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SUPPORTING SUSTAINABLE FOREST MANAGEMENT THROUGH THE GLOBAL FOREST RESOURCES ASSESSMENT: LONG-TERM STRATEGY (2012-2030)

This document describes the Long-Term Strategy for the Global Forest Resources Assessment as endorsed by the 21st session of the Committee on Forestry. It describes a process of continuous improvement intended to deliver improvements in quality, reduced reporting burden, enhanced capacity building and harmonization of forest-related reporting.

I. Introduction

1. Global forest resources assessments, coordinated by FAO, have been made at approximately five to ten year intervals since FAO was established in 1945¹. The mandate for these assessments is found in the FAO Constitution, which states that “The Organization shall collect, analyse, interpret and disseminate information relating to nutrition, food and agriculture. In this Constitution, the term ‘agriculture’ and its derivatives include fisheries, marine products, forestry and primary forestry products.” (Article I, Functions of the Organization, paragraph 1).
2. The scope and content of the global assessments have evolved over time to respond to changing information needs. The main concern driving the first FAO-led assessment was well expressed in the first sentence of its report: “The whole world is suffering from shortages of forest products” (FAO, 1948). Studies of timber supply trends dominated the assessments through the 1960s. From the 1970s through the Global Forest Resources Assessment 1990 (FRA 1990), environmental dimensions of forest resources were in focus, in particular the rate of deforestation. FRA 2000 was designed to cover a wider range of forest benefits and functions, but severe information shortages made reporting on key trends difficult. In addition, users and the media still appeared to be primarily interested in forest area and area change², a view repeated in user surveys and evaluations associated with FRA 2005 and 2010.
3. Following an evaluation of FRA 2005, the fifth Expert Meeting on Global Forest Resources Assessments, held in Kotka, Finland in 2006 (Kotka V), recommended that the FRA process should continue to use the sustainable forest management (SFM) concept as a reporting framework and that FRA should cover the commonly agreed seven thematic elements:
 - a) Extent of forest resources;
 - b) Biological diversity;
 - c) Forest health and vitality;
 - d) Productive functions and forest resources
 - e) Protective functions of forest resources;
 - f) Socio-economic functions;
 - g) Legal, policy and institutional framework.
4. At its eighteenth session (2007), the FAO Committee on Forestry (COFO) endorsed the above recommendations and asked that FAO continue to collaborate with Members, CPF members, and regional partners, including the UN Economic Commission for Europe (UNECE), UN Forum on Forests and regional SFM criteria and indicator processes, in global forest resources assessments.
5. To promote a Global Forest Resources Assessment that meets long-term global needs, COFO in its twentieth session (2010), requested FAO to prepare a long-term strategy for the FRA programme consistent with prospects for sustainable funding. This strategy is written in response to that request.
6. COFO in its twenty-first session (2012) endorsed this strategy and the implementation of FRA 2015 as a first step.
7. Forest resources are under constant pressure and are called upon to produce useful forest products, environmental services, wildlife habitat, recreation and opportunities for livelihoods. Many of these demands are in conflict with one another – for example, the need to convert forested land to agricultural production in some countries due to increasing demand for food and fuel may be a threat to the use of natural forests as carbon sinks. Conflicting demands increase as human population

¹ The reporting years have been as follows: 1946-1948, 1953, 1958, 1963, mid-1970s (regional assessments), 1980, 1988, 1990, 1995, 2000, 2005, 2010

² Holmgren, P. and R. Persson, 2002

continues to grow, income levels and wood and food consumption rates increase at a time when the area of natural forest continues to decline.

8. Into this context comes the Global Forest Resources Assessment (FRA) which seeks to describe forest area, forest change and selected functions of forests. These assessments ultimately seek to support the expanded application of sustainable forest management, the permanent forest estate and support to the forestry sector by providing reliable information about the world's forests. The use of forests to help reduce net greenhouse gas emissions through mechanisms such as REDD+ highlights the importance of understanding land use change in new ways, including net changes in global forest carbon stocks.
9. Exactly how FRA can contribute to increasing the area and quality of sustainably managed forest has not always been clearly stated, yet it is essential if the assessment is to target those users who contribute meeting the challenges of forest management in the 21st century. FRA can help shape both policy making processes, inform and encourage forest-related investment decisions by a wide range of actors, including governments, private companies, NGOs and donor organizations. FRA must also be able to adapt to meet different needs of the diverse global forest data users: governments, non-governmental organizations, the media, intergovernmental agencies, academia, research institutions and the private sector. Understanding and meeting these diverse client needs is an important on-going challenge and an important element in this strategy.
10. During the period of this Strategy (2012-2030), the context of global forests and forestry will likely include the following changes:
 - a) An increase in human population from about 7.1 billion in 2012 to about 8.3 billion in 2030;
 - b) An increase in annual demand for cereals from about 2.2 billion tonnes in 2012 to about 2.7 billion tonnes in 2030;
 - c) An increase in annual demand for sawnwood from about 465 million m³ to about 594 million m³ in 2030;
 - d) Over 65 million ha of land now in forest will be cleared for agriculture between 2012 and 2030.
11. The Strategy seeks to define a pathway for the FRA to track and help users understand how forests have and will change in response to the demands of society.

