**PROJECT ACTIVITIES**

**MAR study in China**

The Academy of Forest Inventory and Planning (AFIP) of the State Forestry Administration (SFA) conducted a diagnostic study on forest MAR to review the current status of MAR development and consider next steps for its improvement in China under the lead of the Department of Forest Resources Management of the SFA.

The SFA with provincial forestry agencies has developed a national forestry monitoring system which is comprised of: (i) a national forest inventory (NFI) and inventories for forest management at a management unit level; (ii) national desertification and sandification monitoring; (iii) wetlands resources monitoring; (iv) wildlife investigation; (v) long-term forest ecosystem research; (vi) forest fire monitoring; (vii) investigation of forest insects and pests; and (viii) forest investigation for specific objectives of forest resource management. These schemes provide data for national reporting to FRA, ITTO C&I, CBD, UNFF, UNCCD, UNFCCC, CITES, etc., applying their specific methods.

A task force was organized with reporting agencies and related departments to improve a mechanism for coordinated gathering and checking of forest-related information. Special investigation was carried out on current systems of forest monitoring and statistics to ensure comprehensive national reporting, while satisfying international information needs.

Nevertheless, China still faces several challenges to international reporting. Firstly, data in each national report are not yet consistent on forest resource conditions, particularly forest area, due to different international reporting methodologies. Secondly, each national report is overloaded with multi-faceted aspects of forest management. Thirdly, preparation of national reports on forests requires a lot of coordination work among agencies, raising responsible officers’ workload. Fourthly, national and international forest-related criteria and indicators (C&I) are not consistent. Fifthly, continued expansion of reporting items and indicators in international reporting processes on forests increases burden on government agencies. Lastly, forest information is not yet consistent enough under the current national forest monitoring system on account of different forest definitions, indicator sets and monitoring methods.

The study provided recommendations for harmonization of national reporting to international processes, such as: (i) accelerated development of the globally recognized C&I framework for sustainable forest management; (ii) strengthening of harmonization of international reporting on forests with common definitions and methods; (iii) simplification of reporting formats and indicators for international reporting; and (iv) continued building of national capacities for international reporting with increased technical assistance.
MAR study in Vietnam

A study was carried out on current MAR situations and mechanisms for its harmonization in Vietnam to propose improved methods and regulations for forest data collection. In 2006, the Ministry of Agriculture and Rural Development (MARD) issued a decision on a statistical indicator system in which 18 indicators are used as a foundation for monitoring, evaluation and reporting (MER) in forestry (e.g. areas of existing or destroyed forests and forest plantations, areas of land for natural regeneration, protected forest areas, volume and value of timber, etc.). The Forestry Sector Support Program and Partnership (FSSP) has developed 72 indicators in total, covering biophysical, environmental, socio-economic, and financial aspects and a database for the Forest Sector Monitoring and Information System (FOMIS), out of which 55 are currently feasible for data collection. However, considerable costs and time would be required to collect data for these indicators. Data for forest MER are collected mainly by the Forestry Department, the Forest Protection Department, the Forest Inventory and Planning Institute (FIPI), and local inventory and planning sub-institutes. Forest-related data are distributed among ministries for their use.

The FIPI has conducted a national forest resource inventory with its evaluation and modification every 5 years since 1991 to provide data on forest status. Local forest inventory and planning units of forest-rich provinces help local government agencies and forest enterprises in monitoring and planning of forest management.

The study identified obstacles to forest MER in Vietnam. Firstly, agreements have not yet been made among various stakeholders on concepts, definitions, indicators, and methods for forest MER. Secondly, no agreement has been reached between the MARD and the Ministry of Natural Resources and Environment (MONRE) on classification of forests and forest lands, either. Thirdly, it is very difficult to search for required forest information among many agencies which hold related data separately without coordination. Fourthly, forest inventory data are not accurate or objective, affected by directions of specialized management agencies and local managers for their benefits as well as shortage of time or budget. Data were often collected using old methods with low reliability. Fifthly, it is difficult to buy high-resolution satellite imagery due to budget limitations. Lastly, there are differences in measurement of some indicators on account of divergent forest definitions and classifications between the country and international organizations.

