Forest Resources Assessment Working Paper 178

The Global Forest Resources Assessment

Auto-Evaluation

Prepared
by
Judita Janković, Consultant

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ACRONYMS AND ABBREVIATIONS

ACTO	Amazon Cooperation Treaty Organization
CBD	Convention on Biological Diversity
COFO	Committee on Forestry (FAO)
COP15	The 15th Conference of the Parties (to the UNFCCC)
CPF	Collaborative Partnership on Forests
FAOSTAT	Food and Agriculture Organization Statistical Databases
FDI	Forest Development Index
FOEL	Forest Communication and Liaison Team
FOEP	Forest Policy and Economics Team (ex-FONP)
FOMA	Global Forest Assessment and Reporting Team (ex-FOIM)
FOMR	Forest Resources Management Team
FORIS	Forestry Information System (FAO)
FRA	Global Forest Resources Assessment
FRA AG	FRA Advisory Group
GEO	Group on Earth Observations
HDI	Human Development Index
HDR/NHDR	Human Development Report/National HDR
IEE	Independent External Evaluation of FAO
INBAR	International Network for Bamboo and Rattan
ICRAF	World AgroForestry Centre
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
IUFRO	The Global Network for Forest Science Cooperation
IUCN	International Union for Conservation of Nature
MAR	Monitoring, Assessment, and Reporting
MCPFE	Ministerial Conference on the Protection of Forests in Europe
MDG	Millennium Development Goals
MTP	Medium-Term Plan
NC	National Correspondent for FRA reporting
NFMA/NFA	National Forest Monitoring and Assessment/National Forest Assessment
NFP	National Forest Programme
NRCE	Environmental Assessment and Management Unit
NWFP	Non-wood forest product
OEDD	FAO Office of Evaluation (ex-PBEE)
PE	Programme Entity
PIRES	Programme Planning, Implementation Reporting and Evaluation Support System
PWB	Programme of Work and Budget
RSS	Remote Sensing Survey
SFM	Sustainable Forest Management
SOEF	State of Europe's Forests
SOFO	State of the World's Forests
UNCHR	United Nations Commission on Human Rights
UNICEF	The United Nations Children's Fund
UN-REDD	The UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme

UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UNEP-WCMC	World Conservation Monitoring Centre (of UNEP)
WRI	World Resources Institute
WWF	World Wide Fund for Nature
WFC	World Forestry Congress

EXECUTIVE SUMMARY

The Food and Agriculture Organization (FAO) has had a mandate to provide data and information on global forest resources at 5 to 10 year intervals since 1945. FAO coordinates the country data collection and analyses the data to present the status and changes in global forest resources through a process that has become known as the Global Forest Resources Assessments (FRA), coordinated by the FRA Team in the FAO Forestry Department. The FRA Team is composed of staff funded by regular programme and extra-budgetary resources and a number of short and long-term consultants, and forms part of the Forest Assessment and Reporting Service (FOIM), renamed the Global Forest Assessment and Reporting Team (FOMA) in 2010. Major activities and outputs of the FRA Team include: facilitating expert consultations to provide technical input for the design (and subsequently, technical evaluation of) FAO's global forest resources assessments; training National Correspondents to report to FRA, including through delivery of regional and subregional workshops; facilitating quality-controlled reporting and validation of country data and information; producing and disseminating results and key publications; conducting expert consultations to harmonize forest-related definitions and reporting; and providing overall coordination of the country reporting process.

An auto-evaluation – a participatory review of the Global Forest Resources Assessment (FRA) programme – was facilitated by an external consultant and supported by the FRA team and the FAO Evaluation Office (September 2009 - February 2010). The auto-evaluation addressed the relevance, effectiveness and efficiency of the process, major outputs and outcomes related to FRA and as defined in the FAO Medium-Term Plan (2007-2010). The new structure of the programme according to the FAO Strategic Framework (2010-2019) was also considered. The aims were to reflect on programme achievements and shortcomings during the period from 2003 to 2008, to gain a perspective from information providers and users of FRA data and to consider what should be maintained and what should be changed to improve the programme.

Feedback was elicited from over 400 participants through questionnaires administered to National Correspondents, internal and external users of data, and through interviews with key stakeholder groups. A desk review, citation and web traffic analysis were carried out. The country reporting process from the perspectives of the FRA Team, the FRA Advisory Group and the National Correspondents; data quality and data collection challenges; dissemination of information products; use of FRA data and information by countries, external and internal users; effectiveness of the FRA Team; overall programme outcomes and funding are some of the key issues addressed in the report.

The FRA reports have firmly established themselves as FAO flagship publications and the FRA approach and process have overall evolved positively. With its strong international appeal, FRA is recognised as the best available information and data on global forest resources, although it is still most commonly known for its assessment of global deforestation rates. The role of the FRA Team in facilitating the country reporting, especially in reviewing the data, is a critical quality assurance mechanism. However, more frequent and targeted capacity-building engagement provided by the FRA focal points could considerably contribute toward improving data quality in countries. Overall, there is a strong need for continued capacity-building and increased synergy with the National Forest Monitoring Assessments, the UN-REDD Programme and the global remote sensing survey. Data users would welcome more frequent reporting on key variables, but there is concern that this would result in an increased reporting burden on countries.

New links, collaboration and partnerships with forest-related organizations and national counterparts forged through the FRA country reporting process represent a significant outcome and the nomination of National Correspondents and the FRA Advisory Group are two major

contributions to this. Much progress has been made on streamlining forest-related reporting in recent years. Equally significant is the strengthening of country ownership reflected through a change from initially associating FRA with an FAO product to perceiving it as a country product as a result of the experience. Although less visible aspects of the FRA, these outcomes are evidently highly appreciated, in some cases even more so than the global report itself – a key output of the FRA programme.

