL STRENGTHENING

Training and capacity building are important components in the successful integration of landscape conservation planning within the country's planning framework. This assignment will contribute to training and capacity building for landscape level conservation planning through the following.

- **Provide recommendations for capacity development of key stakeholders on LMP specially through internal training programs and setups.**
- **Institutional strengthening** - through on the job training for assigned counterparts from the conservation agencies and other key stakeholder agencies as determined.
- **Training workshop** - to introduce the LMP and train staff in planning and use the plan for decision making.
- **A training plan** for incrementally building the capacity of key conservation agencies for landscape conservation planning.

TASK 7: MANUAL ON LANDSCAPE MANAGEMENT PLANNING

Consultant team should produce a manual on Landscape Management planning to be used as guideline in training programs and producing management plans for other landscapes identified by stakeholders.

Important: List of aps to be produced

During the analysis of study results series of maps should be generated specially on ; status of biodiversity, fauna & flora distribution, Land cover, present land use pattern, proposed land use pattern, present and proposed conservation areas, forest types, proposed restoration areas, hydrology, drainage pattern, topography, slope, elevation, climate, population distribution (pressure areas), forest dependency, Human Elephant Conflict (HEC) areas, threaten areas, conservation status, potential areas for ecotourism, poverty of buffer zone communities, environmental sensitive areas, areas of special attention is needed, proposed national projects, Archaeological/cultural/historical important sites/areas etc. which are important in demonstrating the status of the landscape and making recommendations.

5 DELIVERABLES:

5.1 The following 08 deliverables are expected under this assignment:

	Action/delivery	To be submitted by
i)	Inception report outlining proposed planning methodology, work programme, team of consultants engaged and their program, organisational relationships and key contacts.	Within 1 st month
ii)	Interim report detailing descriptions including: (Work program of the entire consultant's team <ul style="list-style-type: none"> • Each consultant's work programs • Stakeholder engagement plan • Field survey program • Additional studies proposed • Stakeholder workshop 	Within 2 nd month
iii)	Field Studies and Analysis reports <ul style="list-style-type: none"> • Stakeholder Analysis • Problem analysis • SWOT Analysis 	Within 3 rd month
iv)	Status Report on the SFR landscape on priority PAs, ecosystem services, environmental sensitive areas in outside of PAs significant threats to PAs, the areas highly pressurised by external factors, other conservation areas (Cultural and Archaeological), prominent environment issues, critical land use issues, socioeconomic status and forest dependency. Also alternatives for reducing forest dependency, community development strategies proposed to be submitted.	Within 4 th - 6 th months
v)	<ul style="list-style-type: none"> • Draft structure of the LMP report. • Report on Ecosystem services assessment, Economic evaluation and land use issues 	Within 7 th – 8 th months
vi)	<ul style="list-style-type: none"> • Draft Landscape Management Plan • Present to the stakeholder forum, and District Coordinating Committees(DCC)/District Agriculture Committees (DAC) • Validation workshop 	Within 9 – 10 months
vii)	<ul style="list-style-type: none"> • Final Landscape Management Plan • Landscape Management Planning Manual 	Within 12 months
viii)	<ul style="list-style-type: none"> • Training workshop for stake holders (Note: Other forms of stakeholder engagement as outlined in the SEP will be considered incidental to study outputs.)	Within 12 months

- 5.2 Each of the above deliverables should be provided as 04 printed copies and e-copies in English both in Microsoft Word and PDF. The executive summary of the LMP needs to be provided in the following three languages: Sinhala, Tamil and English. (All raw data collected should be provided in MS Excel format).
- 5.3 Zonal mapping should be produced to a scale of 1:25000 to provide adequate detail and in a digital format as shapefiles compatible with ArcGIS version 10.1.

6 PERIOD OF CONSULTANCY & KEY STAFF:

6.1 The estimated total duration of this consultancy is 12 months (48 weeks).

The duration of each consultant's service period may decide by the team leader of the consultancy team/firm based on the service requirement and to be proposed under the consultancy proposal.

