Exchange and training Workshop on satellite forest monitoring systems for REDD+

Panama City, Panama.

02, 03 and 04 of September 2014

1. Background

This workshop is jointly organized by FAO and UN-REDD Programme (www.un-redd.org/) and the Strengthening Project for REDD + Preparation and South-South Cooperation Mexico (www.mrv.mx/ index.php /en /). It is part of a series following the first exchange workshop on National Forest Monitoring System[1] for REDD + in Latin America, organized by UN-REDD and the Ministry of Environment of Ecuador in April 2013. This workshop is part of a package building on MRV for the Mesoamerican region, which was constructed collectively from countries as early actions to a proposed plan of work on forest monitoring for long-term within the Mesoamerican Environmental Sustainability Strategy (EMSA). The package consists of six workshops, which respond to the needs of cooperation MRV identified as priorities by the countries of the region during the workshop *Opportunities for international cooperation to strengthen forest monitoring in Mesoamerica and REDD +*, held in July 2013 in Mexico City.

According to the UNFCCC decisions, a National Forest Monitoring System (SNMB) for REDD + can serve simultaneous "monitoring" and "Measurement, Reporting and Verification (MRV)" functions. MRV function refers to the estimation and reporting of emissions and removals of carbon due to change in land use in the forestry sector. Remote sensing and to some extent the National Forest Inventories (NFI) can be used as an approach to both data collection activity related to forest land (data on land use change and forest area) for MRV as well as to meet the needs more general monitoring.

Satellite data provide spatially explicit information and frequent temporal coverage, and includes the ability to cover large and possibly remote areas that are difficult or costly to access on the ground. Remote sensing based techniques are adapted to conform to the principles of consistency, integrity, comparison, accuracy and transparency, as recommended by the IPCC (IPCC, 2003). Satellite forest monitoring systems can be a useful and cost effective tool for measuring changes in forest areas and other land uses while meeting the needs of reporting to the UNFCCC. Most importantly, satellite data can

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[1] http://www.un-redd.org/Newsletter38/EcuadorNFMS/tabid/106344/Default.aspx

be used to assess historical rates of change in forest areas in a consistent way and are one of the main ingredients in the construction of the reference levels of forest carbon emissions. A transparent and consistent methodological approach over time can ensure that the estimates reported are verifiable and comparable. The accuracy of measurements of change can and should be evaluated and reported.

Objective and approximation: Share lessons learned and discuss methods to improve the generation and use of remote sensing data to generate activity data, including REDD + and reports to the UNFCCC.

The workshop hopes to encourage sharing and South-South cooperation among countries of the region, making the center the presentations and discussions of national experience and approach adopted methodological approaches.

2. Central Themes

During the workshop, national challenges and solutions developed by each country around the following topics will be discussed - captured through a needs assessment exercise conducted with participants during the workshop organization, and reported here in order of priority indicated by the participants:

1. Measurement of the historical and current changes: in the wooded areas, and other land uses. Tools and supplies and comparability between resolutions, classes, etc. ..
2. Mapping of land use high resolution and comparability with other maps (other resolutions, classes, etc).
3. Evaluation of the accuracy of the maps of land use and / or change maps and area estimates accurately / errors
4. Measuring forest degradation
5. Surveillance and early warning of deforestation
6. Measurement of carbon stock and emissions / removals from forest carbon via satellite images (data link with INF and GHG Inventory)

3. Participating participants and invited guests

18 countries have been invited to participate in the workshop, with all UN-REDD countries invited and others where funds available: Argentina, Chile, Colombia, Costa Rica, Bolivia, Ecuador, Guatemala, Guyana, Honduras, Mexico, Panama, Paraguay, Peru, Belize, El Salvador, Nicaragua, Dominican Republic, Suriname.

