Chapter 10
Conclusions

FAO has been coordinating global forest resources assessments since 1946. FRA 2010 is the latest and the most comprehensive assessment to date. Information was collected and analysed from 233 countries and areas for four points in time: 1990, 2000, 2005 and 2010. Some 90 variables were included related to the extent, condition, uses and values of forests.

More than 900 people were involved in the FRA 2010 process, including 178 officially nominated national correspondents, their colleagues, an Advisory Group, international experts, FAO and UNECE staff, consultants and volunteers from around the world. The outcome of this process is harmonized definitions and classifications, more streamlined reporting on forests, higher quality data, a transparent reporting process and enhanced national capacity in data analysis and reporting.

This section offers general conclusions on the scope, process and results of FRA 2010. It does not repeat detailed findings from previous chapters.

SCOPE AND COVERAGE OF FRA 2010

The scope and coverage of global forest resources assessments have evolved over the past 60 years, from a timber supply orientation through a strong focus on environmental issues to a broader approach in FRA 2000 and FRA 2005. FRA 2010 continued this trend by explicitly addressing all seven thematic elements of sustainable forest management.

A critical first step in the FRA 2010 process was to select and define the global reporting variables. Following a consultative process, including a global consultation with national correspondents to FRA in Finland in June 2006 (FAO, 2006a), 17 reporting tables with about 90 variables were defined (FAO, 2007b). The tables and variables were generalized to facilitate reporting from all regions, which by necessity limits the degree of detail and emphasizes the need to consult country-specific classifications and references for more detailed analyses. At the same time, the reporting tables represented a broader coverage of forest resource parameters than in previous global assessments, for example by including information on afforestation and natural expansion of forests, and on the legal, policy and institutional framework governing the management and use of the world's forests.

Although the introduction of new tables increases the reporting burden and may result in divergent interpretations and an incomplete data set in the first round, their addition provided new insights on rates of deforestation and the significant efforts over the last ten years in many developing countries to put in place an enabling framework for sustainable forest management.

As in FRA 2005, data on deforestation rates were not directly compiled for FRA 2010 because few countries have this information. In FRA 2005 the global deforestation rate was estimated from net changes in forest area. The additional information on afforestation and natural expansion of forest for the past 20 years collected for FRA 2010 has now also made it possible to take into account deforestation within those countries that have had an overall net gain in forest area. As a result, the estimate of the global rate of deforestation and loss from natural causes for 1990–2000 of 13 million hectares per year in FRA 2005 was revised to the higher, but more accurate figure of close to 16 million hectares per year in FRA 2010. While the deforestation rate for the tropical countries for the 1990s did not change significantly as a result of

this additional information, the inclusion of countries in the temperate and boreal zone made a significant difference.

The tables on the legal, policy and institutional framework confirm that significant progress has been made in developing forest policies and laws. Some 76 countries have issued or updated their forest policy statements and 69 countries – primarily in Europe and Africa – reported that their current forest law was enacted or amended since 2005.

One important consideration in defining the tables was the availability of information at the country level. For example, while more detailed information related to protective functions of forest resources was desirable, it was not considered meaningful to request information if very few countries could respond. On the other hand, certain parameters, including NWFP values and forest fire occurrence, were considered important enough to include even if the response frequency would be low. The tables thus represent a compromise between information availability and the objective of reporting on each of the thematic elements of sustainable forest management.

The experience of linking with related reporting processes and attempting to harmonize overlapping variables was generally good. For example, further streamlining of reporting to FAO, ITTO and the Forest Europe was achieved. New variables were included in FRA 2010 to enable the assessment of progress towards the 2010 Biodiversity Target of the CBD and towards the four Global Objectives on Forests of the Non-Legally Binding Instrument on all Types of Forests adopted by the United Nations General Assembly at its 62nd Session (UNGA, 2008). Methods for reporting on variables related to forest biomass and carbon were harmonized with the latest specifications and guidelines of the IPCC (IPCC, 2006). The proportion of land area under forests, reported to FAO as part of FRA 2010, is also used as one of the indicators of progress in reaching the Millennium Development Goals. Efforts have continued to establish and maintain globally consistent definitions in the FRA process, in order to ensure consistency over time and reduce the overall reporting burden on countries.

Data availability and quality

Overall, the response rate was very good, with nine tables having information for more than 80 percent of the global forest area and all tables having more than 53 percent coverage (Figure 10.1).

However, the conclusion regarding poor information availability in earlier FRA reports is still valid: many developing countries have difficulty reporting because their national monitoring systems are inadequate both for international reporting and domestic needs. Data quality also remains an issue.