FRA data and information is used by countries to inform current debates on national forest resources, as input to new forest legislation and national programmes, and in forest carbon financing mechanism proposals. National Correspondents reported that FRA has contributed to increased importance of the forest sector on the national agenda, to raising awareness of the impact of forests in poverty alleviation, and to improvements in data management and dissemination.

Despite the positive developments in the reporting process, challenges remain in some countries related to unavailability and low reliability of data, dispersed country sources, a lack of internal organisation and support for the FRA process, difficulties in mobilizing country teams, time constraints and staff attrition. Nevertheless, National Correspondents appreciate the networking and collaboration gained through the process. Moreover, the FRA process drives countries to address some of these challenges.

The FRA country reports contain a wealth of country-specific information on forest resources and these reports have the potential to be more widely disseminated among country stakeholders and the general public. The FRA Team can play a significant role in this effort. More generally, the development and implementation of a communication and dissemination strategy could considerably contribute to improving the diffusion of FRA data and information to targeted audiences, especially high-level policy makers.

In addition to the results of the interviews and questionnaires, the FAO Strategy for Forestry (2008) endorsed during COFO 2009 was also considered to provide a broader context for shaping auto-evaluation recommendations. Recommendations focus primarily on strengthening the FRA Team to enable more effective implementation strategies in the country reporting process; maintain involvement of countries, organizations and regional officers in a sustainable manner; improve data quality, especially through more targeted support to countries; make data and results more user-friendly and relevant; continue with harmonization efforts of forest-related definitions and reporting; maintain the role of a key provider of comprehensive, timely and high quality data and information.

In conclusion, FRA is appreciated both as a product and as a process. The Programme is seen to continuously evolve in a positive manner, as demonstrated more recently by the implementation of the global remote sensing survey of forests for FRA 2010. However, the lack of secure, long-term funding to support the key roles and functions of the FRA Team is a serious concern. While FRA is perceived as the best global source of information on forest resources, the opportunity to take FRA to the next level could be fulfilled through more fine-tuned capacity building efforts to address limitations in country data and thus data quality on the world's forest resources combined with increased use of remote sensing at the global level and a coherent communication strategy. Synergies have been facilitated with the groups collecting information on forest products and on institutions and efforts should be made to capitalize on progress to date and further strengthen these synergies.

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1 INTRODUCTION

This report presents the results of the auto-evaluation of the Global Forest Resources Assessment (FRA) programme, followed by recommendations for forward-looking improvements to be considered by Senior Management of the FAO Forestry Department. The methodology entailed a desk review, questionnaires designed for users and information providers, individual and group interviews, citation and web traffic analysis, and a workshop with the FRA team to evaluate and finalize the recommendations. Key aspects of the programme discussed in this report include: programme design and relevance, the FRA reporting process, dissemination of FRA data and information, technical and managerial efficiency, programme effectiveness, resources management and emerging issues. The action plan concerning the auto-evaluation recommendations is outlined in Annex 1. Issues covered in the auto-evaluation, including this report, were based on the auto-evaluation scope (Annex 2).

1.1 Historical perspective

The need to collect updated information on world's forest resources was recognized as early as during the first FAO Conference session in 1945, in the backdrop of post-war stock-taking of timber supplies to rebuild Europe combined with the need to promote economic development in tropical countries. In the following year, the Forestry and Forest Products Division was established and initiated the first worldwide assessment of forests by FAO.

The sixth session of the FAO Conference in 1951 recommended that the assessments continue regularly. Consequently, FAO has been monitoring global forest resources at 5 to 10 year intervals since 1946. The Global Forest Resources Assessments (FRA) are based on data that countries provide to FAO in response to a standardised questionnaire. FAO then compiles and analyses the information and presents the current status of the world's forest resources and changes over time.

A more detailed historical perspective on the assessments, including methodological developments, as well as the more recent activities and outputs (publications, guidelines, training material etc.) can be found on the FRA website[1], in more recent editions of FRA Main Reports (e.g. FRA 2005 – Annex 6), as well as in Mather's (2005) comprehensive technical review of FRA.

1.2 FRA programme as implemented today

The assessments have increased in scope and quality over time, as knowledge on forest resources has improved at national level and with advancements in technology. The most recently published assessment, FRA 2005, addressed six[2] broad themes aimed at monitoring progress towards sustainable forest management:

- Extent of forest resources and their contribution to the global carbon cycle
- Forest health and vitality
- Forest biological diversity
- Productive functions of forests
- Protective functions of forests
- Socio-economic functions of forest resources

[1] http://www.fao.org/forestry/fra/en/

[2] FRA 2010 included a seventh theme on the legal, policy and institutional framework related to forests.

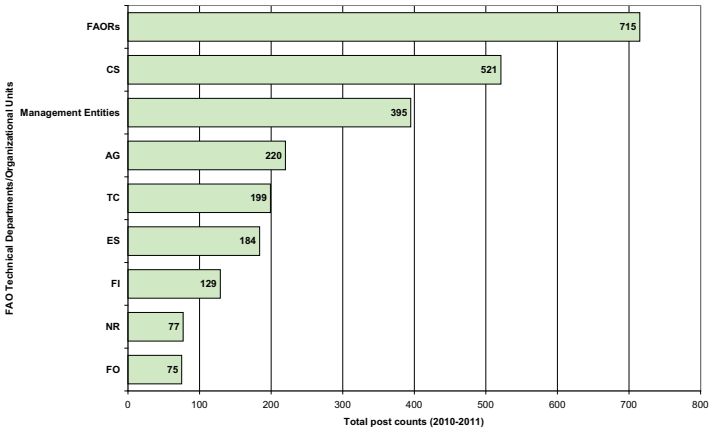
The Global Forest Resources Assessment programme is coordinated by the Forestry Department at FAO headquarters in Rome, more specifically by the FRA Team, located in the Forest Assessment and Reporting Service (FOIM), renamed Global Forest Assessment and Reporting Team (FOMA) at the start of the 2010-2011 biennium.

