

MRV for REDD+ Basic Concepts

FOREST MONITORING

The most commonly debated subject under forest monitoring is **Measurement, Reporting and Verification (MRV)** of forest carbon. That is, how can we reliably account for the amount of forest carbon, including changes over time?

This is the core monitoring challenge in REDD+, well-defined in GHG reporting standards and the Inter-governmental Panel on Climate Change (IPCC) guidelines, and addressing the direct objective of REDD+. The main focus is on the national level reporting to the UNFCCC, and the subsequent, anticipated accounting of valuable carbon credits for the country as a whole.



Photos: tbeveries
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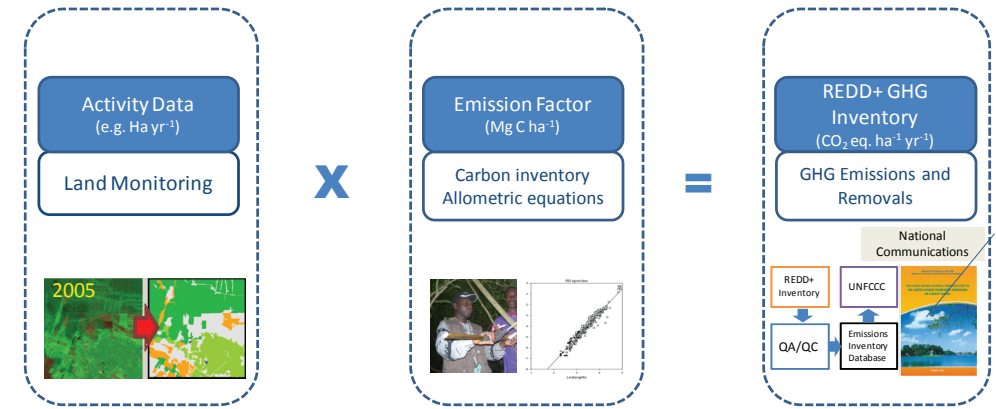
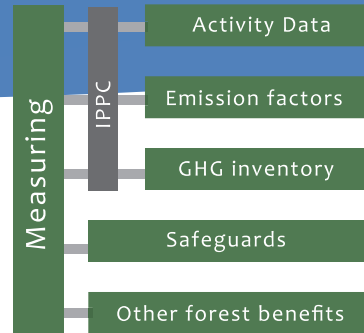
UN-REDD PROGRAMME ZAMBIA IS FACILITATED BY FAO, UNDP AND UNEP

<http://www.un-redd.org>

ABC of MRV

MEASUREMENT

Refers to information on the area extent to which a human activity takes place in forests (activity data – AD) with coefficients that quantify the emissions or removals per unit activity (emission factors – EF). For REDD+ this translates into measurements of forest area and area change (AD) and forest carbon stock and carbon stock changes (EF). Together, this information provides the basis for compiling a greenhouse gases (GHGs) inventory. Countries are also required to measure safeguards' indicators and other forest benefits.



Assessing the land area covered by the different forest and land use classes, will be done with satellite data.

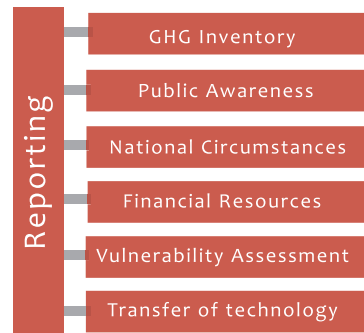
Measurements at different points in time are used to estimate forest area changes.

Assessing biomass, carbon stocks (changes) and emission factors. The data will be derived from national forest inventory (NFI) data, collected through the ILUA projects, the nation-wide forest inventories for Zambia, actually ongoing a second phase through funding from FAO-Finland.

It is based on the data collected from the national forest inventory combined with the national satellite monitoring system and can be done using the Table templates developed through the UNFCCC processes.

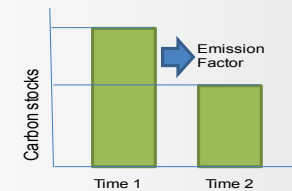
REPORTING

Implies the compilation and availability of national data and statistics for information in the format of a GHG inventory. Reporting requirements to the UNFCCC (National Communications) may cover issues other than just those subject to measurement. The core elements of the national communications are information on emissions and removals of GHGs and details of the activities a country has undertaken to fulfill its commitments under UNFCCC.



The data are stored and harmonized into a REDD+ database. The data on forest land area are used to develop matrices representing the changes between land uses and within the forest land area.

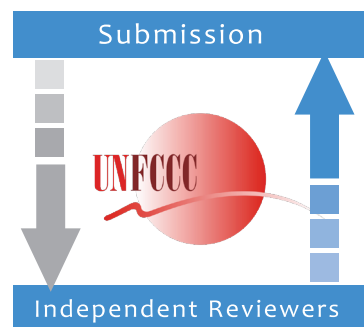
The data on carbon stocks and carbon stock changes are used to derive emission factors (EF).



The data on land use changes and changes in forest uses are integrated with their respective emission factors to establish the GHG inventory. The data are used to report to the UNFCCC.

VERIFICATION

Refers to the process of independently checking the accuracy and reliability of reported information or the procedures used to generate information. This verification is done by a totally independent and external review. The UNFCCC Secretariat through its experts will verify the data reported. The verification of countries' actions depends on 3 factors: 1) the degree to which reported data is capable of being verified; 2) the actors conducting the verification; and 3) the way in which verification is performed.



The verification process concerns all the variables that were reported under REDD+. The verification can be done by several institutions including civil society. All the data, including the satellite and national forest inventory data will have to be made available in order to allow the verification of the GHG inventory. The different means of verification are: through interviews with key government officials and national NGOs, reports, media reports, training materials, etc.