6.2 Cost Estimate : Rs. 30 Million

6.3 The consultancy team must be led by an individual with extensive landscape/Land use experience and has ability to effectively coordinate a multi-sectoral team and deliver the tasks specified above. The consultancy team should be able to demonstrate the following expertise and demonstrate through the consultant's proposal and the consultancy period of their participation and contributions:

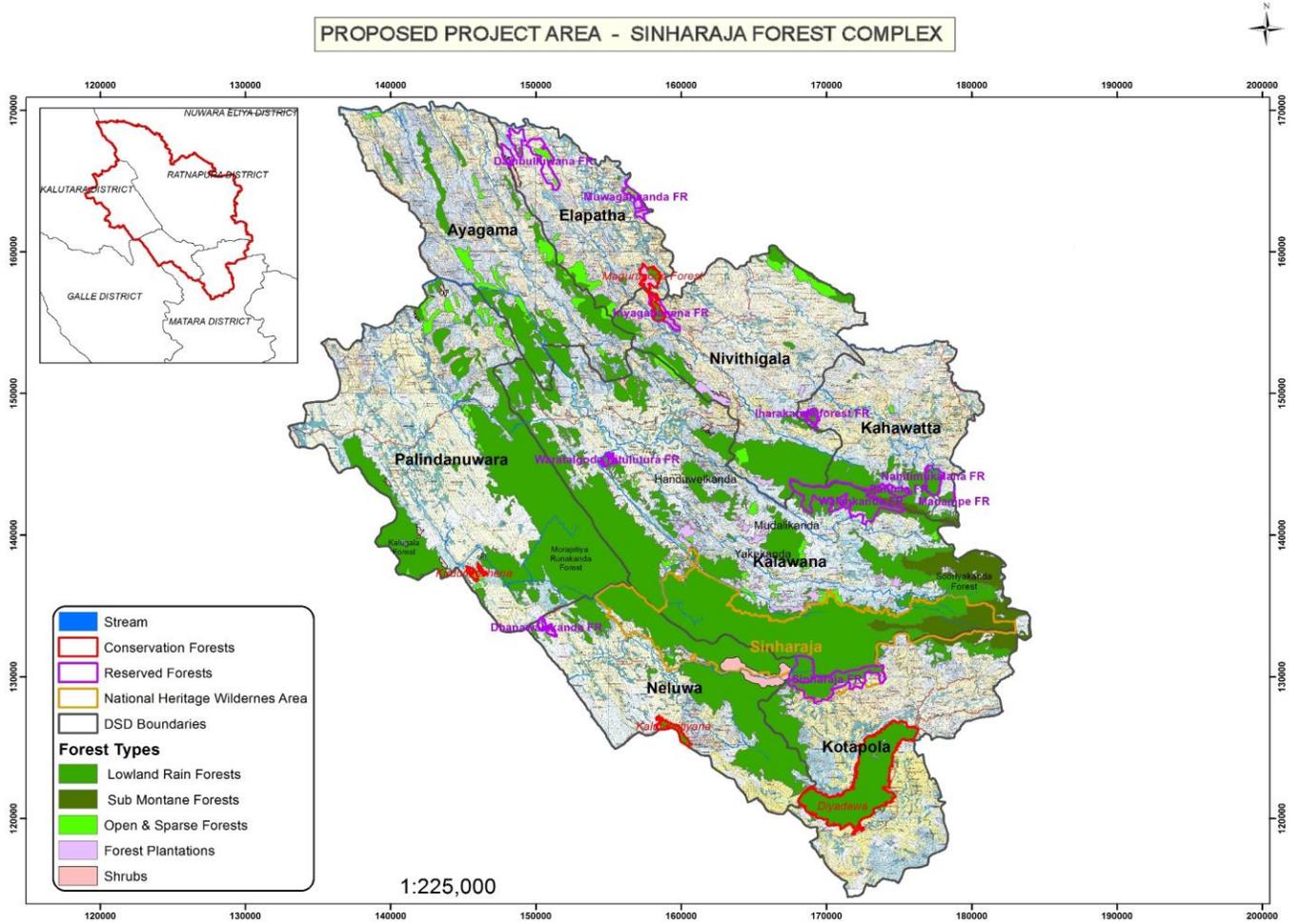
Consultant	Professional qualifications and experiences
i). Landscape Management Planning Specialist (Team Leader)	Extensive knowledge in the field of Landscape planning/Land use planning/Geography/forestry/Natural Resource Management with a postgraduate degree in Geography/Land use Planning/Natural Resource management or any other relevant field. At least 10 years of broad working experience of Land use/Landscape planning, Watershed management, Forestry or Protected area management will be preferred.
ii). Land use Planning Specialist (Deputy tea leader)	Hold a postgraduate degree in Land use Planning/ Geography/Agriculture/Natural Resources management, etc with at least 10 years' experience in Land use planning specially in protected areas or in landscapes with multiple land uses.