The new Strategic Framework of FAO (2010-2019), the Medium Term Plan (MTP 2010-2013) and the Programme of Work and Budget (PWB 2010-2011) set out the programme structure of the Organization around eleven Strategic Objectives, two Functional Objectives and eight Core Functions. Moreover, 56 organizational results (or outcomes) and 174 measurable indicators of achievement with two- and four-year targets have been conceptualized (MTP 2010-2013 and PWB 2010-2011). Furthermore, Impact Focus Areas represent a communication and advocacy tool to stimulate resource mobilization and partnering towards priority results (FAO, 2009).

Within this new organizational framework, Strategic Objective E covers the sustainable management of forests and trees, for which US$ 119 372 000 has been set aside in the 2010-2011 biennium.

The Forestry Department is the least staffed Technical Department at FAO Headquarters in the 2010-2011 biennium, with 75 Regular Programme staff in total, 7 in the Office of the Assistant Director-General (FOD), 35 in the Forest Economics, Policy and Products Division (FOE) and 33 in the Forest Assessment, Management and Conservation Division (FOM) under which the FRA programme is located. This compares to 129 staff in the Fisheries and Aquaculture Department (FI) and 77 in the Natural Resources Management and Environment Department (NR), both of which also have two divisions, in addition to the Office of the Assistant Director-General, respectively (Figure 1).

Figure 1: Distribution of Regular Programme posts across FAO's Departments, the Corporate Service (CS) and FAORs (PWB 2010-11)



The most significant change in terms of FRA's organizational structure up to 2009 was the replacement of the Forest Resources Division (FOR) by the Forest Products and Industry Division (FOI) as the lead division responsible for programme implementation during the period 2006 – 2009. By early 2009 the Forest Products and Industry Division was abolished and the FRA Programme moved back to the Forest Resources Division (renamed Forest Assessment, Management and Conservation Division in 2010). The explicit mentioning of the Global Forest Resources Assessment in the first major objective of the Programme Entity (PE) 2GP02 (2008-2009) suggests an *internal recognition of FRA in its own right*, at least through the strategic planning channel (Table 1).

The "birth" of FOIM/FOMA. The Forest Assessment and Reporting Service (FOIM) was first established as a programme entity in March 2006 (2GP02 - *Assessment, monitoring and reporting on forest resources, products and institutions*). This new entity, which works across the then three Divisions of the Forestry Department, was created to reduce the monitoring, assessment and reporting burden on countries and to make better use of synergies within the Department by consolidating previously separate entities dealing with country-level information.

While the Entity had links to all three divisions, it was placed under the Forest Products and Industries Division since this was the smallest of the three divisions. Originally, it was proposed that the Entity would also comprise the work on National Forest Assessments (which formed part of the FRA group in FORM), but this proposal was not implemented.

The creation of this programme entity formed part of a restructuring of the FAO due to a reduced budget and the wish to consolidate and reduce the number of programme entities in the Organization as a whole. A number of vacant posts were abolished and some staff changed positions to cover key work areas and keep all existing staff. The number of Programme Entities in the Forestry Department was reduced from 18 to 12.

The original proposal from the DG called for an abolishment of all Services, so the group was established as a "Unit". However, shortly before the meeting of the Council in November 2006, the Department was allowed to keep the *status quo* of six Services. It was decided to have two Services in each Division, so this Programme Entity became a Service (FOIM) with effect of 1 January 2007. When the Director of FOI retired in early 2009, the Service moved to FOM and was re-named the Forest Assessment and Reporting Team (FOMA) as of 1 January 2010.

Table 1: Organizational structure changes - FRA programme (2004-2009)

PWB period	Lead Division	PE	Title of Programme Entity	Major Outputs
PWB 2008-09 Final Proposal	FOI - Forest Products and Industry Division	2GP02	Assessment, monitoring and reporting on forest resources products and institutions	• Implementation of the **Global Forest Resources Assessment** process and periodical production of global reports. • Statistics on production, consumption and trade of forest products. • Development and provision of information on national forest policy and institutions. • Integration of reporting processes and national communications.
PWB 2006-07 Revised Phase II	FOI - Forest Products and Industry Division	2FP01	Assessment, and monitoring of forests and woodland resources	**As in PWB 2004-05**
PWB 2006-07	FOR - Forest Resources Division	241P1	Assessment and Monitoring of Forests and Woodland Resources	**As in PWB 2004-05**
PWB 2004-05	FOR - Forest Resources Division	241P2	Assessment and Monitoring of Forests and Woodland Resources	• Improved methodologies for assessing and monitoring changes in all types of forests and woodlands. • Reports and updates on the extent and quality of global forest resources. • Support to national and international monitoring and reporting on progress towards sustainable forest management.

Source: FAO's PIRES database (Programme Planning, Implementation Reporting and Evaluation Support System): http://pires.fao.org/pires/Index.htm.

The auto-evaluation thus covers a period of turbulence in terms of the organizational structure. However, the coordinator of the programme remained the same throughout the period covered by the auto-evaluation.

1.3 The auto-evaluation process and methodology

Process. On the basis of FAO's evaluation policy, the Evaluation Service (PBEE)[3] proposed an auto-evaluation of the Programme Entity PE *2GP02 - Assessment, monitoring and reporting on forest resources products and institutions*, in its 2008 annual cycle of auto-evaluations in FAO. In agreement with the Programme Entity Manager of the Forest Assessment and Reporting Service (FOIM), the proposal to conduct an auto-evaluation was accepted and it was agreed to focus on the Global Forest Resources Assessment, a major programme covered within the proposed Programme Entity (2GP02)[4].