II. Supporting the FAO Strategic Framework

12. The FAO Strategic Framework (2009-2013) places the FRA under Strategic Objective E : Sustainable management of forests and trees. FRA contributes most directly to Operational Result E1 – Policy and practice affecting forests and forestry are based on timely and reliable information. FAO carries out this mandate in full partnership with other international organizations, national institutions, and non-governmental organizations.
13. The FAO Strategy for Forests and Forestry, adopted by COFO 2009, notes that “Decision-making across sectors is informed, better coordinated, transparent and participatory, enabling effective action both within and outside the forest sector. Forest-related decisions are based on timely and accurate information, inter-disciplinary approaches and stakeholder participation at all levels.” It also notes that FAO Forestry needs to provide long-term perspectives and leadership in monitoring and assessing trends in forest resources and services, and the production, consumption and trade of forest products.
14. The mission of FAO's global forest resources assessment programme is to provide the world community with reliable information to describe the world's forests and how they change over time.

III. Goals, Objectives and Outputs

15. In support of this mission, the long-term goals of the Global Forest Resources Assessment are to:
 - e) Assist countries and the world community by providing relevant, timely, realistic, reliable and useful information for use in reviewing policies, promoting multilateral cooperation and taking appropriate investment actions for the sustainable management of forest resources;
 - f) Support international cooperation in harmonizing and sharing multi-country forest resource information in common formats;
16. The immediate objectives for the Global Forest Resources Assessment (commencing with FRA 2015) will include the following responsibilities to:
 - g) Carry out an assessment of forest resources (including information on the goods and services provided by forests) on a global basis every five years;
 - h) Estimate the changes in forests and their uses that have taken place since the previous assessment;
 - i) Provide information and analysis that helps understand the reasons for and the effects of change, including drivers outside the forest sector;
 - j) Produce a study on the trends and outlook for the use of forests for wood supply;
 - k) Disseminate results, data bases, and methodologies to interested national and international institutions, the general public, academia, NGOs and the private sector.
17. In turn, these objectives will be met through the following types of activities:
 - l) Country reporting process. Compile, analyse and report on world forest resources state and change based on data available at the national level through a network of officially nominated national correspondents;
 - m) Remote sensing to support national forest resources assessment and reporting. National reporting that incorporates remote sensing provides added value for countries and the global community – FRA in collaboration with other units in the Department will work with countries as needed to support the use of field and remotely sensed data for international reporting;
 - n) Harmonization of reporting. Forest-related reporting burdens are substantial and increasing, thus FRA must work with countries and partners to harmonize and where possible streamline reporting mechanisms;
 - o) Country capacity building. Build and strengthen the capacity of countries to improve information essential for sustainable forest management, in collaboration with other units in the Department.
 - p) Adapt the methodologies and specific variables to changing needs of member countries and international processes.
 - q) Data availability and dissemination. Tailoring data availability, analytical tools and dissemination approaches to the needs of key FRA user groups.
18. Anticipated outputs from this strategy include:
 - a) User-relevance will increase as a result of periodic needs assessments,
 - b) Data quality and reliability will be improved,
 - c) Data collection and reporting burden will be reduced,
 - d) Core, long-term priorities will be defined,
 - e) Remote sensing use for country reporting will be enhanced,
 - f) Projections of future global forest area and use of forests for wood supply will be produced,
 - g) Analytical outputs will be tailored to user needs.