iii).Hydrologist	Hold a postgraduate degree in Hydrology/Forest Hydrology/Watershed Management and at least 10 years experiences in watershed management, water resources management or related field and land use planning specially in protected areas or in landscapes with multiple land uses.
iv).Agriculture and Plantation Management specialist	Hold a postgraduate degree in Agronomy/Plantation Management/Forestry/Agriculture, etc with at least 10 years' field level experience on same disciplines specially in landscapes with protected areas, plantations (Tea/Rubber/Cinnamon etc) and with multiple land uses.
v).Socioeconomic/Community Development Specialist	Hold a postgraduate degree in Sociology/Community Development with sufficient knowledge and experiences (At least 10 years) on livelihood improvement and Community development activities in buffer zone villages of PAs.
vi).Ecology and Biodiversity Specialist	Hold a postgraduate degree in ecology or relevant field (biology, ecology, agriculture, natural resources management, etc) with at least 10 years' experiences in biodiversity and ecosystem services assessment.
vii). Environmental Economist	Hold a post graduate degree in Natural Resource Economics/Environmental Economics with 10 years experiences in economic assessment/environmental valuation of natural resources in different ecological zones.
viii).GIS Specialist	Hold a postgraduate degree in Land use/ GIS with 10 years experiences in Spatial Planning specially in forest based landscapes.

6.3 i). In addition to this consultancy team, additional consultants may be assigned based on requirements and the issues pertaining to the landscape, but additional cost incurred should be managed within the agreed contract value.

ii). CVs for all staff must be submitted along with information regarding experience of undertaking similar projects.

Map of the Project Area



Key tasks of individual consultant

1). Landscape Management Planning Specialist (Team Leader)

- i). Make aware the key stakeholders and the consultant team on Landscape Planning concept and develop vision, objectives and operational plan
- ii). Identify and assess the magnitude of key environmental issues based on landscape aspects and also lapses in national or regional sectoral plans related to the SFR landscape and gather required information through rapid assessment methodology.
- ii). Produce a comprehensive action plan, consultants engagement plan, organising, implementation, management and monitoring of the management planning process.
- iii). Deciding of additional consultant required (If necessary) and individual consultants' consultancy periods, time schedules etc,
- iv). Coordination of consultants, landscape working group, PMU, Stakeholders and lead and facilitate and provide necessary assistance for planning.
- v). Lead the consultant team to deliver all tasks and produce the Landscape Management Plan in line with the ToR.
- vi). Team leader is fully responsible in supervising, guiding and monitoring the consultant team in carrying out the planning process scientifically and adopting internationally accepted planning tools & methodologies and delivering a proper landscape management plan fulfilled by stakeholders.
- vi). Draft and finalize the Final Landscape Management Plan incorporation of all specialist's report and other documents.
- vii). Present the management plan at the stakeholder workshop and final validation workshop.