The manager and staff of the FRA programme brainstormed on potential analyses and scope of the auto-evaluation and participated in a SWOT session in the context of a broader strategic exercise in the second half of 2008. In addition to these inputs, a consultation with the members of the FRA Advisory Group was used to shape the auto-evaluation scope (Annex 2). Due to a heavy workload of the work group during 2008 and early 2009, the auto-evaluation was postponed until September 2009, when an Auto-Evaluation Consultant was hired to facilitate the evaluation. Quantitative and qualitative data was collected from September 2009 through January 2010, with interim results delivered to the FRA Team in early December (Annex 9).

Methodology. The evaluation methodology for assessing the FRA programme consisted of:

- **Desk reviews** that included examination and analysis of all relevant and documented printed and online material related to FRAs;
- **Questionnaire surveys** tailored to: i) National Correspondents as FRA country data and information providers and users; ii) internal FRA data users; iii) external FRA data users and stakeholders (Annex 4);
- **Interviews** with FRA Team/Programme staff, other forestry staff in FAO (Headquarters and field offices), and with external stakeholders (FRA Advisory Board members representing various international entities; Annex 5);
- **Analysis of the financial and human resources** available to support FRAs;
- **Citation analysis** using selected online search databases and engines (Annex 6);
- **Web traffic analysis** of the FAO Forestry and FRA websites (Annex 7);

Raw interview data was analysed and synthesized, drawing attention to issues consistent across the majority of informants (triangulating key messages) and those that are distinct, innovative or contentious. Interview data was collected and analysed both manually (note-taking) and using Excel. Questionnaire data was mostly collected and analysed using the SurveyMonkey software that offers descriptive statistical analysis output, including segmentation and cross-tabulations of data, and Excel.

2 AUTO EVALUATION RESULTS

Auto-evaluation results are structured around key criteria as defined by the Auto-evaluation guidelines[5] of the FAO Office of Evaluation, and as defined more specifically and applied to the FRA programme by the auto-evaluation scope. These include:

[3] PBEE changed to OEDD (Office of Evaluation) at the start of the 2010-11 biennium.
[4] Two major outputs of the PE 2GP02 are related to the Global Forest Assessment Programme ("Implementation of the Global Forest Resources Assessment process and periodical production of global reports" and "Integration of reporting processes and national communications").
[5] http://www.fao.org/pbe/pbee/common/ecg/232/en/AutoEvaluationGuidelinesDRAFTJuly2007.pdf

- *design* and *relevance* of the FRA programme;
- effectiveness and efficiency of the *country reporting process*;
- *dissemination* of FRA data and information;
- *technical efficiency and soundness*, including *managerial efficiency*;
- overall programme effectiveness evaluating the medium and longer-term outcomes and how partnerships contributed;
- resource management; and
- emerging issues.

2.1 Programme design

2.1.1 Appropriateness and coherence

The new Strategic Framework of FAO (2009-2013) places the FRA programme under the Strategic Objective E (SO E): Sustainable management of forests and trees. More specifically, the programme is accounted for under Organizational Result E1 – *Policy and practice affecting forests and forestry are based on timely and reliable information*, in conjunction with the National Forest Monitoring Assessment (NFMA) programme; and the State of the World's Forests (SOFO) (FOEL). Accordingly, the two indicators of E1, namely E1.1 and E1.2 are the number of countries that complete a NFMA meeting FAO standards, and the number of countries that submit complete reports for the FRA, respectively. Markedly, all indicators under SO E start with "Number of countries..." without any reference to qualitative indicators or characteristics (apart from "meeting FAO standards" for NFMA and "complete reports" for FRA).

The baseline for FRA is set to be 130 country reports with a 4-year target increase to 157 (FRA 2005 had 229 country reports, while FRA 2010 has 233 cleared country reports to date). Some are desk studies, as not all countries submit a report. Additionally, not all country reports submitted are complete (see table of comparison between FRA 2000 through to FRA 2010, Table 4, section 2.5b).

In terms of Core Functions, which provide the "glue" and coherence between the various forestry related outcomes of Strategic Objective E, FRA (part of E1) has the functions of monitoring and assessment; information, knowledge and statistics dissemination; capacity-building; advocacy and communication; and inter-disciplinary approach and partnerships (Table 2).

Table 2: Application of Core Functions to Strategic Objective E

Application of Core Functions to Strategic Objective E								
Org Result	A - Perspectives, trend monitoring, assessment	B - Information, knowledge, statistics	C - International instruments	D - Policy advice	E - Tech support, capacity building	F - Advocacy, communication	G – Inter-disciplinary approach	H - Partnerships, alliances
E1	X	X			X	X	X	X
E2			X			X	X	X
E3			X	X	X	X	X	X
E4			X		X	X	X	X
E5	X	X		X				
E6			X	X	X	X	X	X

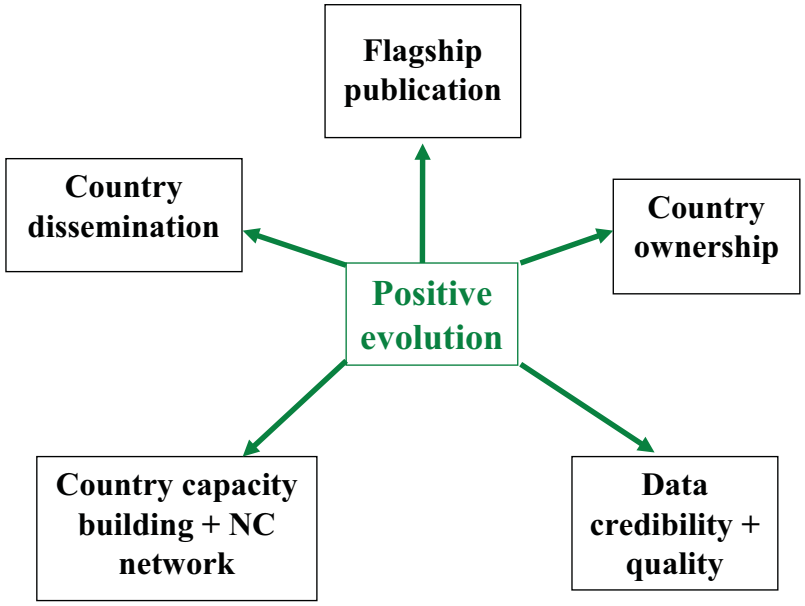
The juxtaposition of NFMA, SOFO and FRA under a single outcome is reasonable and a rational choice; however, links to other relevant processes and projects, such as the UN-REDD have not been explicitly stated.