IV. Building on strengths

19. The assessments that have gone on before have provided a strong base upon which to build. User surveys and evaluations have since 2002 cited a number of key messages:

- a) **Highly respected publication and country ownership.** Given its long history and tradition, it is recognized that the "*FRA Main Report*" is a key publication of the FAO Forestry Department, a global public good with international appeal. Ownership of FRA products (the "*FRA Main Report*", the "*Key Findings*" and the Country Reports), the process itself through the involvement of national correspondents and the data by using it as input to other international policy processes has been a key to FRA success and must remain so in the future.
- b) **Data process credibility and quality.** A major message over time has been that data credibility and quality should not be compromised and that there is a delicate balance between FRA data quantity and quality. There is a need to prevent (further) overburdening of the providers of country data and information (national correspondents) by increasing data quantity at the expense of ensuring data quality. This balance must be an important part of each assessment-specific plan to ensure that data quality is as high as possible and that suggestions for additional data are carefully evaluated to ensure that they do not increase the net reporting burden.
- c) **Country capacity building and the national correspondents network.** Less visible features, such as mobilizing other national stakeholders for the country reporting process and the networking are crucial in addition to the external, visible and formal processes and outputs. As REDD+ monitoring efforts become better defined and implemented, it will be crucial for future FRAs to adapt to both data needs and availability for this potentially important process.
- d) **Country dissemination.** The need to actively disseminate information products and data at country level and to different user groups is very important if results are to be used to help make better informed decisions. To maximize the use of results means that continuous effort will be needed to ensure that users can easily access, analyze and use elements of the FRA data that are of greatest use to them. Greater interactive and flexible data availability would allow different user groups to use the database in different ways.
- e) **Reporting frequency and geographic focus.** Past experience with differing reporting intervals and geographic focus suggested that future assessments need to be produced with predictable frequency – every five years. It is also clear that continuity for key variables on forest area and change needs to be maintained so that some measure of long-term change can be reasonably assessed. Likewise, a global focus has been consistently sought from reviews and users.

V. Continuous improvement to meet global needs

20. Producing and reporting global forest resources assessments presents significant challenges, including: international definitions and measurement standards that frequently change, varying levels of national resources for reporting and an ever-growing list of information needs. FAO and its partners seek to implement a long-term strategy that is based on continuous improvement. The strategy foresees the use of the best available tools and approaches to improve reporting efficiency and accuracy, making the best use of remote sensing in country reporting and improved data access that is directed to key stakeholders/users of FRA data. This must be done in a way that allows future FRA

reporting to be generally as consistent over time as possible to allow users to better understand trends in forest extent, characteristics and uses.

21. As global pressures on forest land increase, the need for high quality FRA data will also increase. This presents the need, and the opportunity, to seek continuous improvement. The long-term strategy will be to seek continuous improvement in the following areas:

- a) **Helping make country reporting of high value to countries.** Reporting to international bodies is often seen as a requirement that must be met with varying levels of local importance. Country ownership of data submitted to FRA has improved dramatically over the years and FAO will continue to work with countries to maximize the utility of these data for country purposes. Identifying high priority data needs that are common country priorities will be crucial for future assessments and will also demonstrate data gaps that need to be filled with new national forest inventories, which are themselves vital to forest planning and management.
- b) **Reduced net reporting burden.** Demands for additional reporting come from many sources, but often end up increasing the workload of national reporting teams. In order to continually improve data quality, it will be important to manage the quantity of data collected to ensure practicality, importance and application of the data collected. A robust online reporting system using current technology will be produced and maintained to increase the efficiency of country reporting. Likewise, the principle of "collect once, use many times" will be used to ensure that the data collected by countries are utilized to the greatest extent possible, including through shared data collection, analysis and reporting by regional partner organizations.
- c) **Understanding and addressing specific client needs.** The FRA process must measure and understand, and address specific client needs as they evolve to ensure that the collected data are as usable as possible. This needs to include involvement of diverse users such as the media, general public, private sector, UN conventions related to forests, academia, governments and NGOs. Because users are so diverse, it will be important to conduct periodic readership surveys to understand the range of user groups and how future assessments can be made more useful to each.
- d) **Improving online access and usability of FRA data.** Maintain an updated online portal using current technologies is critical to the future ease of data access and use for FRA users. In addition to keeping current with online technologies, the FRA process must measure and understand and address specific client needs as they evolve to ensure that the data are as usable as possible. At the same time, a means of allowing countries that either do not have reliable internet access or who wish to report via spreadsheet or paper forms will be made available to ensure that all countries have a way of reporting effectively.
- e) **Data accuracy/quality control.** The difficulty of collecting data of known quality has been known since 1948³, and each assessment since then has sought to improve data quality. Finding ways to make country reports relevant and usable first at the national level with global reporting as a secondary benefit is an example of how to ensure that those who produce data used by the FRA programme have as much return on time invested as possible from their work. This increases incentives to ensure that data sources are identified and that quality is as high as possible. Integration of remote sensing and country reporting by countries as part of their analysis and reporting processes will be a crucial step in helping improve country reporting for many countries.
- f) **Projecting the future.** Forests clearly provide a wide range of products and services and one of the key reasons why the FRA programme was created was to help describe the relationship between forests and wood supply. This is an important purpose in a world where human population continues to increase, demand for agricultural and urban land use increases, wood and paper product demand per capita is expected to grow and the area of production forest is declining in many countries. Using the FRA data to help project future

