



## Terms of Reference

<b>Job Title:</b> Forestry statistician - <b>FOM/UNREDD/Statistician/2014/1</b>	
<b>Division/Department:</b> FAO Forestry department	
<b>Programme/Project Number:</b> UN-REDD Programme – UNJP/386/GLO/UNJ	
<b>Location:</b> Rome, FAO HQ	
<b>Expected Start Date of Assignment:</b> February/ March 2014	<b>Duration:</b> 6/11 months
<b>Reports to: Name:</b>	<b>Title:</b> Forestry officers
<b>Contact:</b> Consultant-FOM-UNREDD-Statistician@fao.org	

### GENERAL DESCRIPTION OF TASK(S) AND OBJECTIVES TO BE ACHIEVED

The assessment of forest biomass at global scale is limited by the lack of data and the lack of harmonisation methods. It results that the data are not comparable and consistent over time because different methodologies have been used. Discrepancies in methods to assess emission factors (carbon stock and stock changes) and activity data (mainly related to land use and land use change data) are related to different methods and inadequate use of existing methods such as volume and biomass models, assessment of forest carbon stock using forest inventory data, and assessment of forest land area change. According to the IPCC guidance and guidelines, reporting countries for REDD+, countries are encouraged to produce GHG inventory that are transparent, accurate, consistent, complete and comparable.

The REDD decision adopted at COP13 “encourages the use of the most recent reporting guidelines as a basis for reporting greenhouse gas emissions from deforestation, noting also that Parties not included in Annex I to the Convention are encouraged to apply the Good Practice Guidance for Land Use, Land-Use Change and Forestry”. The IPCC Good Practice Guidance, GPG 2003, has been used by almost all Kyoto Protocol Annex-B Parties to assess carbon stock changes on their forest land. Thus, the main objective of this capacity development action is to prepare developing countries to assess carbon emission and removals from forest land through methodologies recognized by GPG 2003, so that future results will be demonstrable, transparent, verifiable, and estimated consistently over time. The REDD decision adopted at COP13 also requires that any “reductions in emissions or increases resulting from the demonstration activity should be based on historical emissions, taking into account national circumstances.” Thus, another urgent issue for developing countries is to establish a national monitoring system to determine an historical emission reference scenario and future emission levels.

Assessment of forest carbon stock and stock changes largely depends on tree allometric equation, growth models, forest inventory data, land cover and assessment of forest land and area changes and ancillary data. Recent compilations of tree allometric equations often reveal contrasting models for the same species and site. Rather than choosing a model with the risk of not selecting the best available one, Bayesian model averaging (BMA) offers a way to combine different allometric equations into a single predictive model. On the other hand, harmonization of existing forest inventory data and land cover information requires development of adequate models, conversion factors and adequate classification systems.

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD Programme) is a collaboration between FAO, UNDP and UNEP. It builds on the convening power of its participating UN agencies, their diverse expertise and vast networks, and “delivers as One UN”. Within the partnership, FAO supports countries on technical issues related to forestry and the development of cost-effective and reliable Measurement, Reporting and Verification (MRV) processes for emission reductions which may be helpful for the implementation of REDD+ after the negotiations reach a final decision on the issue. At the international level, the partnership fosters improved guidance on MRV approaches, including consensus on principles and guidelines for MRV and training programmes.

The UN-REDD National Programmes builds capacity for countries to prepare the greenhouse gas inventory for the LULUCF sector, acquire activity data and build their own tree allometric equations. Several countries are working on the compilation of national databases, as well as conducting field measurements in a number of representative

forest types in different countries. In support of these initiatives, training events are organized on data analysis, model development and statistical analysis for biomass and carbon stock assessment in several countries.

The objective of this consultancy is to support the UN-REDD countries in developing adequate statistical methods to improve accuracy of results obtained from their forest monitoring system.

Under the overall supervision of UN-REDD officers Matieu Henry and Inge Jonckheere, the incumbent will:

- Undertake an overview of existing statistical methods used for analysing tree allometric equations, forest inventory and land use change information in partner and pilot countries of the UN-REDD programme;
- Develop adequate training materials to support different countries' circumstances and different levels;
- Undertake trainings in-country for university students and for forest technicians in governmental institutions;
- Support and improve statistical approach for accuracy assessment of forest carbon stock and stock change assessment;
- Support approaches to use Bayesian model averaging to improve tree biomass estimates;
- Provide recommendations on improving the approach to assess volume, biomass and carbon stock assessment;
- Support the analysis of Height/diameter relationships in all forest types;
- Support mapping accuracy assessment;
- Perform any other tasks required.

#### KEY PERFORMANCE INDICATORS

Expected Outputs:

- Recommendations on adequate approach to improve the accuracy of statistical analysis used to improve forest carbon and carbons stock change estimates;
- Training materials on forestry statistics depending on different country context and needs (land use change, forest inventory analysis and tree allometric equation);
- Note on the use of the Bayesian model averaging methods considering country context and existing database on tree allometric equations;
- Improved analysis of the tree diameter/height relationships;
- Improved R script to support the analysis of forest inventory data;
- List of participants for the in-country trainings;
- Final report including statistical methodology, results and recommendations.

Minimum requirements:

Candidates should meet the following:

- University degree (master or PhD) in statistics;
- Three years of relevant experience in statistics;
- Working knowledge of English.

Selection criteria

Candidates will be assessed against the following:

- Experience in developing countries;
- Experience in the field of forestry, natural resources;
- Quality of both oral and written communication skills;
- Working knowledge of Spanish or French;
- Demonstrated ability to work as an effective team member;
- Demonstrated Initiative and ability to deliver results within deadlines.

#### HOW TO APPLY

Interested applicants are required to create an online Personal Profile form (PPF) in iRecruitment. To create the PPF, please follow the instructions available at:

[http://www.fao.org/fileadmin/user\\_upload/Employment/docs/Applying\\_to\\_Consultancy\\_Vacancies\\_at\\_FAO.pdf](http://www.fao.org/fileadmin/user_upload/Employment/docs/Applying_to_Consultancy_Vacancies_at_FAO.pdf)

The PPF along with a cover letter quoting the Position Title and Vacancy Announcement

**FOM/UNREDD/Statistician/2014/1** should be sent to: [Consultant-FOM-UNREDD-Statistician@fao.org](mailto:Consultant-FOM-UNREDD-Statistician@fao.org)

**Deadline for applications: 21 February 2014.**

Applications received after the closing date will not be given consideration. Only short-listed candidates will be contacted.