While E1 and E5 were originally a single entity, they were split as the scope was too big. While the split seems reasonable with E1 providing the data and information and E5 incorporating the information into policies, mechanisms to dynamically link the two need to be ensured. The Forestry Strategy drafted in 2008 and adopted in 2009 by COFO places timely and high quality information on forest resources at the centre of the strategy. FRA is also identified as an Impact Focus Area in FAO's new Strategic Framework to mobilize resources, contribute to strategic objectives, and as a form of a communication and advocacy tool (FAO, 2009).

2.1.2 Positioning of FRA

Judging by the key messages from interviewing internal (FAO Forestry and Natural Resources Department) and external (former and existing NCs, Government officials, international organizations, academic representatives – most of these represented by AG members) stakeholder groups, there is wide recognition that in its more recent history *FRA has been and is evolving in a mainly*[6] *positive direction* (expansion towards a more holistic scope, sustainable forest management reporting format, closer alignment with international reporting and conventions, strengthening the National Correspondent network, the remote sensing component in FRA 2010). Key messages that emerged through triangulation of interview data implicitly underscore the relevance, appropriateness and coherence of the programme (Figure 2).

Figure 2: Overall key messages on the Global Forest Resources Assessment Programme



Flagship publication and country ownership. Given its long history and tradition, it is recognised that the FRA Main Report is a *key flagship* 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 national policy processes was evident from the interviews and questionnaire data (see section 10 on Programme Effectiveness). A National Correspondent vividly explained the transformation of the main report and associated

[6] The most recent technical evaluation of FRA 2005 (Kotka V, 2006) recognised that the reporting burden for NCs has been increasing considerably – a finding also corroborated in the present evaluation.

outputs from what was initially perceived as a *FAO product* to a valued and used *country-owned report* offering an overview on national forest resources.

Data process credibility and quality. Consistent messages emerged also regarding the *data* generated by the FRA: data credibility and quality should not to be compromised by the format and appeal of presenting it, nor by the quantity of data requested. The majority of informants, including members of the FRA Team highlighted the delicate balance between *FRA data quantity and quality in country reporting* and the 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.

Country capacity building and the NC network. Less visible features of FRA, such as mobilizing other national stakeholders for the country reporting process and the networking were pointed out as crucial in addition to the external, visible and formal processes and outputs, such as the KOTKA expert consultations and the FRA Main Report.

Country dissemination. When informants were prompted to think about users who should or could be using FRA data and information but are currently not doing so, NCs urged that effort should be directed towards country capacity-building and the NC network instead of reaching out to additional potential users. The need to disseminate FRA information products and data at country level more actively was also raised – an activity that is perceived to be the responsibility of both the NCs and the FRA Team. While dissemination of results is important (that is, the distribution of FRA publications), use of FRA results to make informed decisions is the ultimate aim of the programme.

2.2 Relevance to needs

2.2.1 Whose needs?

Demographics. Prior to discussing the extent of relevance to needs, it is worthwhile to ask: who needs timely and accessible information on forest resources, that is, who are the actual users? Part of the answer lies in the profiles of the users who responded to the surveys, more specifically the *demographics of internal and external users* (see Annex 3), as well as in the *perceptions* among FO colleagues and AG members as to who *existing and potential users* of FRA data and information are and ought to be.

Judging from the profile of external users who responded to the External user survey, about a third are from *Europe*, and most are affiliated with *academic institutions (including students)*, followed by Government or public institutions and research institutions (see pie graphs in Annex 3).

Internal users of FRA data and information are mostly professional staff in the P1-P4 category, although a good proportion of the senior professional staff (P5 and above) also responded and reported using FRA (23percent), and 22 percent of respondents were consultants. Some general service staff also responded to the survey[7] (13 percent or 8 individuals) although most were admittedly not very familiar with the FRA data and information (5 out of 8).

Internally, FRA is viewed by a few informants as perticularly servicing international needs, perhaps at the expense of the need to attend more to country needs. These international needs and processes

[7] While the Internal user survey was open for all FAO staff to participate regardless of contract type, level or Department, questions were designed to assess the level of awareness and familiarity with FRA data and information.

include but are not limited to: the United Nations Framework Convention on Climate Change (UNFCCC), United Nations Forum on Forests (UNFF), the Convention on Biological Diversity (CBD), regional Criteria and Indicators (C&I) processes and similar.

Logframe definitions of needs and users. Although the new logframe (FAO, 2009) does not outline who the primary and secondary users or beneficiaries of FAO services, outputs and outcomes are, according to the previous biennium logframe (PWB 2008-2009), Member Countries, international processes, general public, academics and donor organizations were identified as *primary users* who need information and data on forest resources. More specific results on the uses of FRA at national level, as reported by National Correspondents, are discussed in section 2.4.2.

The new logframe does however outline new issues, values and challenges facing forestry that were also affirmed during the World Forestry Congress (WFC) organized by FAO in Argentina, 2009. The key messages of the WFC were:

- enhanced interaction between the forest and related sectors is needed to result in an *integrated landscape approach* and *multi-sector responses*
- worldwide, the demand for ecosystem services from forests is increasing
- forests have an increasing role in mitigating and adapting to climate change and as a source of biofuel
- linkages of forestry with agriculture, energy and water need to be recognized and synergized
- environmental, social and cultural values are becoming increasingly important

The PWB and MTP document also outlines that "*Countries expect that FAO reach outside the traditional forest sector, engage in partnerships with new stakeholders, and serve as a global leader*." The messages provide impetus for new directions of FRA in meeting newly identified information needs.