³ "All these investigations made valuable additions to our knowledge, but all suffered from certain fundamental difficulties..". FAO World Forest Inventory Report, 1948

supplies and describe where this wood is likely to come from is vitally important as is the projection of future forest area, including areas set aside for forest conservation.

- g) **Understanding forest change in the context of pressures on land.** Most deforestation comes from conversion of forest land to agriculture and as global populations grow, pressures for food production areas increase. FRA must describe and project these pressures using other relevant data sources and use this information to explain and predict changes in forest area and quality as well as use of forests for wood supply.
- h) **Identifying relative levels of confidence in reported values.** Because data come from sources ranging from recent national forest inventories, to expert opinion it is often difficult for readers to know and understand the reliability of the data. FRA must continue to evolve methods of data collection that clearly identify the source and make this information available to FRA users to enable users to understand the relative level of confidence they should have.
- i) **Facilitating increasing levels of harmonization in forest related definitions.** FAO has contributed substantially to common forest-related definitions and needs to continue to do so through the FRA programme in cooperation with multiple stakeholders, including the Collaborative Partnership on Forests (CPF).
- j) **Thematic studies** can be useful in the analysis of particularly difficult monitoring problems where there is limited quantitative information, no commonly agreed assessment methodology, or insufficient detailed information, and as such can be an important tool for continuous improvement of assessments. This may include analyses that help refine questions and variable selection for future FRAs or to prepare background documents for critically important topics. However, this tool can also become a distraction that diverts resources to problems that cannot be addressed effectively by the FRA programme. Future thematic studies should be conducted when there is a reasonable chance that they will improve assessment methods or approaches, they complement and supplement FRA, and sufficient resources are secured to conduct them.

VI. Partnerships

22. FRA has always been built upon partnership and must continue to be so in the future. Clearly partnership with countries, intergovernmental organizations, national programmes, national correspondents and research and development agencies has been crucial in past FRA success. This section deals specifically with partnerships that collaborate on data collection, analysis and presentation as opposed to users of the dataset and analyses. It is expected that partnerships amongst international data collectors/providers will increase as demands for forest related information continue to grow. Future partnership decisions will need to balance the requirements of new potential partners with the mandate and capacity of the FRA staff.

23. Specific actions related to partnerships include:

- a) National forest departments are crucial to the success of the FRA programme as a credible reporting mechanism. FRA will continue to work through a network of national correspondents to strengthen the utility and quality of reporting for both national forest planning/reporting and international reporting needs. A mark of success for FRA will be increased ownership of the process and the quality of the data by national correspondents and their governments. This will require significant attention to working with national correspondents in ways that encourage their contributions, which are often made in addition to their normative work.
- b) Increased labour-saving cooperation with key strategic partner organizations, both global and regional, to reduce the country reporting burden while at the same time improving efficiency, consistency and data quality. For example, working with the International

- Tropical Timber Organization (ITTO) and the Observatoire des Forêts d’Afrique Centrale (OFAC) toward common data collection approaches will reduce country reporting burdens, increase the efficiency of each of the organizations reporting and allow greater consistency and most likely quality control over reported values.
- c) Continued cooperation with UNECE and Forest Europe on the regular assessment of the state of forests in the pan-European region and FRA.
 - d) Maintaining a mutually supportive and professional strategic partnership with the European Commission’s Joint Research Centre (JRC) is vital to ensuring a connection to world-class remote sensing expertise with a long-term institutional interest in forest cover mapping for the tropics and Europe.
 - e) Internal FAO partnerships. Because forest assessment and monitoring exists as a responsibility in several different FAO units it is critical that this form of partnership also be maintained and strengthened over time. Ensuring that feedback and gaps from FRA analysis is fed to other forest and land use assessment units within FAO to help identify and prioritize future actions.
 - f) Donor partnerships. Extra-budgetary support will remain vital to the success of the FRA programme, therefore close communication and partnership with key donors will ensure that outputs from the assessment are used in donor-funded programmes/projects and will improve funding continuity that is key to implementation of this long-term Strategy. This partnership needs to provide adequate visibility to donor contributions that demonstrates the importance of these contributions.