2). Land use Planning Specialist (Deputy Team Leader)

- i). Design an appropriate methodology to carry out a comprehensive land use assessment in the landscape and identify and record the critical land use issues which have affected the ecological imbalance of the area.
- ii). Work closely with other consultants (Ecology & Biodiversity Specialist, Social Development and obtain available data/information/findings from their inputs for this exercise.
- iii). Identify a set of land use categories based on the set of guidelines prepared for recommending proposed land use classes and finalize the land use plan prepared.
- iv). Take a lead role in studying and classification of the existing land-use patterns across the selected landscape, referring available information and maps and pay special focus on buffer zones around PAs and other sensitive eco-systems; for the different categories of land-uses seen across the landscape, broadly assess the current status and key land management practices/issues.

- vi). The consultant shall identify key environmental issues, their causes and driving forces leading to aggravating the stability of the landscape.
- vii). The consultant will identify and incorporate proposed major regional/sectoral development plans earmarked for the SFR landscape consulting relevant stakeholders.
- viii). The Consultant shall highlight the unsustainable land-use practices adopted in the landscape and assess and analyze the magnitude of the impacts on biodiversity conservation within and outside of the PAs.
- ix). Recommend appropriate land use applications and measures for each land use category identified in the project area specially for Protected Areas, other state lands, homesteads and private lands.
- x). Based on the analysis of information and data gathered in the steps above, the consultant shall in a participatory way carryout the following;
 - a). Recommend appropriate land use applications and measures for each land use category identified in the project area (Based on guidelines developed), especially for degraded/denuded lands, homesteads, private lands, waste lands and appropriate land use practices.
 - b). Identify both threats and opportunities for development and conservation requirements of the landscape from landscape point of view that will minimize current/future conflicts.
- xi). Pertaining to observed land use pattern, ii). Status, iii). Existing/emerging threats and opportunities for conservation through for better land management in the land management in the land management should be presented at Divisional Secretariat level (Important/selected divisions) and alternatives suggested by consultant may agree with the communities and the PMU.
- xii). Recommend timely land use policy amendments and regulations to be made to address and overcome the present land use issues faced in the SFR landscape.
- xiii). The consultant will review the governing policies and regulatory framework for land-use planning applicable to the selected landscape and identify key stakeholders/stakeholder groups with an interest in land-use planning and its outcomes within the landscape.

3). Hydrologist

- i). Conducting a water resources/reservoir and water catchment survey in the SFR land cape, and mapping of water sources and developing a hydrological baseline
- ii). Study the hydrological pattern of the landscape and zoning it based on the hydrological importance, economic and ecological value,
- iii). Study the current status of watershed functions in the landscape and identify the issues, threats and main causes in watershed degradation,

- iv). Progressive assessment of the impacts of watershed development initiatives for rejuvenating water resources on water availability, water discharge, soil erosion and water use in the landscape,
- v). Recommend the appropriate interventions and their actions to be made for enhancing the watershed functions as well as ecosystem services in the landscape.

4). Agriculture and Plantation Management Specialist

- i). Carry out a field assessment on current cropping systems which adopt in different land uses of the landscape and highlight the lapses, misuses, undesirable practices and also positive approaches adopted in the landscape.
- ii). Study the cropping systems adopted in plantation sector specially in tea small holdings, rubber plantations and other areas planted with plantation crops and export agricultural crops and their adaptability and cultivation practices, which effect on land degradation and landscape stability.
- iii). Recommend appropriate crops, cropping systems, different agricultural practices and lands and soil stability for different land use categories identified in the landscape.
- iv). Develop strategies and technical concepts including guidelines, manuals, and procedures, which are suitable for applying different land use categories.
- v). Recommend appropriate soil conservation measures which include mechanical and biological suited to different land categories and terrains.

5). Socioeconomics and Community Development Specialist

- i). Develop an appropriate methodology to assess the socioeconomic status of the landscape especially in buffer zone areas of PAs.
- ii). Identify key stakeholders that are active and significance influence within the landscape.
- iii). Gather all information required through a comprehensive study (Adopting participatory tools and methodologies) socioeconomic status, demographic features, forest dependency, Non Timber Forest Products (NTFP) collected, their level of threats on PAs and significance on landscape management.
- iv). Similarly, assess the impact of environmental degradation, caused by land degradation, economic development and other factors, on community livelihoods and their general socio-economic well-being.
- v). Rank villages/clusters of villages around PAs and within the landscape according to their level of dependency and consequent conservation impacts and map the locations with the help of FD and DWLC.
- vi). Provide guidance to FD and DWLC teams to mobilizing Protected Area buffer zone communities to develop Action Plans and identify potential development options that communities could contribute to conservation and management of forests.