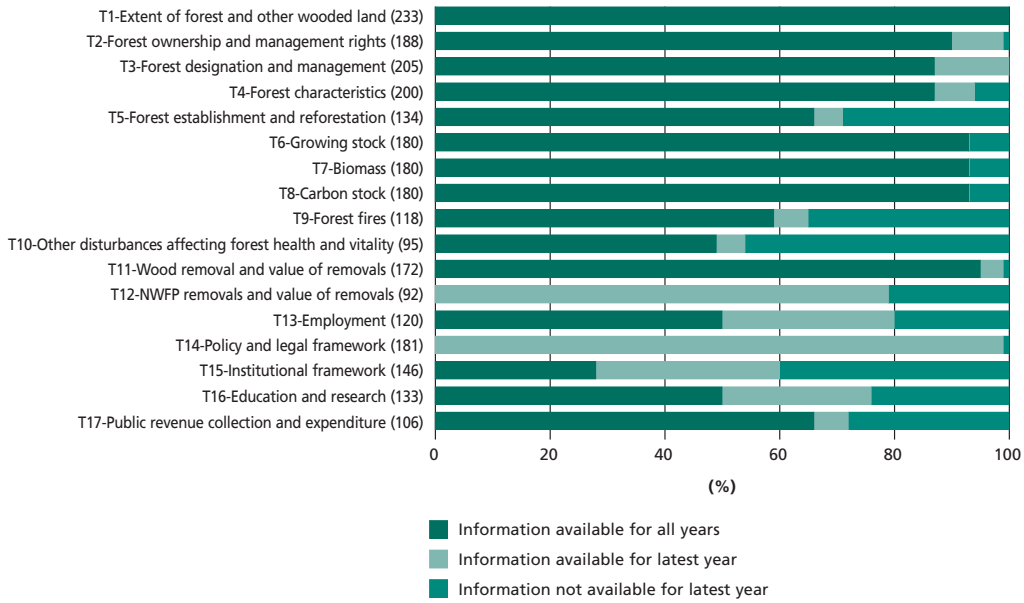
To address the issue of data availability and quality, FAO has developed a programme to support national forest assessments (see Box 10.1), and results from efforts over the last ten years are visible in a number of country reports to FRA 2010. Nevertheless, information gaps remain wide in many countries, including major forest countries.

Complementary information

A global remote sensing survey is currently being carried out for FRA 2010 to obtain more detailed and comparable information on forest change dynamics (deforestation, afforestation and natural expansion of forests) between 1990 and 2005 at global, biome and regional levels. The results are expected at the end of 2011 (see Box 2.3).

A series of special studies is also underway to provide information on specific topics where there are no agreed definitions or assessment methodologies. These studies aim to provide complementary information as well as inputs to discussions on how these aspects can be incorporated into future assessments. They include studies on forest degradation, trees outside forests, forest genetic resources, and on forests, livelihoods and poverty. Data availability is a key concern for SIDS and, even when information is available, the figures reported are often 'not significant', given the units

FIGURE 10.1
Information availability for the 17 reporting tables in FRA 2010, in relation to global forest area



Notes: No trend data were requested for NWFP removals and the existence of a policy and legal framework.
Numbers in () are number of countries that provided data for the latest reporting year.

of measurements necessary to include information from the large forested countries. A special study aims to address both of these issues (see Box 10.2).

THE FRA 2010 PROCESS

The active, direct involvement of countries was a defining characteristic of FRA 2005. FRA 2010 continued and expanded this process by strengthening the collaboration with other forest-related organizations and reporting processes.

FAO, with the support of donors, invested considerable resources in establishing a network of national correspondents and organizing global and regional meetings to support the reporting process and build capacity. Countries readily provided the expertise and resources needed to participate and the network currently numbers 178 officially nominated national correspondents and a large number of alternates, representatives of forest-related organizations and individual resource assessment specialists. While demanding of resources, the network of national correspondents was a critical success factor for FRA 2010.

As in FRA 2005, the information from each country is documented in a national report in either English, French or Spanish, following a standard outline. To help those countries from which limited new information was expected, FAO pre-filled the FRA 2010 reports with the information provided for FRA 2005. This significantly reduced the workload involved in the documentation of information sources and original data. However, where new information was available, substantial efforts were needed by the national correspondents to document each step in the transformation of national data to the FRA 2010 reporting tables. These efforts involved extensive knowledge-sharing through discussions at regional workshops, and between countries and the regional focal points at FAO headquarters.

BOX 10.1

FAO's support to national forest monitoring and assessment

The National Forest Monitoring and Assessment (NFMA) programme at FAO is developing cost-effective methodologies that include both remote sensing techniques and systematic field data collections to assess and monitor the multiple benefits from forests (and other natural resources) at the country level, in order to support national policy processes.