VII. Communications and outreach

24. Communications technologies are rapidly evolving and it is essential that FRA communications and outreach keep up in order to improve data access to those with good access to broadband internet services and those who have limited or no internet access. Traditionally, communications has been seen primarily as a one-way flow – the dissemination of FRA outputs to users. Increasing dependence of users on web-accessible information, however, will continue to increase expectations for up to date information that is tailored to user needs.
25. It is assumed that the trend of less reliance on paper versions of the FRA outputs will continue and as a result, while paper versions of the *"Main Report"* and *"Key Findings"* will continue to be needed, the primary emphasis will be to prepare online versions that meet future expectations.
26. The long-term communications and outreach strategy focuses on the following key elements:
- g) Branding;
 - h) Attractive, easy to use web-access to data, including user-selected analyses, graphics and reporting;
 - i) Feedback from users;
 - j) Limited number of tailored online products intended for specific user groups.
27. **Branding.** FRA is widely known among some user groups as a source of global forest information – but it has not always been as well established as the best source for key users, often times for reasons of data quality that have been beyond the control of FAO. Strengthening of the FRA brand is important so that users will readily identify FRA as a reliable source of global forestry information. Credibility is essential to the value of the FRA products and an important part of the Long-Term FRA Strategy will be to strengthen the FRA brand in a way that increases both credibility and visibility as a premier source of global information on forests. This effort needs to recognize the practical limits in resources and capacity available in developing countries to ensure that data collection scope fits with these constraints. Weak data quality damages the FRA brand and reflects

poorly on country data sources, therefore strengthening data quality is crucial to continuous improvement of the FRA brand.

28. ***Enhanced online access.*** The power of the FRA database exists only when the data are accessible and readily usable. The rapid evolution of online tools for display and analysis of complex data sets is expected to continue over the life of this strategy – and it is essential for the FRA programme to utilize modern tools that attract users to the data set. If FRA data are to be sought by an increasingly broader audience, they will need to be presented in a format that is current and intuitive. Over the lifetime of this strategy, communications tools will evolve in ways most people cannot now imagine – it will be important for the FRA results to be presented using the best available technologies, while at the same time offering options suited to users that do not have access to these technologies.

29. ***Soliciting and using client feedback.*** While it is clear that the FRA data have multiple users, it is also clear that the relative extent of use by different groups that use the assessment is not well understood. As a result, past assessment planning has not known who the most important users are – even though the categories of users are well known. It will be important for each reporting cycle to produce/update the understanding of who uses the FRA data for what purpose – and also to what effect. This will ensure that future planning is not necessarily dominated by the most vocal or best resourced users, but also provides a voice to other less visible user groups.

30. ***Tailored products.*** Helping users with access to what they need to know is a relatively easy way to communicate. While the "*Main Report*" and "*Key Findings*" clearly have a place for a broad range of users, FRA needs to also be able to serve specific needs through brief summaries that are targeted to specific audiences. Communicating online provides many opportunities to ensure that users themselves can easily access information through report formats that they define.

Resources

31. The scope of the global forest resources assessments has increased significantly over the years (e.g. the number of variables has doubled in the last five years alone) at a time when financial resources to conduct the assessment have not kept pace. This strategy assumes that FAO will continue to support and to be the financial foundation for core FRA activities and that this support will continue to grow as the extent and nature of forests and their many values become increasingly threatened. However, reaching the goals/immediate objectives listed in this document, depends, to a large extent, on the willingness of countries and other partners to fund, provide in kind contributions to, and collaborate with the FRA process.

32. This also means there is a need to make the process as efficient as possible, recognizing that meeting all of the interests of all FRA users is most likely beyond reach. Part of the strategic use of available resources will be to manage the level of effort to reduce the country reporting burden and make reporting more streamlined, together with data collection partners. An increased focus on key variables and the willingness to exclude information requests that stretch country reporting and FAO processing capabilities will help improve efficiency – albeit possibly at the cost of reporting gaps.

33. The need for extra budgetary funds will also remain and needs to be a fundraising priority of FAO Forestry. The stability and continuity of high quality data collection and reporting to match the growing demands for information on the world's forests resources, needs stable, adequate and predictable sources of funding.