- vii). Recommend appropriate and novel community development alternatives/income generating activities to be implemented in buffer zone areas (Other than traditional means) of Protected Areas to upgrade their living standards and economy, through skill development, leadership training, community empowerment and strengthening of CBOs.
- viii). Draft the sociological component of the management plan with required analysis and recommendations.

6). Ecologist/Biodiversity Specialist

- i). Carryout a fairly detail Biodiversity baseline study which include (Fauna and flora distribution, Threaten/endangered species) through an appropriate methodology enabling to analyse the current status of PAs and other ecological sensitive areas.
- ii). Identify and map biodiversity hotspots, special wild life habitats, degraded sites and areas to be restored.
- iii). Inspect the environmental areas in (Outside) PAs in the landscape ad recommend appropriate measures to enrich or restore the area aiming biodiversity conservation and improvement.
- iii). Identify and map the areas in the landscape to be restore focusing on enhancing of ecosystem services.
- iv). Identify threats and critical issues related to key ecosystems in the landscape and identify root causes.
- v). Identify major habits of elephants, elephant corridors and areas of human elephant conflict abundance areas and prepare detail map indicating such areas. Also recommend appropriate locations of elephant corridors and other important areas to be conserved.
- vi). Draft the biodiversity and ecological component of the management plan with required analysis and recommendations.
- vii). Provide special recommendations to biodiversity conservation of PAs as well as outside areas of ecologically important.
- viii). In consultation of Forest and Wildlife officials, local communities, technical and managerial staff and other experts provide recommendations for improvement and management of habitats in the landscape.

7). Natural Resource Economist/Environmental Economist

- i). Assess the economic value of all restoration activities proposed in the Landscape management plan
- ii). Cost benefit analysis of ongoing development projects in the landscape
- iii). Assess the economic values of forest products collected from forest areas and recommend appropriate livelihood development activities as alternatives for buffer zone communities of the Landscape.

8). GIS Specialist

- i). Spatial analysis of areas which forest denudation highly taken place in the landscape.
- ii). Verify the areas of proposed land uses, proposed development areas, environmental sensitive areas other than designated PAs, proposed nature based tourism areas etc produced by the biodiversity specialist.
- iii). Produce all maps required in landscape management plan preparation and given in the list of tasks.

Annexure (III)

Contract Payment Schedule

	Deliverable	To be submitted	Payment (%)
1	i). Inception report outlining planning methodology, work programme, team of consultants engaged and their program, organisational relationships and key contacts.	(Within 1 st month)	10%
2	Interim report detailing descriptions including: i). Work program of the entire consultant’s team, <ul style="list-style-type: none"> • Each consultant’s work programs • Stakeholder engagement plan • Field survey program ii). Stakeholder Analysis Report	(Within 2 - 3 months)	15%
3	iii). SWOT Analysis report iv). Status Report on the SFR landscape on priority PAs, significant threats to PAs, the areas highly pressurised by external factors, other conservation areas (Cultural and Archaeological), prominent environment issues, land use issues and socioeconomic status and forest dependency. v). Draft structure of the LMP report. This should include all components, sections and proposed plans and	(Within 4 – 8 months)	20%
4	vi). Report on Ecosystem services assessment and Economic evaluation vii). Three workshops should be held in(Rathnapura, Galle and Mathara districts for LMP consultation. viii). Draft Landscape Management Plan with situation analysis and operational plans ix). Present the draft LMP for stakeholder forum x). Present the draft LMP for DDC/DAC for their awareness and concurrence	(Within 9 – 10 months)	30%
5	ix). Validation workshop x). Final LMP xi). Training workshop	(Within 12 Months)	25%
			100%