2.2.2 Country, regional and global information needs

As to whether FRA data and information are relevant to identified needs, it is useful to make a distinction between country, regional and global information needs and the match with the existing information and data, their parameters and presentation. It is not only the availability of the *type* of data that matters to users, but its *scale* (country, regional or global; by administrative units or biomes), as well as the *temporal* dimension – or the availability of time series data to enable an analysis of changes in forest resources – (Mather, 2005; Matthews, 2001).

Country needs. Information and data on national forest resources is essential for Governments and other national entities for their governance of natural resources. However, the reality is that some countries lack the capacity and resources to collect essential data, as revealed by the gap analysis conducted by the FRA Team as part of assessing the FRA 2005 experience (FAO, 2007). It is a common perception among the FRA Advisory Group members and NCs that FAO's national forest inventories and reporting for FRA has encouraged countries to systematically collect data on forest resources and raised awareness on the importance to do so in order to facilitate sustainable forest management. Most importantly, country capacity is built through these activities, particularly through the NC network and the FRA reporting process.

Nevertheless, a *data ownership paradox* is apparent: while countries report the data to FRA, which then is published in a global report, country counterparts typically cite FRA data as published by FAO. This is technically speaking a "correct" way (citing the publishing authority), however, the

reality, which is supposed to be apparent to country counterparts, especially when disputing published statistics, is that the data originated from the very same country counterparts but has been published by FAO. Disputing incidents, although rare, may unfold data reliability and ownership issues or simply ignorance regarding the FRA process and origins of the collated data. The FRA country guidelines and the process itself – at least for country counterparts – are sufficiently transparent to avoid mistaken judgments on the origins of the data collated. However, more emphasis could be put on publicizing the individual country reports, which often contain more detailed information and explanatory notes and comments.

Regional needs. The "15 Key Findings" publication format of FRA 2005 has been adopted by the US Department of Agriculture (USDA) to publish their own "*Assessment of the status and trends of natural resources from US forest and range lands: 15 key findings*". The FRA 2005 Key Findings, targeted at policy-makers, has been praised by interviewed and surveyed informants. However, National Correspondents emphasized the need to have a similarly *concise* publication showing *regional* data and trends with policy implications and recommendations, although this was done in SOFO 2007. Similarly, the need for a regional focus was also emphasized through suggesting to hold regional FRA workshops on cross-sectoral issues and on how FRA data can be used to address these.

The need for a global assessment. The necessity to produce an assessment on global forest resources is indisputable. Given the state of global forest resources and their increasingly important role in mitigating climate change and conserving biodiversity, the need for a global assessment is arguably more important than before. A global map on forests, based on a remote sensing survey will be published in FRA 2010 and represents a needed and long-awaited product[8].

While consensus exists among informants that a global assessment on forest resources is a must – and one that is uniquely carried out by FAO, there is some recognition that upgrading the programme is needed to be able to offer an improved global assessment to the international community that needs this information. The remote sensing component of FRA 2010 offers one such improvement.

The Independent External Evaluation (IEE, 2007) of FAO recognised FRA, as part of FAO's mandate to produce basic data, to be a *Global Public Good* with non-excludable access and non-rivalrous use, which is to gradually also provide information on other relevant and emerging global needs, such as deforestation and forest degradation and the resulting carbon stock changes. As a step towards this, a technical meeting on "*Assessment and Monitoring of Forest Degradation*" took place at FAO Headquarters in September 2009. Two significant conclusions were made:

- the diverse aspects of forest degradation should be communicated more effectively to climate change negotiators and other relevant stakeholders; and
- integrating forest degradation in terms of climate change and the proposed REDD mechanism is feasible, as methodologies to monitor changes in carbon stocks do exist.

In light of the conclusion that in most developing countries the quality of current forest monitoring is unsatisfactory for an accounting system of carbon credits, capacity-building including through the FRA process is crucial to improve measurement, monitoring and verification of the two FRA variables relevant for climate change reporting with the UNFCCC – *forest area changes* and *forest carbon stocks* (Holmgren *et al., 2007*).

[8] The FRA 2010 global map will be an update of the FRA 2000 global forest cover map.

2.2.3 Information gaps and needs of users

In terms of relevance of FRA 2005 to the needs of individual users, FRA overall seems to draw much attention in the area of (reported by respondents as key themes of interest[9]):

- Global forest changes and forest loss,
- Current global forest area, and
- Forest changes and loss in a specific country/region.

The above three themes are a focus for the majority of the respondents – external, internal or National Correspondents – regardless of the language respondent group or the occupational/affiliation groups. Only within the francophone group, a majority (7 respondents) also emphasized progress towards *sustainable forest management*, including conclusions of FRA as a pertinent theme.

In terms of information that users *searched but could not find*, the types of searches were either for specific themes, analyses and trend data with a few expecting to find data on species, particularly threatened species and wildlife data; and information on management aspects (Annex 8). Distinct, individual requests included information on global forest environmental awareness, industry value added and regional and local practices of sustainable forest management.

Some NC respondents suggested the following additions to the FRA report:

- Estimation of carbon emissions from forest degradation and deforestation,
- Carbon balance and SFM regarding boreal forests,
- Added value of forest products, and
- Wood increment and renewal balance.

No deletions/modifications were recommended, except for a more robust definition of primary forests, which is currently perceived as too subjective. More elaborate feedback on technical specifications of future assessments was provided in the evaluation of FRA 2005 (Kamelarczyk, 2006).

2.3 The FRA country reporting process

The following sections address the efficiency and effectiveness of the FRA country reporting process from the perspective of the key stakeholders: the National Correspondents and the members of the FRA Advisory Group and how they assess the FRA Team in coordinating the reporting process, the challenges faced and how reporting can improve.