The study proposed improvement of a national forest MER system which is more consistent with the FAO system through development of a principal indicator set, linking a national indicator set with FAO’s indicators under FRA2010. The indicators should focus on forest status, forest management owners, forestry activities, institutional aspects (e.g. policy, labour, training, etc.), and forest investments. The proposed indicator set will have to be tested to verify its viability. The study also recommended restructuring of the MER system using a modular model with appropriate database software in which related ministries and other stakeholders will supplement and update monitoring and evaluation methods to improve consistency of forest information. Then the study advocated modification of regulations for effective collection of data in the national MER system. New regulations should aim to improve forest indicators, reinforce data collection and analysis procedures including inventory surveys at central and local levels, and build institutional capacities for data collection and analysis through mutual collaboration.
MAR Study in Pacific

The Secretariat of the Pacific Community (SPC) conducted a MAR study in nine Pacific countries to understand their needs and capacities for data collection by examining indicators of FRA 2005. A questionnaire was distributed to national contact points to assess types of available information, required information and their gaps. Based on results of questionnaire analysis and visits to several countries, recommendations were prepared to fill information gaps and explore further steps towards development of a MAR network for Pacific countries.

The study showed that all countries needed a higher quality of information. However, gaps between required and available information varied in countries and criteria. Countries which recently conducted national forest inventories such as Fiji and Samoa provided better information, satisfying their needs well. Some other countries seriously lack information and require more support. Countries can collect data for basic forestry variables relatively well, including forest extent, ownership, and growing stock. Conversely, few of them can complete data easily for specific variables such as carbon stock, non-wood forest products, and other wooded land.

Some countries could assist other countries with their good experience and expertise in basic forestry information. However, all of the countries would require external support to collect data for advanced variables. Considering limited resources of the countries and the fact that all criteria would not have equal significance for all countries, a list of priority indicators was suggested. Indicators of Priorities I and II in the list could be used as a "common denominator" for essential forest-related information in a regional MAR system (e.g. extent, characteristics, and functions of forests, forest biodiversity, growing stock, wood removal from forests, biomass/carbon stock, etc.). Indicators of Priority III are an optional set to meet countries’ specific needs (e.g., value of wood/non-wood products, employment, etc.).

Development of a regional MAR network should involve the following processes: (i) verify the most significant results of the study by country visit; (ii) set up a MAR coordination unit; (iii) agree on a concrete joint MAR design for Pacific islands; (iv) identify countries’ specific capacity building needs; (v) establish a regional pool of experts as a task force; and (vi) provide sophisticated equipment and expertise through a qualified partner institution.

TOPICS

Initiatives for Climate Change Monitoring

REDD-Workshop on MRV
FAO, UNDP, UNEP, and the Meridian Institute convened a workshop on monitoring, reporting and verification (MRV) under the UN-REDD Programme in Washington, 16 - 17 September 2008. Its objectives were to develop a road map and initiate a process to orient various initiatives to a coordinated framework of guidelines for the MRV to support agreed international REDD approaches. The workshop proceedings is available at: http://www.fao.org/climatechange/media/16432/0/0/

Terrestrial Carbon Observation (TCO)
The Terrestrial Carbon Observation (TCO) under the Global Terrestrial Observation System (GTOS)/FAO aims to identify potential end users and their needs, organize and coordinate reliable information on carbon, and link the scientific community with potential users. The TCO provides information on spatial and temporal distribution of terrestrial carbon sources and sinks, collecting data at various levels from local to global scales. Visit http://www.fao.org/gtos/TCO.html for more details.

Terrestrial Essential Climate Variables (ECVs)
The GTOS/FAO has developed a framework and guidelines for terrestrial climate-related observations by assessing the status of developing standards for essential climate variables (ECVs) in the terrestrial domain. The GTOS prepared reports on the status for 13 ECVs (river discharge, water use, ground water, lake level, snow cover, land cover, fraction of absorbed photo-synthetically active radiation, leaf area index, biomass, fire disturbance, etc.). Visit http://www.fao.org/gtos/topcECV.html for more details.