

Component 3: Develop a Reference Scenario

TOR for Subcomponent 3.2: Forecast of future emissions

1. Background

Deforestation and forest degradation are issues of great concern for Nepal and the world. Deforestation and forest degradation not only have implications on watershed conditions, biodiversity, aesthetic conditions and the entire livelihoods of communities, deforestation/degradation also results in release of the carbon originally stored in the trees, therefore contributing to climate change. There is now general agreement on the importance of reducing of carbon emissions from deforestation and forest degradation (REDD) in developing countries in order to mitigate the impacts of climate change. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. The FCPF has the dual objectives of building capacity for REDD in developing countries in tropical and subtropical regions, and of testing the program of performance-based incentive payments in some pilot countries, on a relatively small scale, in order to set the stage for a much larger system of positive incentives and financing flows in the future.

The FCPF's initial activities relate to technical assistance and capacity building for REDD. Specifically, the FCPF is assisting countries to arrive at a credible estimate of their national forest carbon stocks and sources of forest emissions; work out their national reference scenarios for emissions from deforestation and forest degradation based on past emission rates for future emissions estimates; calculate opportunity costs of possible REDD interventions; adopt and complement national strategies for stemming deforestation and forest degradation; and design national monitoring, reporting and verification systems for REDD. These activities are referred to as 'REDD Readiness' and are supported by the Readiness Fund of the FCPF.

Nepal is one of the countries selected by the FCPF for the REDD Readiness Fund and is now in the process of preparing a Readiness Preparation Proposal (R-PP). The purpose of the R-PP is to assist Nepal in laying out and organizing the steps needed to achieve 'Readiness' to undertake the range of activities for reducing emissions from deforestation and forest degradation (REDD), in the specific country context.

A "REDD-Forestry and Climate Change Cell" under the Ministry of Forests and Soil Conservation has been established to manage the REDD readiness in Nepal. This Cell is directly responsible for the procurement and the supervision of all actions financed during the Readiness phase, including the consultant services described in this document.

2. Purpose

The R-PP will consist of 6 components. The third component is to “**Develop** a national Reference Scenario” for REDD in Nepal. The purpose of this component is to develop a scenario of forest cover change and related greenhouse gas emissions from the forests over time. This should provide a future scenario of deforestation, forest degradation and carbon removal enhancement of carbon stocks (and the related emissions and removals) over time from the forests of Nepal, if current trend continues (business as usual) in the absence of additional incentives for emission reduction from the forests. The reference scenario will need to be based on a combination of recent historical data on deforestation, forest degradation and carbon stock enhancement, and estimated future emissions and removals, leading to a national scenario through time of greenhouse gas emissions.

The REDD-Cell will be leading the development of the REDD Reference Scenario. The purpose of this contract is to assist REDD-Cell in assessing the availability and quality of historic data as a first step in the preparation of a REDD Reference Scenario for Nepal.

The “REDD-Forestry and Climate Change Cell” now seeks to employ the services of a qualified consultant to contribute in preparing Reference Scenario through purchasing services for **subcomponent 2: Forecast of future emissions**

3. Major Tasks of the contractor:

As part of developing a reference scenario for Nepal, the country should be able to develop forecasts for changes in forest cover and carbon density under current conditions, and different macroeconomic and development scenarios using projections into the future of historical trend data. This may involve the use of data and tools (e.g., GDP, population, agricultural expansion, and/or forest industry growth or other forecasts, national or sectoral development plans, specific investment programs, and/or adjustment coefficients otherwise derived from such factors and data). To develop such forecast, the consultant will have the following tasks:

Task 1: The consultants will make an inventory of existing scenario models to project future forest cover and carbon density change over time due to deforestation and forest degradation. The consultant will review the applicability of these models and frameworks in Nepal and make a recommendation on which model to use, or alternatively develop a ToR for the adaptation of an existing model or the development of a new model for Nepal. The consultant will also identify the appropriate institutions that will provide data, make analysis and make contribution in developing reference scenario (s). As part of this task, the consultant will be expected to consider the

potential benefits of preparing a sub-national reference scenario for the major geographical zones of Nepal

Task 2: Based on the recommendation made as part of task 1, the consultant will review the data that are needed to project future forest cover and carbon density change over time due to deforestation and forest degradation. The consultant will review the availability of this data in Nepal and also identify the additional data required and training needs to capacitate government forestry institutions to attempt computer modeling to identify and interpret the future projections of carbon stock change over time.

Task 3: If under task 1 it is concluded that sub-national reference scenarios are required, the consultant will make a recommendation on how sub-national reference scenario would be linked to the national reference scenarios and how this approach would be organized, implemented, and be consistent with the national scenario (?).

Task 4: If any future work that is identified in tasks 1-3 (for example model development, data collection etc), the consultant will develop a ToR for this future work, which will contain the following elements at minimum:

- Objective
- Major tasks
- Methods and tools to be used
- Deliverables
- Timeline for deliverables
- Estimated budget

4. Deliverables:

A comprehensive report describing the approach taken and outcomes of all the tasks described above. The Report needs to be fully referenced (with data sources identified). Expected length of the report must be maximum 20-25 pages including a comprehensive executive summary (maximum 3-4 pages).

5. Methodology

The consultants do have liberty to use varieties of methods to produce an authentic document. The consortium of specialized experts responsible for carrying out the job will keep themselves informed of the relevant studies (particularly: 'Component

2.a.: ‘Assessment of Land Use, Forest Policy and Governance’) that has already been completed.

6. Qualifications of consultant and team members

The team leader must possess experience with scenario modelling for land use or forestry purposes. Experience and knowledge in forest survey, forest inventory and GIS application is a plus..

7. Details on Contract duration, budget and payment conditions

Starting date:

Total person days: 20 days

Report submission date: Three weeks after contract

Maximum allocated budget: NRs. 975,000

8. Terms and conditions

- The team leader of the consortium of specialized experts after getting the assignment will take full responsibility to commission the job within the stipulated time frame.
- The allocated budget is the maximum available ceiling. The precise contract amount will be as per the negotiation between the REDD Cell and the concerned party that will ultimately be approved by the secretary, MFSC.
- Regarding payment, 25 per cent of the contracted amount will be paid upon the signing of the contract and 40 per cent will be paid after submission of the final draft. Rest 35 per cent of the contract amount will be reserved for which the final payment will be made when Nepal’s R-PP gets approved by the FCPF.
- The consultants will work in close contact of the REDD cell and the REDD working group who will provide constant feedback and incorporate the suggestions.
- Given that each of the six components is an ingredient part of the overall R-PP document than a discrete activity on its own, the consultant concerned will make sure that it tries to get informed of the rest of the R-PP assignment so as to insure complementarily, synchrony and synergy with the overall R-PP.
- The penalty for delays will be US\$ 500 per day for which there is a delay.

Note: See FCPF ‘Readiness Preparation Proposal (R-PP) Template’ and ‘Standards to be met by Individual –R-PPP Components’ for details. For further details see FCPF website at www.forestcarbonpartnership.org