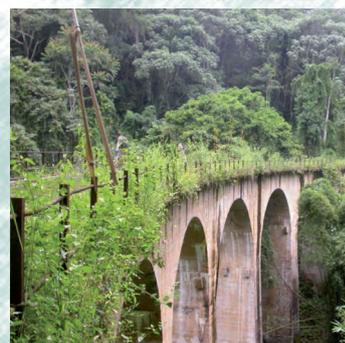
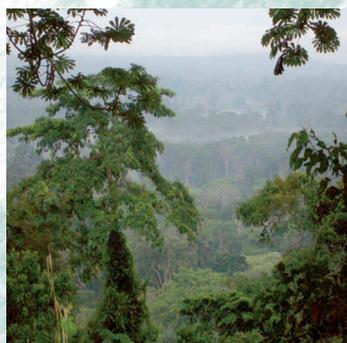




# FRA 2015 PROCESS DOCUMENT



# **FRA 2015 Process Document**

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## Abbreviations and acronyms

<b>CFRQ</b>	Collaborative Forest Resources Questionnaire
<b>COFO</b>	Committee on Forestry
<b>COMIFAC/OFAC</b>	Observatory of Central African Forests
<b>FLUDE</b>	Forest Land Use Data Explorer
<b>FRA</b>	Global Forest Resources Assessment
<b>FRIMS</b>	Forest Resources Information Management System
<b>FSC</b>	Forest Stewardship Council certification scheme
<b>GDP</b>	Gross domestic product
<b>ITTO</b>	International Tropical Timber Organization
<b>MODIS</b>	Moderate Resolution Imaging Spectroradiometer
<b>PEFC</b>	Programme for the Endorsement of Forest Certification scheme
<b>RAPA</b>	FAO Regional office for Asia and the Pacific
<b>UNECE</b>	United Nations Economic Commission for Europe

# 1. Introduction

Ever since its foundation, FAO has regularly collected, analysed, interpreted and disseminated information on the status and trends of the world's forests resources through the Global Forest Resources Assessment (FRA). The scope and the methodology of the assessments have evolved over time to respond to changing information needs, to increase the level of participation of the countries, as well as to streamline and harmonize definitions and reporting in collaboration with other organizations and international reporting processes.

FRA 2015 is the most recent FAO's Global Forest Resources Assessment which continued and improved this comprehensive and broader participatory approach.

This document provides a summary of the different steps that led to the completion of FRA 2015, from the designing process to the implementation and the dissemination of the results.

## 2. FRA 2015 preparation and implementation of the FRA Long-Term Strategy

FRA 2015 is the result of a long consultative process that, guided by key recommendations from the FRA Long-Term Strategy, involved users, national correspondents and experts from all over the world and from a wide variety of technical backgrounds.

The preparation of a Long-Term Strategy for FRA for the period 2012-2030 was requested from the Committee on Forestry (COFO) in its twentieth session in 2010, in order to promote a Global Forest Resources Assessment that meets long-term global needs (<http://www.fao.org/3/a-az431e.pdf>).

The development process for FRA 2015 began in June 2011 when the FRA Advisory Group in its eleventh meeting met to provide guidance on variables for FRA 2015 and discuss the FRA Long-Term Strategy.

In September 2011, the expert consultation on the FRA Long-term strategy, held in Finland, provided important inputs for the finalization of the strategy and for the FRA 2015 implementation (Expert consultation on “A Long-term Strategy for Global Forest Resources Assessment”: <http://www.fao.org/3/a-az431e.pdf>).

In October 2011 in Canada, representatives from the International Tropical Timber Organization (ITTO), FOREST EUROPE, United Nations Economic Commission for Europe (UNECE), Montréal Process, FAO, met for a joint workshop of international criteria and indicators process ([http://foris.fao.org/static/data/fra2010/ProceedingReport\\_JointWorkshop\\_E.pdf](http://foris.fao.org/static/data/fra2010/ProceedingReport_JointWorkshop_E.pdf)). This meeting was followed by a second meeting in February 2012, for a joint action plan in collecting, exchanging and analysing international forest data that originated the Collaborative Forest Resources Questionnaire (CFRQ) (<http://foris.fao.org/static/data/fra2010/Sendaireport.pdf>).

In March 2012, another important step in the process of finalization of the strategy and preparation for FRA 2015 was the Technical consultation on preparation of FRA 2015, held in Italy (Ispra 1 Report: <http://foris.fao.org/static/data/fra2010/Ispra1meetingsummary.pdf>). Throughout 2012, six Regional Forestry Commissions concluded the consultation process on the strategy, which was finally endorsed by COFO in its twenty-first session in September 2012.

Key objectives from the strategy set the stage for the FRA 2015 reporting process which is the first assessment to take into account the recommendations from the long-term strategy and to implement its objectives, as better described in the following paragraphs.

## **2.1 IMPROVED REPORTING, DATA QUALITY AND DATA RELIABILITY**

The long-term strategy emphasized on the importance of country reporting as the backbone of global forest resources assessments and on the crucial role of national correspondents. The strategy recommended strengthening the National correspondents' network in order to increase the rate of response by countries, the visibility of the reporting process and the participation of stakeholders at the national level and thus the availability and the reliability of the data.

To implement this strategic objective, FRA 2015 initiated a capacity building plan with the aim of supporting countries during the reporting process. The plan was developed through the organization of global, regional and national training workshops in accordance with the following component:

- Capacity building for completion of the FRA 2015 reports: to provide technical assistance and guidance to the FRA National Correspondents in order to ensure consistency and high-quality of the national reports;
- Capacity building at national level: to promote the incorporation of remote sensing into the FRA 2015 country reports in selected countries;
- Capacity building to strengthen national networks for the FRA 2015 reporting process: to enhance awareness of the FRA reporting process at national level through the involvement of key stakeholders and the promotion of a support network.

A total of 21 global, regional and national workshops involving more than 500 participants were carried out (Annexes 1 and 2).

The strategy also emphasized on the importance of data quality in terms of quality control and accuracy and recommended improving transparency and traceability of the estimates. Since data sources range from recent national forest inventories to expert opinions, FRA 2015 introduced a tier system to clearly identify data sources by ranking them in reliability classes or Tiers. For most variables countries were asked to assign a Tier class 1, 2 or 3, where Tier 3 indicates the highest level of detail and Tier 1 the lowest.

## **2.2 REDUCED REPORTING BURDEN**

Another key objective of the strategy was to decrease the reporting burden on countries and facilitate the work of the national correspondents, through a better balance between quantity, importance, practicality and use of the information requested as well as through the improvement of data sharing among the organizations involved in the collection of forest information.

Building on lessons learned from FRA 2010 and taking into account recommendations from the various preparatory expert consultations, FRA 2015 focused on variables that were easy to collect and practical to analyze.

The pre-filling of the country reports with information previously submitted to past assessments and with information from external data providers for some of the variables was implemented to facilitate the reporting.