Two participants from each country to choose between the following profiles:

- Person from the technical unit responsible for the maps of forest use, forest monitoring unit.
- Person from the technical unit responsible for the maps of land use, another unit (Agriculture, Statistics, Protected Areas, Plantations, Forest Conservation)

4. Agenda

Day 1: 2 of September 2014

Time	Activity	Presenter
8:00 – 8:45	Registration to the workshop	FAO/MRV South-South
9:00 – 9:30	Welcoming remarks	Emilio Sempris, Deputy Administrator of the National Environmental Authority (ANAM) Ignacio Rivera, FAO Representative in Panama and Subregional Coordinator for Mesoamerica
9:30-10:00	**Context** 1. Regional and international cooperation in the field of Monitoring, Measurement, Reporting and Verification (MRV & M) 2. The National Monitoring System of Forest: M & MRV functions	1. Adam Gerrand, FAO UN-REDD 2. Serena Fortuna, Regional Adviser in FAO UN-REDD

10:00-10:15	RECESS	
10:15 – 11:45	*Session 1a: Maps of land use* a) *Mapping of land use high resolution and comparability with other maps (other resolutions, classes, etc).*	Representatives of countries: • Panama • Guatemala • Mexico • Costa Rica • Argentina
11:45 – 13:00	Panel discussion	
13:00 – 14:00	LUNCH	
14:00-15:00	**Session 1b: Deforestation** b) Measurement of the historical and current changes: in the wooded areas, and other land uses. Tools and supplies and comparability between resolutions, classes, etc.	Representatives of countries: • Dominican Republic • Costa Rica • Peru
15:00-15:15	RECESS	
15:15-16:00	**Continuation SESSION 1b: Deforestation**	• Chile • Bolivia
16:00-17:30	Panel Discussion	
17:30	Closing of the Day 1	Facilitator

Time	Activity	Responsible
18:30-20:30	Welcome cocktail	Hotel (pool área)

Day 2: 03 of September 2014

Time	Activity	Responsible
9:00 – 11:00	**Session 2: Degradation** Measuring forest degradation • Approach loss of canopy cover • Focus ecosystem integrity index • Comparison between biomass maps.	Representatives of countries: • México • Chile • Guyana • FAO (Erik Lindquist)
11:00 – 11:15	RECESS	
11:15 – 13:00	**Panel Discussion** Examples of methods by loss of coverage, experience FAO	All presenters and moderator
13:00 – 14:00	LUNCH	

Time	Activity	Responsible
14:00-15:00	**Session 3: Early Warning System**	Representatives of countries: • Honduras • Peru • FAO
15:00-15:15	RECESS	
15:15-17:00	Discussion panel	All presenters and moderator
17:00	Closing of Day 2	Organizers

Day 3: 04 of September 2014

Time	Activity	Responsible
09:00 – 10:00	**Session 4: Integration with field data** *Measuring carbon stock and emissions / removals from forest carbon via satellite images (data link with NFI and GHG Inventory)* Mapping biomass What is the utility of the integration of field data? Inputs that have been used?	Representatives for countries: • Ecuador • Mexico • Belice

	What features should have these supplies? Temporality, scale, size and type of sample etc.	
10:00 – 11:30	Discussion panel	All presenters and moderator
11:30-11:45	RECESS	
11:45-12:45	**Session 5: Evaluation of the accuracy of the maps of land use and / or change maps and area estimates with accuracy / bugs** Inputs that are used to make the evaluation of the maps? Historical and change? That Have Been Methodological approach used? What % reliability obtained? Discuss what is the % reliability that would be acceptable?	Representatives for countries: • Paraguay • Ecuador • Panama
12:45 – 13:00	Explanation of the workshop evaluation and first inputs	Participants and organizers
13:00 – 14:00	LUNCH	

14:00 – 14:45	**Session 5: Evaluation of the accuracy of the maps of land use and / or change maps and area estimates with accuracy / bugs** Inputs that are used to make the evaluation of the maps? Historical and change? That Have Been Methodological approach used? What % reliability obtained? Discuss what is the % reliability that would be acceptable?	• Honduras • Methodology "good practice" for accuracy assessment' (FAO, Erik Lindquist)
14:45-15:30	Discussion panel	All presenters and moderator
15:30-15:45	Workshop evaluation (results)	Participants and organizers
15:45-16:00	Conclusions	Organizers
16:00-16:30	Closing of Day 3	ANAM