2.3.1 National Correspondents: the information providers

The National Correspondents represent the information providers nominated to conduct the FRA country reporting and are a key asset and resource for the FRA country reporting process. They engage in specific *processes* and deliver specific *outputs*, as reflected in their Terms of Reference and illustrated in Figure 6.

[9] Corresponding to question 11 of the External user survey (*What are the top 3 FRA themes and issues that are of particular interest to you?*)

2.3.2 FRA Team

The National Correspondents were asked to evaluate the FRA Team in terms of the facilitation of the country reporting process. NCs were asked to rate the *intensity of challenges*, some of which may be imposed by the FRA Team, as well as specific features of the performance of the FRA Team.

Attitudes of National Correspondents. The attitude items with which NCs were asked to rate their level of agreement were all related to the role of the FRA Team in the process and their engagement with the NCs (Figure 3). Three of the attitude items can be used as indicators of progress towards *intangible but critical outcomes* – results achieved regarding the quality of the process or progress towards achieving these results (e.g. enhanced credibility, improved national forest monitoring). The attitude items are:

- Collaboration with the FRA focal points at FAO Headquarters (the FRA Team) for the review of reported data *enhancing the credibility* of the reporting process
- FRA focal points considerably *facilitating the compilation* of the country report
- *Participation in FRA activities* (training, workshops, revision process and liaison with FRA focal points) has improved national forest monitoring and reporting capacities

Figure 3: Attitudes of National Correspondents regarding the role of the FRA Team

Judging from the responses to the three attitude items that refer to the FRA Team, most of the 21 National Correspondents agreed (over 90 percent *strongly agree* or *agree*) that the *effort of the Team has brought in some positive, intended changes in the country reporting process*.

Most disagreement (combined proportion of *strongly disagree* and *disagree*) was generated around the perception that the Unit/Service/Department that the respondents work in devote *sufficient*

attention and time to the FRA reporting process and that even if FRA discontinues, the NC network in the region would be sustained. Disagreement with these statements supports the notion that the NC network is a valuable resource that needs to be maintained.

Open comments, most of which point to *positive developments as a result of FRA* include:

- The FRA team has been indispensable for the involvement of countries; however, decision-makers need to be more involved.
- The FAO initiative to nominate National Correspondents has enabled dispersed country information and data to be collated and presented in a single report.
- The aspects of the FRA 2010 requesting specific information on biomass and growing stock has impressed upon developing countries the need to address the data gaps in these areas and to acquire the necessary technical support to address these.
- FAO promotes cross-country synergies through gathering information on forest resources. Very few institutions exist in the world that comprehensively study forests. If FRA terminates, the effort will not be sustained, at least not within the Latin American network, considering also that FRA is not obligatory.
- The country report is very useful and utilised at national and regional levels.
- The FRA focal points have a crucial role in reviewing reported information.

Perceived positive or negative developments by National Correspondents. This question, considered in conjunction with the question on *most significant outcomes or results*[10], whether positive or negative, offers insight into NC perspectives (see also Figure 22 on reported outcomes). Some compelling examples include:

- The process enables *creation of networks* within countries and has contributed to NCs sharing information and technology related to *forest resource mapping*. It is recommended that the network is strengthened e.g. by organizing forums with old and new NCs to continue sharing experiences on how best to improve the process. *Attrition of NCs should also be addressed* to prevent losing institutional knowledge.

Box 1: Interaction between ownership and accountability. Since there is no ownership of the FRA report by decision-makers, support for data and information collection and reporting is low and deemed less relevant. Also, training workshops and data collection is made more difficult given the low availability of human and financial resources.

- Given the broad scope of the FRA reports, officials who may not be aware of the FRA process are often *asked to assist in writing the report, not having received the training and capacity-building intended for NCs*. To this end, a sensitization strategy is needed for decision-makers of various institutions and countries involved to strengthen and make engagement more effective.

[10] A question on most significant outcomes was posed to interviewed NCs, whereas the question on positive or negative developments was included in the NC survey.

- The FRA process is an *opportunity for national institutions to re-evaluate the relevance of the data they own* and this may trigger a need to support a forest data management programme.

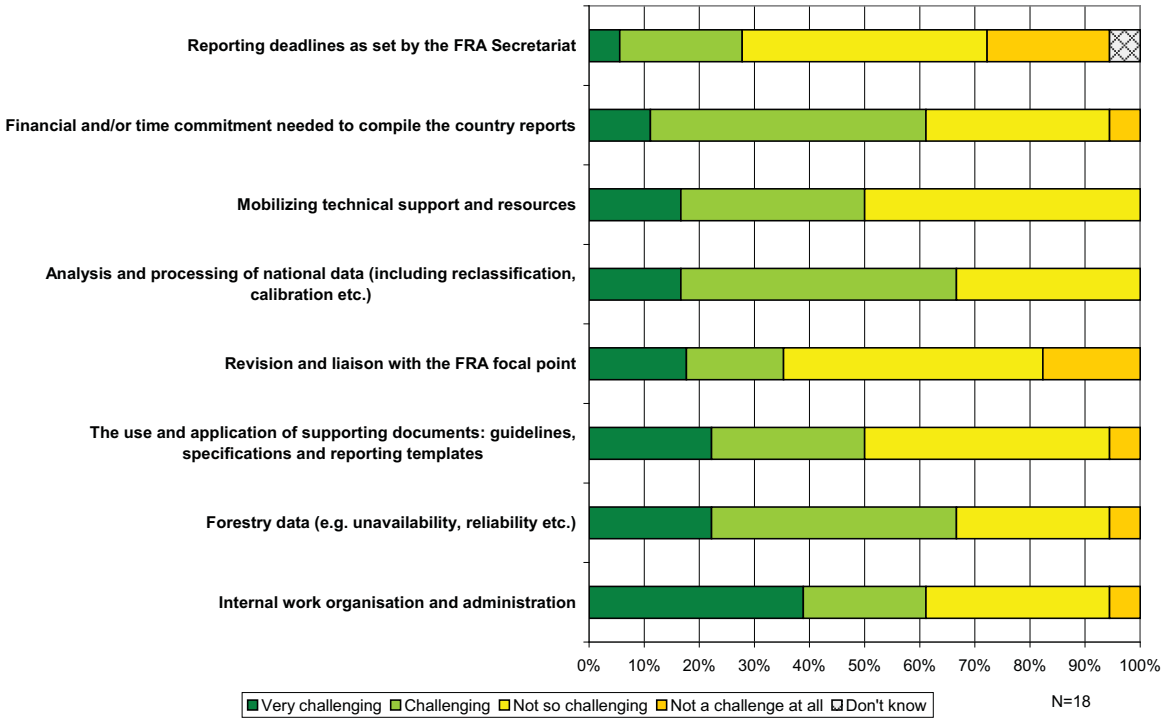
- After publishing the data generated by the FRA process, it is taken as *authoritative* and has wider citation and reference than the same data provided by the forestry institutions.