However, the most important step that FRA 2015 undertook towards reducing the reporting burden was the adoption of the Collaborative Forest Resources Questionnaire (CFRQ), in collaboration with the International Tropical Timber Organization (ITTO), FOREST EUROPE, United Nations Economic Commission for Europe (UNECE), the Observatory of Central African Forests (COMIFAC/OFAC) and in cooperation with countries of the Montréal Process. The CFRQ questionnaire contained a subset of the FRA 2015 variables which were in common with at least one of the partner organizations and covered 104 countries representing 88 percent of the world's forests.

Through the questionnaire, data of common interest among the partner organizations/processes, could be collected once and then shared many times, contributing not only to decrease the reporting burden, but also to achieve a greater consistency in the published results.

### **2.3 IMPROVED ACCESS TO FRA DATA**

The strategy also emphasized the importance of improving access and usability of FRA data and proposed the development of an updated online portal where interactive and flexible tools would allow users to extract and analyze FRA data in many different ways. For this purpose, the Forest Land Use Data Explorer (FLUDE) was developed and is available in the FRA Website. The strategy also outlined the development of online tools to facilitate the work of the countries during the reporting process.

To this aim, FRA 2015 implemented the Forest Resources Information Management System (FRIMS), an online platform that facilitated the reporting process, simplified the data entry and the review process. The FRIMS allowed simultaneous access to the reports by multiple users and also provided automatic checks to highlight errors in the calculations and inconsistencies among the tables, to facilitate the work of the correspondents and their national team of experts. Furthermore a help desk function was activated to assist users and collect their comments during the reporting process ([FRIMS-Help-Desk@fao.org](mailto:FRIMS-Help-Desk@fao.org)).

The online system also proved useful during the review process as more than one reviewer could work at the same time on the same report; comments provided could then be reviewed and optimized by a review editor before being sent back to the countries. The online system was also built to promote the interactive use of FRA 2015 data, allowing users to extract and analyze data in a more interactive and tailored-made way. The online analysis functions in FRIMS were scheduled to be made available to users in September 2015.

### 3. FRA 2015 Milestones

Once the process of designing and defining the content and scope of FRA 2015 was completed by the end of 2012, the reporting process started in January 2013 with the distribution of the pre-filled country reports and of the CFRQ questionnaires to the countries.

In May 2013, the Global meeting of national correspondents brought together representatives from 96 countries to provide them with guidance and technical assistance for the completion of the country reports. The summary report from the Global meeting in Thailand is provided in Annex 1.

Throughout 2013, a total of 20 regional and national workshops were conducted in the framework of the capacity building plan. The regional workshops represented a unique opportunity for the national correspondents to receive technical assistance for the finalization of the country reports and the CFRQ questionnaires as well as to share experiences of forest related reporting with colleagues from the same region.

The national workshops mainly focused on the strengthening of the national network, on improving the participation of all stakeholders at national level and, for countries that specifically requested this type of support, on the integration of remote sensing into the reporting process.

Remote sensing data were included in FRA 2010 as an independent means of collecting comparable time data on the state of the World's forests between 1990 and 2005 at the regional, climatic domain and global levels. Thanks to a partnership between FAO, its member countries and the European Commission Joint Research Centre (JRC), new data from an update of the FRA 2010 remote sensing data, were released in March 2014, on the occasion of the International Day of Forests. The updated assessment provided information on the extent of forest land and changes in forest land use for the period 1990-2010.

The deadline for the submission of the complete country reports was in October 2013. The country reports submitted online through the FRIMS could be directly reviewed by the reviewers. Country reports that were submitted in Word format were uploaded in FRIMS in order to be reviewed. Once all the country reports were revised, finalized and data officially endorsed by the National Correspondents, the data could be extracted from FRIMS and moved to an excel database to be analyzed.

The analysis of the collected data started in July 2014 and continued with the drafting of the three main FRA 2015 publications: the Desk reference, the Synthesis document and the Special volume on FRA 2015 of the Forest Ecology and Management scientific journal.

The official release of the FRA 2015 results and publications was scheduled for September 2015, on the occasion of the XIV World Forestry Congress in Durban.

The main steps that brought to the completion of FRA 2015 are summarized in the table below.

**TABLE 1**  
**Workplan**

<b>Activity</b>	<b>Date</b>	<b>Comment/output</b>
<b>FRA and CFRQ 2015 questionnaires release</b>	January 2013	Pre-filled questionnaires and reference documents for FRA 2015 sent out to all National Correspondents and CFRQ partners
<b>Global meeting (Chiang Mai, Thailand)</b>	6-10 May 2013	To assist in the compilation of consistent FRA and CFRQ questionnaires and strengthen national networks
<b>First deadline for completed country reports</b>	1 July 2013	Countries were requested to submit their reports
<b>Regional/national workshops</b>	July - November 2013	To assist in the compilation of consistent FRA and CFRQ questionnaires, strengthen national networks, integrate the use of remote sensing in the reporting process
<b>Deadline for completion of final reports</b>	October 2013	Countries were requested to submit reviewed and completed country reports
<b>FRA Remote sensing update release</b>	March 2014	An update of the FRA 2010 Remote sensing survey provided new data for the period 1990-2010
<b>Analysis of preliminary results</b>	July - December 2014	Analysis of collected data and drafting of FRA publications
<b>Preliminary results discussed and reviewed by FRA Advisory Group and CFRQ partners</b>	September 2014	Preliminary results as well as draft FRA 2015 publications discussed in Salt Lake City by AG members and CFRQ partners
<b>Preparation of FRA 2015 publications</b>	October 2014 - August 2015	Editing, formatting, translating and printing of the FRA 2015 publications for dissemination in September 2015
<b>Launch of FRA 2015 publication at the World Forestry Congress (Durban, South Africa)</b>	September 2015	Release of the FRA 2015 results and publications

## 4. The country reporting process

The wealth of information contained in the FRA 2015 assessment was collected through standardized country reports submitted by a network of 168 officially nominated National correspondents. In total more than 680 contributors were involved in the reporting process, including the national correspondents and their national teams. The complete list of national correspondents, alternates and contributors is found in the FRA Website (<http://www.fao.org/forest-resources-assessment/background/national-correspondents/en/>).

A total of 155 Country Reports covering 98.8 percent of the total forest area were submitted, while 79 desk studies covering 1.2% of the total forest area were compiled by the FRA secretariat for countries that did not nominate National Correspondents or did not submit any report. The list of countries for which desk studies have been prepared is provided in Annex 3.

To ensure transparency and traceability of the estimates, the reporting format required countries to provide the full reference for original data sources used, the description of national definitions and categories and the explanation of the methodology used for the estimates, as well as indication of the reliability of the estimates (tiers). The reporting methodology is explained in detail in the document Guide for Country Reporting for FRA 2015 (<http://www.fao.org/3/a-au190e.pdf>).

