

Development of a biodiversity assessment methodology for Papua New Guinea's National Forest Inventory

Background

The Food and Agriculture Organization of the United Nations (FAO) is currently providing assistance to Papua New Guinea's Forest Authority to develop its first multipurpose National Forest Inventory (NFI).

The NFI will be the basis for planning activities in the forestry sector and a key element for the National Forest Monitoring System that PNG is required to establish in order to participate in the expected UNFCCC mechanism on Reducing Emissions from Deforestation and forest Degradation (REDD+).

Three FAO projects are now jointly supporting the development of PNG's NFI, with assistance by UN-REDD (Multi-donor Trust Fund), the European Union, and the Italian Development Cooperation.

In addition to the traditional inventory activities for carbon and greenhouse gas measurement, PNG's multipurpose NFI aims to incorporate the multiple values (products and services) that forests provide, such as those related to biodiversity.

National Forest Inventory planning started in October 2012. Design, methodology and implementation planning is currently being finalized by PNG Forest Authority.

FAO invited the University of Rome "La Sapienza" and the University of Queensland to develop a proposal to integrate the design of the planned NFI with a methodology for biodiversity assessment and monitoring.

Following exchanges with the two institutions, and in consideration of the respective expertise, it was agreed that La Sapienza would focus on the floral component, while UQ would focus on the faunal component, in coordination with each other.

The final goal is to develop, together with the PNG NFA, an innovative NFI that contains appropriate information allowing for objective analysis of the trade-off between protecting biodiversity and reducing emissions, so that a careful targeting of REDD+ funds could aspire to maximizing both objectives.

Timeline and scope

November-December 2014: training of field teams and field testing of methodology.

January-December 2015: implementation of pilot phase in 115 cluster plots.

2016-2017: implementation of second phase in all remaining plots (total number of required plots will be decided on the basis of experience from pilot phase. Estimated number is between 435 and 1000, including the 115 pilot plots established in 2015).

Issues and constraints

While FAO and PNGFA will take care of costs and logistic arrangements related to the general implementation of the NFI, the integration of a biodiversity assessment will involve a number of additional challenges.

The main challenge is that of reconciling the methodology of a traditional forest inventory with that of biodiversity assessment while dealing with constraints related to the establishment of a forest inventory in terms of timing, number and type of monitored species, and logistics.

In particular:

- Timing: the Forest Authority aims to measure 1 cluster plot in 1 day (not including travel time). Extra time for biodiversity assessment can be negotiated.
- Field teams: 5 teams of 6 people for the inventory of trees (1 team in five different regions). Additional local staff for biodiversity assessment can be negotiated.
- Training: estimated time for initial training in PNG: 1 month (approx. 5 days for each of the 5 regional teams, Nov-Dec 2014). Training is expected to be done in actual inventory plots.

Possible arrangements with UQ

The total available budget for the fauna assessment is approx. 180,000 USD (with support from the Italian Development Cooperation).

Funds could be provided by FAO via one or more Letters of Agreement (LoA) with UQ (School of GPEM), which include detailed descriptions of the services provided, budget, work-plan and timeframe.

Cost of equipment will be charged to FAO and not included in the LoA.

The cost of additional local staff for the biodiversity assessment, if available within the Forest Authority, could be negotiated with FAO and not be included in the LoA.

Annexes

- FAO Project document: *UN Collaborative Programme on Reducing Emissions from Deforestation And forest Degradation in developing Countries - National Programme Document*
- FAO Project document: *Climate change and Mountain Forests - The Mountain Partnership and the Global Island Partnership join hands in Latin America and the Pacific. (PNG activities refer to Objective 1: Sustainable management of forest resources is improved in key tropical mountain regions through capacity development and the provision of monitoring tools);*
- Executive summary of FAO project: *Technical support to the Papua New Guinea Forest Authority to implement a multi-purpose National Forest Inventory (pending approval);*
- University of Rome La Sapienza: *A proposal for integrating PNG's NFI with appropriate biodiversity indicators.*