Over the last decade, the NFMA programme has collaborated with more than 20 countries around the world to strengthen their capacities to establish and manage systems for national forest monitoring and assessment and to carry out national forest inventories. This forestry information supports national level planning and policy formulation in a broad context, which includes, for example, forest management, law enforcement, monitoring and evaluation, poverty monitoring, land use planning and administration, investment opportunities, research, training, advice and outreach, and determination of forests' contributions to GDP. While forests and forestry (including wood production and commercial values, as well as other benefits and beneficiaries of forest resources) are at the centre of the NFMA, strong links are established with related sectors, such as agriculture, water resources, rangelands and energy.

The programme helps countries to produce national level data on a vast number of variables. These include variables needed to calculate growing stock, biomass and carbon (stem diameter, tree height, deadwood biomass, soil carbon and litter); vegetation type (including species composition and naturalness); extent of land use and land cover, biodiversity status, land use history, human disturbances, management practices and conservation status. The inventory covers measurements of trees outside forests, making it possible to estimate above-ground biomass outside forests and to value the multiple functions of trees. Data are also collected on factors that may help in determining the best mechanisms for mitigating deforestation and forest degradation, such as ownership, access to input markets, consumption levels of forest products, potential revenues accrued from forest resources and crop production systems.

NFMA-generated data respond to the needs of both national and international users. National users comprise policy-makers from ministries of agriculture, land, forestry, finance and statistics, as well as universities, research institutes and civil society organizations. International users include international reporting processes, conventions and others, such as the Global Forest Resources Assessment, the CBD, the Millennium Development Goals, ITTO, UNFCCC, as well as universities and research organizations around the world.

The NFMA programme relies on a wide network of experts and specialists who provide technical and strategic guidance, and actively promotes south–south collaboration and knowledge sharing. While the programme provides technical assistance to countries, the actual implementation is carried out by national institutions and national staff to enable strong country ownership of the process as well as replicability and institutional strengthening for long-term forestry monitoring. The programme aims to harmonize methods in order to improve technical collaboration between countries and to facilitate reporting to international processes.

FAO works actively with countries and forest-related organizations to identify and address information gaps for continuous improvement of knowledge about forests and forestry. The FRA process enhances country reporting capacity through training and feedback on national reports. In response to specific country requests, FAO also provides technical support to implement and improve national forest monitoring and assessment systems, for new and better information (see Box 10.1).

BOX 10.2

Special study on Small Island Developing States

The Global Forest Resources Assessment 2010 shows that the data reported by many SIDS are inadequate to determine trends for the majority of the variables. A lack of resources and limited technical capacity for forest resource monitoring in many SIDS means that they have some of the poorest forest data in the world, suffering from gaps, inconsistent quality and old age.

In addition, many SIDS have expressed concern that the data they report for the Global Forest Resources Assessments are not visible, because of the small size of these countries relative to the size of the reporting units. Recommendations have been made in several meetings for a special study on SIDS.

The combined forest cover of SIDS is considered insignificant in global terms (representing less than 1 percent of the forest area of the world). However, forests and trees play a crucial role in the social and economic development of SIDS. In addition, they provide environmental services (e.g. soil and water protection, tourism and carbon sequestration) and many of the island habitats have global significance in terms of conservation of biological diversity, particularly of endemic species.

It is clear from FAO's work globally that better information can lead to better informed decisions. Working in partnership with the officially nominated FRA National Correspondents and the Secretariat of the Pacific Community, FAO will conduct a special study of forests and forest resources in SIDS. This study will lead to benefits through improved forest resource information feeding into broader social, economic and environmental policies and strategies in SIDS. It aims to draw attention to forests, forest management and specific forest-related issues in SIDS and (funding permitting) will:

- increase awareness of the role of forests and trees in SIDS;
- examine the current status, trends and management of forest resources;
- evaluate constraints and opportunities for sustainable forest management;
- examine drivers of deforestation;
- enhance capacity building and regional networks;
- develop base land cover maps;
- develop ways to map forest cover change and information on land use dynamics.

The special study follows recommendations made by the officially nominated National Correspondents to the FRA reporting process. The project will be spearheaded by FAO and carried out in partnership with countries and existing forest-related organizations to ensure a coordinated approach to capacity building.

While there are common issues for SIDS, there are also differences related to the size of each country. These are due to variations in population size and density, remoteness, distance to markets and access to resources. The study is expected to highlight common issues among SIDS and identify differences (and similarities) between specific sub-groups (e.g. large, medium and small countries).

PROGRESS TOWARDS SUSTAINABLE FOREST MANAGEMENT

Using the thematic elements of sustainable forest management as a framework for FRA 2010 has helped further increase the utility of the global forest resources assessments. In addition to providing information on traditional variables such forest area change and deforestation (the first thematic element of sustainable forest management), FRA 2010 also includes detailed information on key aspects related to forest biological diversity, forest health, the productive, protective and socio-economic functions of forests, and the legal, policy and institutional framework guiding their management and use. The result is a much richer review of key trends in forest resources, their functions and benefits.