Each country report was organized around 21 key questions grouped into eight topical categories: forest area and forest characteristics, production, protective functions and ecosystems services, biodiversity/conservation, disturbance, measuring progress toward sustainable forest management, economics/livelihoods and looking forward. A total of 117 variables were included, most of which required estimates for the years 1990, 2000, 2005, 2010 and 2015. A list of all the FRA 2015 variables is provided in Annex 5 while the definitions of each variable can be found in the document FRA 2015 Terms and Definitions (<http://www.fao.org/docrep/017/ap862e/ap862e00.pdf>).

In order to reduce reporting burden and facilitate the work of the National Correspondents, reports were pre-filled with information previously submitted to FRA 2010. Countries were requested either to confirm the pre-filled information or to provide updates whenever new and better data was available and also add estimates for 2015. The country reports were also pre-filled with information from external data providers, notably FAOSTAT for the wood removals, the Forest Stewardship Council certification scheme (FSC-certification) and the Programme for the Endorsement of Forest Certification scheme (PEFC-certification) for the area of forest under international forest certification, and UNSTAT for the contribution of forestry to Gross domestic product (GDP). Finally, Moderate Resolution Imaging Spectroradiometer (MODIS) derived data were used to pre-fill information on forest fires and on the reduction of canopy cover. Countries were asked either to validate these data or to update with better national data if available.

The pre-filled country reports were made available to the national correspondents both online in the FRIMS and in Word version so that they could choose either way of reporting.

The following background documents were prepared in order to facilitate the country reporting and improve the understanding on how to interpret the definitions, categories and reporting requirements of FRA 2015:

- 1. The Guide to reporting:** explaining the methodology to be applied when compiling the reports in order to ensure complete, consistent and transparent reports where all reported figures can be traced back to the original data and data source. The guide also contains, frequently asked questions as well as reference information on the IPCC guidelines and other helpful material (<http://www.fao.org/3/a-au190e.pdf>).
- 2. The Terms and Definitions:** containing all the definitions and explanatory notes for all the variables to be reported on (<http://www.fao.org/docrep/017/ap862e/ap862e00.pdf>).

These documents, available in English, French and Spanish, were distributed to the National correspondents and posted on the FRA website.

The complete set of data by country, variables and reference year is provided in the FRA desk reference (<http://www.fao.org/3/a-i4808e.pdf>).

## 5. The review process

Once received, the country reports underwent a detailed review to check the correct application of the reporting methodology and its completeness in all steps; identification, selection and documentation of data sources, adjustment, estimation, forecasting and reclassification into FRA 2015 categories. All country reports, including those that were compiled in the Word format, were uploaded in FRIMS and an automatic message informed reviewers when a report was ready to start with a revision cycle. Around 30 experts among FAO staff, CFRQ partners and other international experts, through the online platform FRIMS, carefully reviewed the submitted reports, providing comments, suggestions and technical assistance for their finalization.

National correspondents and reviewers could benefit of a special function in FRIMS built to automatically check and highlight errors in the calculations and inconsistencies among the tables (total not matching, unit errors, etc.). Furthermore the check function could also automatically calculate some selected ratio (e.g. growing stock per hectare, ratio removals, total growing stock, carbon/biomass) that were compared with a predefined range of ratios to check the reasonability of the reported data.

The review process was completed in July 2014, when countries were requested to complete any internal review or validation of the data before the final clearance of the reports.

## 6. The analysis

In July 2014, when the vast majority of the country reports were finalized, a preliminary analysis of the collected data was conducted. To this aim the information contained in the country reports was extracted from FRIMS and stored in an excel database that was made available to FAO staff, CFRQ partners and other forest experts involved in the analysis of the results.

The primary analytical categories used in the analysis were:

- 1. Global:** as this implies, the global analysis generally used all of the reported values – with a few exceptions. Because of missing values, list-wise deletions were made for the calculation of the trends for incomplete time series;
- 2. Sub-regional:** countries were grouped into 12 sub-regions for finer-scale global analyses;
- 3. Climatic domains:** because FRA is not spatially explicit, climatic domains at the national scale were defined by the dominant climatic domain per country. Iremonger and Gerrand (2011) (Global Ecological Zones for FAO Forest Reporting: 2010 Update) describe the following domains as aggregations of ecological zones: Tropical, Sub-tropical, Temperate, Boreal and Polar. For the purposes of FRA 2015 the Polar zone was dropped as forest area is de minimis and at the country/territory scale is restricted to Greenland and the Svalbard and Jan Mayen Islands. Because of the lack of spatial data in the FRA the climatic domains are not a precise means in absolute terms, but they provided a useful approach of discriminating and understanding where forest area change occurred;
- 4. Income categories:** the per capita income of national economies was used to evaluate possible relationships with FRA 2015 indicators. The income categories, as defined by the World Bank (<http://data.worldbank.org/about/country-and-lending-groups>), provided a reasonable measure of how forest change occurs across income groups.

The list of countries by the analytical categories is provided in Annex 4.

Status and trends were calculated for all the variables within the analytical categories. For the trend analysis only complete time series were considered and countries displaying missing values for one or more of the reference years were excluded from the analysis. Missing values were not estimated.

The FRA 2015 Synthesis Document and the Special Volume on FRA 2015 of the Forest Ecology and Management paper provide the main results and key findings from the analysis of the collected data (<http://www.fao.org/3/a-i4793e.pdf> and <http://www.fao.org/3/a-i4895e/index.html>).

## 7. Publications and dissemination of the results

The FRA Long-Term Strategy also formulated recommendations concerning the publications and dissemination of the results. By putting special emphasis on the communication and outreach, the strategy highlighted the importance of improving data access and communication, to keep up with rapidly evolving communications technologies and to develop tailored products able to serve specific users' needs.

The Expert Consultation on the FRA Long-Term Strategy, held in September 2011, and the FRA 2105 technical meeting, held in March 2012, endorsed the recommendations from the Long-Term Strategy and, as part of the preparatory process for FRA 2015, encouraged the undertaking of the FRA users and potential users Survey.

The recommendations from the FRA 2015 Long-Term Strategy, the inputs from the consultation processes and the feedbacks from the FRA survey constituted the basis to develop the FRA 2015 Communication Strategy.

Building on the analysis of challenges and opportunities, the FRA 2015 Communication Strategy delineated main strategic directions for FRA 2015 related to the format, content and promotion of FRA products.

The implementation of the Communication Strategy proved to be crucial for positioning FRA 2015 as the world's definitive assessment of global forests and forestry, able to provide the most current and comprehensive assessment of the world's forests resources.

Main challenges for FRA 2015, identified in the Communication Strategy, were data quality and data accessibility, while main opportunities were the global scope of the assessment together with a strong and consolidated partnership with other international organizations.

Based on the analysis of challenges and opportunities, the Strategy delineated the following strategic directions:

- Enhance online accessibility and visibility of FRA 2015: FRA publications supported by online tools and technologies to facilitate research and analysis for each user. Special emphasis given to selected topics (sustainable forest management, remote sensing, future projections);
- Increase the understanding of data quality by clearly identifying data sources and ranking them in reliability classes (tiers);
- Optimize opportunities to promote FRA 2015 through the network of partnerships.

The Communication Strategy envisioned FRA 2015 as a web resource, supported by printed documents. To this aim three printed publications are being produced:

1. The FRA 2015 Synthesis Document containing key findings from the analysis of the FRA 2015 data, by topics;
2. The FRA 2015 Desk Reference containing 51 global tables, with data by country and by variables, organized in 21 main questions;
3. The Special Volume on FRA 2015 of the Journal of Forest Ecology and Management, with contributions from more than 60 scientists and forest experts from all over the world, containing in-depth analysis based on FRA 2015 data.

The three publications were scheduled to be released in September 2015 on the occasion of the XIV World Forestry Congress in Durban, South Africa.

## ANNEX 1

# **Summary report of the Global Meeting in preparation for FRA 2015 and the Collaborative Forest Resources Questionnaire Reporting (Chiang Mai, Thailand, 6-10 May 2013)**

The Global Meeting in Preparation for FRA 2015 and the Collaborative Forest Resources Questionnaire Reporting took place at the Centara Duangtawan Hotel in Chiang Mai, Thailand on 6-10 May 2013. It was jointly organized with the Royal Forest Department of Thailand and FAO. More than 120 participants, among which National Correspondents to FRA 2015 from 96 countries, and representatives of partner organizations, FAO Headquarters (HQ) and FAO Regional office for Asia and the Pacific (RAPA) attended the event.

The programme included plenary presentations and small group sessions organized according to languages, plus a computer room for interactive work. An open knowledge fair and small group sessions allowed participants to clarify any issues related to the FRA 2015 reporting.

### Key outcomes:

- All National Correspondents were informed about the FRA 2015 country reporting process and the CFRQ working modalities;
- All aspects of FRA 2015 were clarified and country reporting capacity was improved;
- National Correspondents are familiar with the use and functionalities of the FRIMS;
- National Correspondents were informed about the FRA 2015 remote sensing activities;
- National Correspondents are informed about the Forest Futures study and scenario formulation is improved;
- National Correspondents are informed about the national capacity building plan activities and benefits derived from its implementation;
- Improved plan for the analysis and publications of FRA 2015 results;
- Networking and exchange of experiences among national experts in forest monitoring assessment and reporting was fostered.

## ANNEX 2

# List of capacity building workshops

## FRA 2015 Regional and Sub-Regional Capacity Building Workshops

#	Title	Venue	Date	Countries	Participants
1	Regional FRA 2015 workshop for African countries	Kenya, Nairobi	3-4 Sep. 2013	33	37
2	Sub Regional FRA 2015 workshop for Southeast, East Asian and main Pacific island countries	Japan, Kyoto	9-13 Sep. 2013	18	25
3	Sub Regional FRA 2015 workshop for some western Asian countries - with RS component	India, Dehradun	19-23 Aug. 2013	5	12
4	Regional FRA 2015 workshop for European countries	Switzerland, Geneva	16-17 Oct. 2013	32	39
5	Regional FRA 2015 workshop for Latin American and Caribbean countries	Mexico, Ciudad de Mexico	2-4 Oct. 2013	19	32
<b>TOT</b>				<b>107</b>	<b>145</b>

## FRA 2015 Capacity Building Workshops for National Networking

#	Title	Venue	Date	Participants
1	Capacity building to strengthen national networks for the FRA 2015 reporting process	Uganda, Kampala	20-21 March 2013	33
2	Joint data collection and capacity building workshop: ITTO, OFAC, FRA	DRC, Kinshasa	12-13 March 2013	Around 20
3	Joint data collection and capacity building workshop: ITTO, OFAC, FRA	Gabon, Libreville	4-5 April 2013	19
4	Capacity building to strengthen national networks for the FRA 2015 reporting process	Paraguay, Asunción	9-10 April 2013	28
5	Capacity building to strengthen national networks for the FRA 2015 reporting process	Laos, Vientiane	2-3 May 2013	41
6	Capacity building to strengthen national networks for the FRA 2015 reporting process - with RS component	Tanzania, Dar es Salaam	13-14 June 2013	NA
7	Capacity building to strengthen national networks for the FRA 2015 reporting process - with RS component	Zambia, Lusaka	17-18 June 2013	27
8	Capacity building to strengthen national networks for the FRA 2015 reporting process	South Sudan, Juba	20 Aug. 2013	45
9	Capacity building to strengthen national networks for the FRA 2015 reporting process	Sudan	21-22 August 2013	6
<b>TOT</b>				<b>219</b>

### Capacity Building Workshop for integration of Remote Sensing data in FRA 2015

#	Title	Venue	Date	Participants
1	<b>FRA 2015 capacity building - Integration of remote sensing into FRA 2015 Country Report</b>	Uganda, Kampala	18-22 February 2013	11
2	<b>FRA 2015 capacity building - Integration of remote sensing into FRA 2015 Country Report</b>	Ecuador, Quito	11-15 March 2013	9
3	<b>FRA 2015 capacity building - Integration of remote sensing into FRA 2015 Country Report</b>	Lao People's Democratic Republic, Vientiane	8-12 April 2013	16
4	<b>FRA 2015 capacity building - Integration of remote sensing into FRA 2015 Country Report</b>	Mexico, Guadalajara	15-19 April 2013	16
5	<b>FRA 2015 capacity building - Integration of remote sensing into FRA 2015 Country Report</b>	South Sudan, Juba	12-19 August 2013	12
6	<b>Sub-Regional, 5 participating countries</b>	India, Dehra Dun	17-25 August 2013	5
<b>TOT</b>				<b>69</b>

## ANNEX 3

# List of desk studies

Afghanistan	Liechtenstein
Albania	Luxembourg
American Samoa	Maldives
Andorra	Malta
Anguilla	Marshall Islands
Antigua and Barbuda	Mayotte
Aruba	Micronesia (Federated States of)
Azerbaijan	Moldova, Republic of
Bahamas	Monaco
Bahrain	Montserrat
Belize	Nauru
Bermuda	Netherlands Antilles
Bosnia and Herzegovina	New Caledonia
British Virgin Islands	Niue
Brunei Darussalam	Norfolk Island
Cayman Islands	Northern Mariana Islands
Comoros	Pakistan
Côte d'Ivoire	Pitcairn
Dem People's Rep of Korea	Qatar
Djibouti	Saint Barthelemy
Dominica	Saint Helena
Eritrea	Saint Vincent and the Grenadines
Falkland Islands (Malvinas)	Samoa
Faroe Islands	San Marino
French Polynesia	Saudi Arabia
Gibraltar	Solomon Islands
Greece	Syrian Arab Republic
Greenland	The former Yugoslav Republic of Macedonia
Grenada	nia
Guam	Timor-Leste
Guernsey	Tokelau
Guinea-Bissau	Turkmenistan
Iraq	Turks and Caicos Islands
Isle of Man	Tuvalu
Jersey	United Arab Emirates
Jordan	Vanuatu
Kazakhstan	Vatican City
Kiribati	West Bank
Kuwait	Western Sahara
Libya	Yemen