It is clear from the findings of FRA 2010 that there is mixed progress towards sustainable forest management. While many trends remain alarming, there are also many positive developments over the last 20 years.

When interpreting the findings from FRA 2010, the scale is crucial. At the global level, the world's forest resources appear to be fairly stable (Chapter 9, Table 9.5): changes in most variables are relatively small and the large changes indicate more positive than negative trends. However, this picture changes dramatically when the information is broken down by region and subregion (Tables 9.6–9.12 in the same chapter), revealing considerable differences, with alarming trends in several tropical subregions. The country reports suggest that the variations are even greater at national and subnational scales, but it is not the purpose of this report to draw conclusions at these levels.

All regions and subregions display a mixture of positive and negative trends, which makes it difficult to say anything definite about the level of progress towards sustainable forest management. The FRA process and this report do not attempt to weight the variables, which would imply that one trend is more important than another, nor is an assessment of progress towards sustainable forest management at the country level included. This would need to be the subject of further analyses by, for example, national forest programmes or other policy or planning processes.

The global forest resources assessment process delivers observed trends of key parameters related to forestry and the forest ecosystem. The FRA process does not include scenario development. By contrast, the FAO-led *Forestry Outlook Studies* (FAO, 2009d), the *Millennium Ecosystem Assessment* (MEA, 2005) and the *Global Environmental Outlook 4* (UNEP, 2007) are examples of processes that make good use of the knowledge generated by the FRA process to predict future scenarios. The FRA report does, however, illustrate recent positive and negative trends at global, regional and subregional levels, which hopefully will stimulate a healthy debate and further analysis of the overall performance of the forestry sector.

Alarming trends

The key findings of FRA 2010 highlight a number of observations that are alarming in the light of aspirations for sustainable forest management and for progress towards the 2010 Biodiversity Target and the four Global Objectives on Forests:

- Deforestation and natural loss of forest continues at an alarming rate in several regions and countries.
- The area of primary forest is decreasing by about 4 million hectares each year. This is partly a result of deforestation and partly due to selective logging and other human activities that leave visible signs of human impact and thus transform the forest into 'other naturally regenerated forest' in the FRA 2010 classification system.
- In some regions, the area of forest adversely affected by drought and by insect pests is increasing.
- Employment in forest establishment, management and use declined by about 10 percent globally between 1990 and 2005.
- The value of wood removals fell in the 1990s, rose between 2000 and 2005, but has since fallen sharply again.

Although the above trends are not universally perceived as negative (a decrease in the level of employment could be due to increased labour productivity and may result in decreased production costs), substantial efforts are needed to address a number of alarming trends and advance progress towards sustainable forest management in all countries and regions. National forest programmes offer a potential vehicle for the discussion of issues and for reaching agreements on priority actions at the national and subnational levels.

Positive news

However, there is also some very positive news:

- The rate of deforestation is showing signs of slowing down at the global level and significant progress has been made in some countries to reduce the rate of forest loss in the last 5–10 years.
- The area of forest designated for conservation of biological diversity has increased by more than 95 million hectares since 1990. These forests now account for more than 460 million hectares. Most, but not all, of them are located inside legally established protected areas, which now account for an estimated 13 percent of the world's forests.
- The area of planted forest increased by about 5 million hectares per year during the period 2000–2010 and, although only accounting for 7 percent of the total forest area, planted forests supply an increasing share of the demand for wood.
- The area of forest designated primarily for the protection of soil and water increased by 59 million hectares between 1990 and 2010 and now accounts for 8 percent of the total forest area.
- Significant progress has been made in further developing an enabling framework for sustainable forest management. A large number of forest policies and laws have been created or updated; close to 75 percent of the world's forests are now covered by national forest programmes; and the area of forest with a management plan has increased significantly in sub-Saharan Africa and South America.

Forests and climate change – a window of opportunity

Among other functions, forests play a crucial role in climate change mitigation and adaptation. One of the positive messages from FRA 2010 is that carbon emissions from forests have been reduced in recent years as a result of the decrease in the rate of deforestation combined with large-scale planting of new forests.

There is now unprecedented awareness of the role forests play in climate change mitigation. The recent discussions under the UNFCCC to establish a mechanism to reward developing countries that reduce their carbon emissions from deforestation and forest degradation (REDD-plus) and the additional funding already pledged will, it is hoped, help further reduce the rates of deforestation and forest degradation in many countries.

NEXT STEPS

Members of the Collaborative Partnership on Forests, regional groups, non-governmental organizations and countries worked together in the design and implementation of FRA 2010. Joint planning for the next global assessment (FRA 2015) will commence in 2011, based on an in-depth evaluation of FRA 2010.