## ANNEX 4

# Definitions of categories and country grouping by category

### REGIONS AND SUB-REGIONS

Grouping by countries

#### **Africa**

##### *Eastern and Southern Africa:*

Angola  
Botswana  
Comoros  
Djibouti  
Eritrea  
Ethiopia  
Kenya  
Lesotho  
Madagascar  
Mozambique  
Mauritius  
Malawi  
Mayotte  
Namibia  
Réunion  
Somalia  
Swaziland  
Seychelles  
United Republic of Tanzania  
Uganda  
South Africa  
Zambia  
Zimbabwe

##### *Northern Africa:*

Algeria  
Egypt  
Libya  
Mauritania  
Morocco  
South Sudan  
Sudan  
Tunisia  
Western Sahara

##### *Western and Central Africa:*

Benin  
Burkina Faso

Burundi  
Cameroon  
Cape Verde  
Central African Republic  
Chad  
Congo  
Côte d'Ivoire  
Democratic Republic of the Congo  
Equatorial Guinea  
Gabon  
Gambia  
Ghana  
Guinea  
Guinea-Bissau  
Liberia  
Mali  
Niger  
Nigeria  
Rwanda  
Saint Helena  
Sao Tome and Principe  
Senegal  
Sierra Leone  
Togo

#### **Asia**

##### *East Asia:*

China  
Dem People's Rep of Korea  
Japan  
Mongolia  
Republic of Korea

##### *South and South East Asia:*

Bangladesh  
Bhutan  
Brunei Darussalam  
Cambodia  
India  
Indonesia  
Lao People's Democratic Republic  
Malaysia

Maldives  
Myanmar  
Nepal  
Pakistan  
Philippines  
Singapore  
Sri Lanka  
Thailand  
Timor-Leste  
Viet Nam

***Western and Central Asia:***

Afghanistan  
Armenia  
Azerbaijan  
Bahrain  
Cyprus  
Georgia  
Iran (Islamic Republic of)  
Iraq  
Israel  
Jordan  
Kazakhstan  
Kuwait  
Kyrgyzstan  
Lebanon  
Oman  
Qatar  
Saudi Arabia  
Syrian Arab Republic  
Tajikistan  
Turkey  
Turkmenistan  
United Arab Emirates  
Uzbekistan  
West Bank  
Yemen

**Europe**

Albania  
Andorra  
Austria  
Belarus  
Belgium  
Bosnia and Herzegovina  
Bulgaria  
Croatia  
Czech Republic  
Denmark  
Estonia  
Faroe Islands  
Finland

France  
Germany  
Gibraltar  
Greece  
Guernsey  
Hungary  
Iceland  
Ireland  
Isle of Man  
Italy  
Jersey  
Latvia  
Liechtenstein  
Lithuania  
Luxembourg  
Malta  
Moldova, Republic of  
Monaco  
Montenegro  
Netherlands  
Norway  
Poland  
Portugal  
Romania  
Russian Federation  
San Marino  
Serbia  
Slovakia  
Slovenia  
Spain  
Svalbard and Jan Mayen  
Sweden  
Switzerland  
The former Yugoslav Republic of Macedonia  
U.K. of Great Britain and Northern Ireland  
Ukraine  
Vatican City

**North and Central America**

***Caribbean:***

Anguilla  
Antigua and Barbuda  
Aruba  
Bahamas  
Barbados  
Bermuda  
British Virgin Islands  
Cayman Islands  
Cuba  
Dominica  
Dominican Republic  
Grenada

Guadeloupe  
Haiti  
Jamaica  
Martinique  
Montserrat  
Netherlands Antilles  
Puerto Rico  
Saint Barthelemy  
Saint Kitts and Nevis  
Saint Lucia  
Saint Martin  
Saint Vincent and the Grenadines  
Trinidad and Tobago  
Turks and Caicos Islands  
United States Virgin Islands

***Central America:***

Belize  
Costa Rica  
El Salvador  
Guatemala  
Honduras  
Nicaragua  
Panama

***North America:***

Canada  
Greenland  
Mexico  
Saint Pierre and Miquelon  
United States of America

**Oceania**

American Samoa  
Australia  
Cook Islands  
Fiji  
French Polynesia  
Guam  
Kiribati  
Marshall Islands  
Micronesia (Federated States of)  
Nauru  
New Caledonia  
New Zealand  
Niue  
Norfolk Island  
Northern Mariana Islands  
Palau  
Papua New Guinea  
Pitcairn  
Samoa

Solomon Islands  
Tokelau  
Tonga  
Tuvalu  
Vanuatu  
Wallis and Futuna

**South America**

Argentina  
Bolivia  
Brazil  
Chile  
Colombia  
Ecuador  
Falkland Islands (Malvinas)  
French Guiana  
Guyana  
Paraguay  
Peru  
Suriname  
Uruguay  
Venezuela

**ECOLOGICAL DOMAINS**

Grouping by countries

***BOREAL:***

Canada  
Faroe Islands  
Finland  
Iceland  
Norway  
Russian Federation  
Sweden

***TEMPERATE:***

Andorra  
Austria  
Azerbaijan  
Belarus  
Belgium  
Bosnia and Herzegovina  
Bulgaria  
Chile  
China  
Croatia  
Czech Republic  
Dem People's Rep of Korea  
Denmark  
Estonia  
Falkland Islands (Malvinas)  
France

Germany  
Guernsey  
Hungary  
Ireland  
Isle of Man  
Jersey  
Kazakhstan  
Kyrgyzstan  
Latvia  
Liechtenstein  
Lithuania  
Luxembourg  
Moldova, Republic of  
Mongolia  
Netherlands  
New Zealand  
Poland  
Republic of Korea  
Romania  
Saint Pierre and Miquelon  
Serbia  
Slovakia  
Slovenia  
Switzerland  
Tajikistan  
The former Yugoslav Republic of Macedonia  
Turkmenistan  
U.K. of Great Britain and Northern Ireland  
Ukraine  
United States of America  
Uzbekistan

***SUBTROPICAL:***

Afghanistan  
Albania  
Argentina  
Armenia  
Australia  
Bahrain  
Cyprus  
Georgia  
Gibraltar  
Greece  
Iran (Islamic Republic of)  
Iraq  
Israel  
Italy  
Japan  
Jordan  
Kuwait  
Lebanon  
Lesotho  
Malta  
Mexico

Monaco  
Montenegro  
Morocco  
Nepal  
Norfolk Island  
Pakistan  
Portugal  
Qatar  
San Marino  
Spain  
Syrian Arab Republic  
Tunisia  
Turkey  
Vatican City  
West Bank

***TROPICAL:***

Algeria  
American Samoa  
Angola  
Anguilla  
Antigua and Barbuda  
Aruba  
Bahamas  
Bangladesh  
Barbados  
Belize  
Benin  
Bermuda  
Bhutan  
Bolivia  
Botswana  
Brazil  
British Virgin Islands  
Brunei Darussalam  
Burkina Faso  
Burundi  
Cambodia  
Cameroon  
Cape Verde  
Cayman Islands  
Central African Republic  
Chad  
Colombia  
Comoros  
Congo  
Cook Islands  
Costa Rica  
Côte d'Ivoire  
Cuba  
Democratic Republic of the Congo  
Djibouti  
Dominica  
Dominican Republic

Ecuador	Panama
Egypt	Papua New Guinea
El Salvador	Paraguay
Equatorial Guinea	Peru
Eritrea	Philippines
Ethiopia	Pitcairn
Fiji	Puerto Rico
French Guiana	Réunion
French Polynesia	Rwanda
Gabon	Saint Barthelemy
Gambia	Saint Helena
Ghana	Saint Kitts and Nevis
Grenada	Saint Lucia
Guadeloupe	Saint Martin
Guam	Saint Vincent and the Grenadines
Guatemala	Samoa
Guinea	Sao Tome and Principe
Guinea-Bissau	Saudi Arabia
Guyana	Senegal
Haiti	Seychelles
Honduras	Sierra Leone
India	Singapore
Indonesia	Solomon Islands
Jamaica	Somalia
Kenya	South Africa
Kiribati	South Sudan
Lao People's Democratic Republic	Sri Lanka
Liberia	Sudan
Libya	Suriname
Madagascar	Swaziland
Malawi	Thailand
Malaysia	Timor-Leste
Maldives	Togo
Mali	Tokelau
Marshall Islands	Tonga
Martinique	Trinidad and Tobago
Mauritania	Turks and Caicos Islands
Mauritius	Tuvalu
Mayotte	Uganda
Micronesia (Federated States of)	United Arab Emirates
Montserrat	United Republic of Tanzania
Mozambique	United States Virgin Islands
Myanmar	Uruguay
Namibia	Vanuatu
Nauru	Venezuela
Netherlands Antilles	Viet Nam
New Caledonia	Wallis and Futuna
Nicaragua	Western Sahara
Niger	Yemen
Nigeria	Zambia
Niue	Zimbabwe
Northern Mariana Islands	
Oman	
Palau	

**Definitions**

Iremonger and Gerrard (2011) (Global Ecological Zones for FAO Forest Reporting: 2010 Update: <http://www.fao.org/docrep/017/ap861e/ap861e00.pdf>) described the following domains as aggregations of ecological zones: Tropical, Subtropical, Temperate, Boreal and Polar.

**FAO Global Ecological Zoning framework for 2010**

EZ Level 1 - Domain		EZ Level 2 - Global Ecological Zone		
Name	Criteria <i>(Equivalent to Köppen-Trewartha Climatic groups)</i>	Name <i>(Reflecting dominant zonal<sup>a</sup> vegetation)</i>	Code	Criteria <i>Approximate equivalent of Köppen-Trewartha Climatic types, in combination with vegetation physiognomy and one orographic zone within each domain)</i>
Tropical	All months without frost: in marine areas over 18°C	Tropical rain forest	TAr	Wet: 0 - 3 months dry <sup>b</sup> . When dry period, during winter
		Tropical moist forest	TAwa	Wet/dry: 3-5 months dry, during winter
		Tropical dry forest	TAwb	Dry/wet: 5-8 months dry, during winter
		Tropical shrubland	TBSh	Semi-Arid: Evaporation > Precipitation
		Tropical desert	TBWh	Arid: All months dry
		Tropical mountain systems	TM	Approximate > 1000 m altitude (local variations)
Subtropical	Eight months or more over 10°C	Subtropical humid forest	SCf	Humid: No dry season
		Subtropical dry forest	SCs	Seasonally Dry: Winter rains, dry summer
		Subtropical steppe	SBSH	Semi-Arid: Evaporation > Precipitation
		Subtropical desert	SBWh	Arid: All months dry
		Subtropical mountain systems	SM	Approximate > 800-1000 m altitude
Temperate	Four to eight months over 10°C	Temperate oceanic forest	TeDo	Oceanic climate: coldest month over 0°C
		Temperate continental forest	TeDc	Continental climate: coldest month under 0°C
		Temperate steppe	TeBSk	Semi-Arid: Evaporation > Precipitation
		Temperate desert	TeBWk	Arid: All months dry
		Temperate mountain systems	TeM	Approximate > 800 m altitude
Boreal	Up to 3 months over 10°C	Boreal coniferous forest	Ba	Vegetation physiognomy: coniferous dense forest dominant
		Boreal tundra woodland	Bb	Vegetation physiognomy: woodland and sparse forest dominant
		Boreal mountain systems	BM	Approximate > 600 m altitude
Polar	All months below 10°C	Polar	P	Same as domain level

<sup>a</sup> Zonal vegetation: resulting from the variation in environmental, i. e. climatic, conditions in a north-south direction.

<sup>b</sup> A dry month is defined as the month in which the total of precipitation P expressed in millimeters is equal to or less than twice the mean Temperature in degrees Centigrade.

## INCOME CATEGORIES

### *Definitions*

The income categories adopted in the FRA 2015 analysis were defined by the World Bank (<http://data.worldbank.org/about/country-and-lending-groups>) in accordance with the following thresholds:

1. Low-income economies: \$1,045 or less;
2. Lower-middle: US\$1,046 to \$4,125;
3. Upper-middle: US\$4,126 to \$12,745;
4. High: US\$12,746 or more.

### *Grouping by countries*

#### **LOW INCOME:**

Afghanistan  
 Bangladesh  
 Benin  
 Burkina Faso  
 Burundi  
 Cambodia  
 Central African Republic  
 Chad  
 Comoros  
 Democratic Republic of the Congo  
 Eritrea  
 Ethiopia  
 Gambia  
 Guinea  
 Guinea-Bissau  
 Haiti  
 Kenya  
 Liberia  
 Madagascar  
 Malawi  
 Mali  
 Mozambique  
 Myanmar  
 Nepal  
 Niger  
 Rwanda  
 Sierra Leone  
 Somalia  
 Tajikistan  
 Togo  
 Uganda  
 United Republic of Tanzania  
 Zimbabwe

#### **LOWER MIDDLE INCOME:**

Armenia  
 Bhutan  
 Bolivia  
 Cameroon  
 Cape Verde  
 Congo  
 Côte d'Ivoire  
 Djibouti  
 Egypt  
 El Salvador  
 Georgia  
 Ghana  
 Guatemala  
 Guyana  
 Honduras  
 India  
 Indonesia  
 Kiribati  
 Kyrgyzstan  
 Lao People's Democratic Republic  
 Lesotho  
 Mauritania  
 Micronesia (Federated States of)  
 Moldova, Republic of  
 Mongolia  
 Morocco  
 Nicaragua  
 Nigeria  
 Pakistan  
 Papua New Guinea  
 Paraguay  
 Philippines  
 Samoa  
 Sao Tome and Principe

Senegal  
Solomon Islands  
South Sudan  
Sri Lanka  
Sudan  
Swaziland  
Syrian Arab Republic  
Timor-Leste  
Ukraine  
Uzbekistan  
Vanuatu  
Viet Nam  
Yemen  
Zambia

***UPPER MIDDLE INCOME:***

Albania  
Algeria  
American Samoa  
Angola  
Argentina  
Azerbaijan  
Belarus  
Belize  
Bosnia and Herzegovina  
Botswana  
Brazil  
Bulgaria  
China  
Colombia  
Costa Rica  
Cuba  
Dominica  
Dominican Republic  
Ecuador  
Fiji  
Gabon  
Grenada  
Hungary  
Iran (Islamic Republic of)  
Iraq  
Jamaica  
Jordan  
Kazakhstan  
Lebanon  
Libya  
Malaysia  
Maldives  
Marshall Islands

Mauritius  
Mexico  
Montenegro  
Namibia  
Palau  
Panama  
Peru  
Romania  
Saint Lucia  
Saint Vincent and the Grenadines  
Serbia  
Seychelles  
South Africa  
Suriname  
Thailand  
The former Yugoslav Republic of Macedonia  
Tonga  
Tunisia  
Turkey  
Turkmenistan  
Tuvalu  
Venezuela

***HIGH INCOME:***

Andorra  
Antigua and Barbuda  
Aruba  
Australia  
Austria  
Bahamas  
Bahrain  
Barbados  
Belgium  
Bermuda  
Brunei Darussalam  
Canada  
Cayman Islands  
Chile  
Croatia  
Cyprus  
Czech Republic  
Dem People's Rep of Korea  
Denmark  
Equatorial Guinea  
Estonia  
Faroe Islands  
Finland  
France  
French Polynesia

Germany  
Greece  
Greenland  
Guam  
Iceland  
Ireland  
Isle of Man  
Israel  
Italy  
Japan  
Kuwait  
Latvia  
Liechtenstein  
Lithuania  
Luxembourg  
Malta  
Monaco  
Netherlands  
New Caledonia  
New Zealand  
Northern Mariana Islands  
Norway  
Oman  
Poland  
Portugal  
Puerto Rico  
Qatar  
Republic of Korea  
Russian Federation  
Saint Kitts and Nevis  
Saint Martin  
San Marino  
Saudi Arabia  
Singapore  
Slovakia  
Slovenia  
Spain  
Sweden  
Switzerland  
Trinidad and Tobago  
Turks and Caicos Islands  
U.K. of Great Britain and Northern Ireland  
United Arab Emirates  
United States of America

United States Virgin Islands  
Uruguay

27 countries and territories in the FRA 2015 set of 234 countries do not have a World Bank income category, these are the following:

Anguilla  
British Virgin Islands  
Cook Islands  
Falkland Islands (Malvinas)  
French Guiana  
Gibraltar  
Guadeloupe  
Guernsey  
Jersey  
Martinique  
Mayotte  
Montserrat  
Nauru  
Netherlands Antilles  
Niue  
Norfolk Island  
Pitcairn  
Réunion  
Saint Barthelemy  
Saint Helena  
Saint Pierre and Miquelon  
Svalbard and Jan Mayen  
Tokelau  
Vatican City  
Wallis and Futuna  
West Bank  
Western Sahara

## ANNEX 5

## List of FRA 2015 variables by topic

TOPIC / Variable	Unit	Reporting year				
		1990	2000	2005	2010	2015
<b>FOREST AREA AND FOREST CHARACTERISTICS</b>						
1.1 Forest area	1000 ha	x	x	x	x	x
1.2 Area of other wooded land	1000 ha	x	x	x	x	x
1.3 Area of other land	1000 ha	x	x	x	x	x
1.3.1 ...of which with tree cover	1000 ha	x	x	x	x	x
1.4 Inland water bodies	1000 ha	x	x	x	x	x
1.5 Total country area	1000 ha	x	x	x	x	x
1.6 Forest expansion	1000 ha/yr	x	x	x	x	
1.6.1 ...of which afforestation	1000 ha/yr	x	x	x	x	
1.6.2 ...of which natural expansion of forest	1000 ha/yr	x	x	x	x	
1.7 Deforestation	1000 ha/yr	x	x	x	x	
1.7.1 ...of which human induced	1000 ha/yr	x	x	x	x	
1.8 Reforestation	1000 ha/yr	x	x	x	x	
1.8.1 ...of which artificial	1000 ha/yr	x	x	x	x	
2.1 Primary forest	1000 ha	x	x	x	x	x
2.2 Other naturally regenerated forest	1000 ha	x	x	x	x	x
2.2.1 ...of which introduced species	1000 ha	x	x	x	x	x
2.2.1.1 ...of which naturalized		x	x	x	x	x
2.3 Planted forest	1000 ha	x	x	x	x	x
2.3.1...of which introduced species	1000 ha	x	x	x	x	x
2.4 Area of mangrove forest	1000 ha	x	x	x	x	x
2.4.1 ...of which planted	1000 ha	x	x	x	x	x
2.5 Primary forest transition matrix	1000 ha	(1990-2000, 2000-2010, 2010-2015)				
<b>PRODUCTION</b>						
3.1 Total forest growing stock	Million m <sup>3</sup>	x	x	x	x	x
3.1.1 ...of which coniferous	Million m <sup>3</sup>	x	x	x	x	x
3.1.2 ...of which broadleaved	Million m <sup>3</sup>	x	x	x	x	x
3.2 Total other wooded land growing stock	Million m <sup>3</sup>	x	x	x	x	x
3.2.1 ...of which coniferous	Million m <sup>3</sup>	x	x	x	x	x
3.2.2 ...of which broadleaved	Million m <sup>3</sup>	x	x	x	x	x
3.3 Net annual increment	m <sup>3</sup> /ha/yr	x	x	x	x	
3.3.1 ...of which coniferous	m <sup>3</sup> /ha/yr	x	x	x	x	
3.3.2 ...of which broadleaved	m <sup>3</sup> /ha/yr	x	x	x	x	
3.4 Volume of top ten species	Million m <sup>3</sup>	x	x	x	x	
3.5 Above-ground biomass	Million tonnes	x	x	x	x	x
3.6 Below-ground biomass	Million tonnes	x	x	x	x	x

3.7	Dead wood	Million tonnes	x	x	x	x	x
3.8	Carbon in above-ground biomass	Million tonnes	x	x	x	x	x
3.9	Carbon in below-ground biomass	Million tonnes	x	x	x	x	x
3.10	Carbon in dead wood	Million tonnes	x	x	x	x	x
3.11	Carbon in litter	Million tonnes	x	x	x	x	x
3.12	Soil carbon	Million tonnes	x	x	x	x	x
4.1	Production forest	1000 ha	x	x	x	x	x
4.2	Multiple use forest	1000 ha	x	x	x	x	x
4.3	Value of most important commercial NWFP	1000 local currency					x
4.4	Total wood removals	Million m <sup>3</sup>	Annual data 1990-2011				
<b>PROTECTIVE FUNCTIONS ECOSYSTEM SERVICES</b>							
5.1	Protection of soil and water	1000 ha	x	x	x	x	x
	5.1.1...of which production of clean water	1000 ha	x	x	x	x	x
	5.1.2...of which coastal stabilization	1000 ha	x	x	x	x	x
	5.1.3... of which desertification control	1000 ha	x	x	x	x	x
	5.1.4... of which avalanche control	1000 ha	x	x	x	x	x
	5.1.5...of which erosion, flood protection or reducing flood risk	1000 ha	x	x	x	x	x
	5.1.6...of which other	1000 ha	x	x	x	x	x
5.2	Ecosystem services, cultural or spiritual values	1000 ha	x	x	x	x	x
	5.2.1... of which public recreation	1000 ha	x	x	x	x	x
	5.2.2... of which carbon storage or sequestration	1000 ha	x	x	x	x	x
	5.2.3... of which spiritual or cultural services	1000 ha	x	x	x	x	x
	5.2.4... of which other	1000 ha	x	x	x	x	x
<b>BIODIVERSITY/ CONSERVATION</b>							
6.1	Conservation of biodiversity	1000 ha	x	x	x	x	x
6.2	Forest area within protected areas	1000 ha	x	x	x	x	x
7.1	List of woody invasive species	1000 ha			x	x	
7.2	Area of forest affected by woody invasive species	1000 ha			x	x	
<b>DISTURBANCE AND FOREST DEGRADATION</b>							
8.1	Total land area burned	1000 ha	Annual data 2003-2012				
	8.1.1. ...of which forest area burned	1000 ha	Annual data 2003-2012				
8.2	Number of fires	Number	Annual data 2003-2012				
	8.2.1 ...of which forest fires	Number	Annual data 2003-2012				
8.3	Area of forest damaged by outbreak of: insects, diseases and severe weather events	1000 ha	List of year(s) of latest outbreak				
9.1	Area of forest with reduced canopy cover	% canopy cover	2000-2010				
<b>MEASURING PROGRESS TOWARD SFM</b>							
<b>i. National-scale enabling environment for SFM</b>							
10.1	Policies supporting sustainable forest management	Boolean	Latest available year				
	10.1.1 ...of which in publicly owned forests	Boolean	Latest available year				
	10.1.2 ...of which in privately owned forests	Boolean	Latest available year				

10.2	Legislation and regulations supporting SFM	Boolean	Latest available year		
10.2.1	...of which in publicly owned forests	Boolean	Latest available year		
10.2.2	...of which in privately owned forests	Boolean	Latest available year		
11.1	National stakeholder platform	Boolean	Latest available year		
12.1	Forest area intended to be in permanent forest land use	1000 ha			x
12.1.1	...of which permanent forest estate	1000 ha			x
13.1	Forest area monitored under a national forest monitoring framework	%, year, check box	Latest available year		
13.2	Forest area monitored through Other field assessments	%, year, check box	Latest available year		
13.3	Forest area monitored through Updates to other sources	%, year, check box	Latest available year		
13.4	Forest area monitored through Expert estimate	%, year, check box	Latest available year		
13.5	Types of forest reporting progress used at national scale	%, year, check box	List of year(s)		
13.5.1	Criteria and indicators reporting	Boolean	Latest available year		
13.5.2	Periodic national state of the forest reporting	Boolean	Latest available year		
13.5.3	Other	Boolean	Latest available year		
13.5.4	None	Boolean	Latest available year		
<b>ii. Operational scale progress toward SFM</b>					
14.1	Forest area with management plan	1000 ha			x
14.1.1	...of which for production	1000 ha			x
14.1.2	...of which for conservation	1000 ha			x
14.2	Monitoring of forest management plans		Latest available year		
14.2.1	Soil and water management	Boolean	Latest available year		
14.2.2	High conservation value forest delineation	Boolean	Latest available year		
14.2.3	Social consideration/community involvement	Boolean	Latest available year		
14.3	Percent of area under forest management plan that is monitored annually	%	Latest available year		
15.1	Type of stakeholder inputs		Latest available year		
15.1.1	Planning phase	Boolean	Not applicable		
15.1.2	Operations phase	Boolean	Not applicable		
15.1.3	Review of operations	Boolean	Not applicable		
16.1	Area of forest certified under FSC	1000 ha	Annual data 2000-2012		
16.2	Area of forest certified under PEFC	1000 ha	Annual data 2000		
16.3	Area of forest certified by other international certification	1000 ha	Annual data 2000		
16.4	Domestic forest management certification	1000 ha	Annual data 2000		
<b>ECONOMICS/ LIVELIHOODS</b>					
17.1	Forest revenue	1000 local currency	x	x	x
17.2	Public expenditures on forests	1000 local currency	x	x	x
18.1	Public ownership	1000 ha	x	x	x
18.1.1	...of which owned by the state at national scale	1000 ha	x	x	x
18.1.2	...of which owned by the state at the sub-national government scale	1000 ha	x	x	x
18.2	Private ownership	1000 ha	x	x	x
18.2.1	...of which owned by individuals	1000 ha	x	x	x

18.2.2 ...of which owned by private business entities and institutions	1000 ha	x	x	x	x
18.2.3 ... of which owned by local, tribal and indigenous communities	1000 ha	x	x	x	x
18.3 Unknown ownership	1000 ha	x	x	x	x
18.4 Holder of management rights of public forests	1000 ha	x	x	x	x
18.5 Public administration	1000 ha	x	x	x	x
18.6 Individuals	1000 ha	x	x	x	x
18.7 Private companies	1000 ha	x	x	x	x
18.8 Communities	1000 ha	x	x	x	x
18.9 Other	1000 ha	x	x	x	x
19.1 Employment in forestry	1000 FTE	x	x	x	x
19.1.1 ...of which female	1000 FTE	x	x	x	x
20.1 Gross value added from forestry	Million local currency	Latest available year			

**LOOKING FORWARD**

21.1 Government targets/aspirations for forest area in 2020 and 2030	1000 ha	2020, 2030
21.2 Forest area earmarked for conversion	1000 ha	2013

Note: Shaded cells mean that the reported values correspond to an average of a five year period.

## ANNEX 6

# List of National correspondents, FRA Advisory Group members and reviewers

### **NATIONAL CORRESPONDENTS**

<http://www.fao.org/forest-resources-assessment/background/national-correspondents/en/>

### **FRA ADVISORY GROUP MEMBERS**

<http://www.fao.org/forest-resources-assessment/background/advisory-group/en/>

### **REVIEWERS**

F. Bojang, T. Brandeis, J. Cedergren, R. D'Annunzio, C. De Wasseinge, J. Donnegan, K. Duvemo, C. Eckelmann, M. Garzuglia, J. Hall, L. Jin, S. Johnson, O. Jonsson, K. Shono, E. Kilawe, W. Kollert, A. Kuliesis, E. Lindquist, K. MacDicken, L. Marklund, S. Maulo, J. Meza, R. Michalak, I. Pesut, L. Pina, S. Radnaaragchaa, I. Thompson, S. Tomter, M. Valgepea, P. van Lierop, P. Vantomme, E. Warsta, A. Whiteman, M. Wilkie.