Box 2: More support through guidelines. Although guidelines for reporting exist, the process is challenging given the absence of support documents specific to the country context that provide direction and elaboration on methodology and validation of data, which would altogether make the country reports more credible. The effort of National Correspondents is commendable in making the report more credible.

Challenges. Figure 4 shows that from some of the key challenges of the reporting process, two reflect the role of the FRA Team specifically:

- Reporting deadlines as set by the FRA Team, and
- Revision and liaison with the FRA focal point.

Figure 4: Challenges related to the FRA process evaluated by the National Correspondents



As seen from Figure 4, a very challenging task, as rated by most of the 18 National Correspondents, is the *internal work organisation and administration*, but also the *analysis and processing of national data* (including reclassification and calibration). The deadlines set and liaison with the FRA focal points appears not to be that challenging for NCs (more than half rating these as not so challenging or not a challenge at all).

Open comments reiterated *key challenges* that National Correspondents reported:

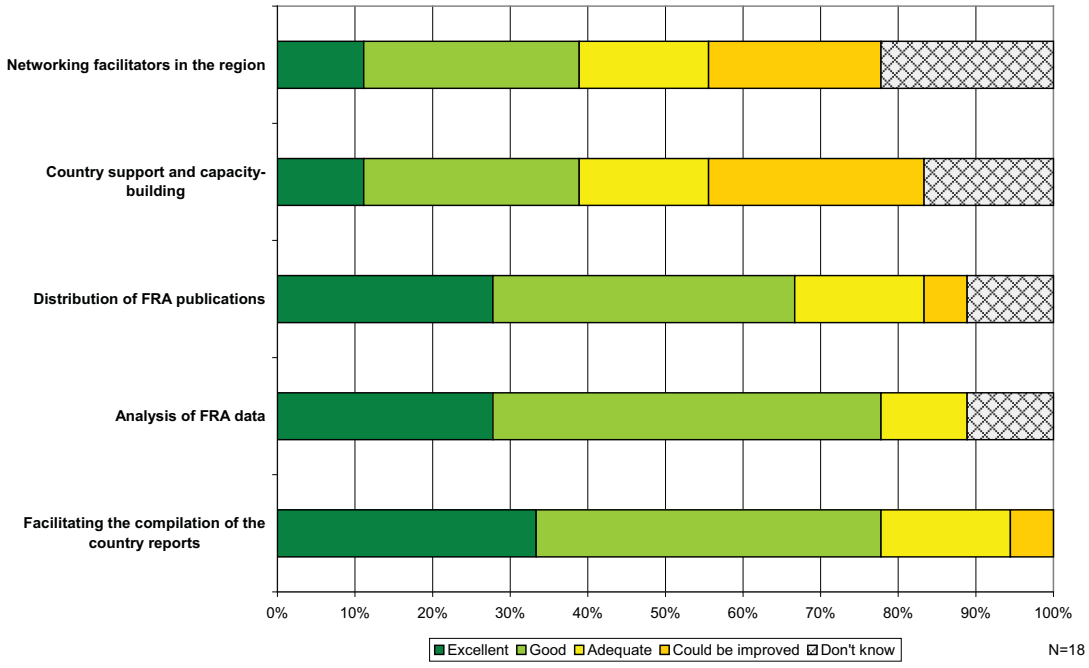
- staff attrition
- time constraints
- reduced or lack of financing to support data collection
- country definitions not corresponding to those of FAO
- mobilization of country teams – unaffordable to involve wider participation; facilitation may be challenging if teams are geographically distant
- Searching for displaced data is a key challenge that warrants supporting a consultancy assignment for NCs as an incentive to deliver higher quality data

Box 3: Availability of reliable forestry data is a key challenge, since without a solid information and knowledge base, sustainable management cannot be effective. Countries with weak financial and human resource capacities experience difficulties in drafting the FRA reports, given the insufficient, outdated and unreliable national data.

Some challenges that countries face as elaborated by NCs are illustrated in Boxes 1-3.

Performance of the FRA Team. Figure 5 shows that overall facilitating the compilation of the country reports, analysis of FRA data and distribution of FRA publications is most appreciated by the 18 NCs that responded. Networking facilitators in the region and country support and capacity-building activities are areas in which the FRA Team can improve.

Figure 5: Performance of the FRA Team as evaluated by National Correspondents



Open comments were mostly recommendations for improving various aspects of the FRA process through the FRA Team:

- Organisations that actually compile the national data should be invited to workshops, not only the NCs. Inform the National Correspondents to invite the "doers" to FRA workshops
- Ensure that the NC receives a copy of the FRA publication and that s/he is informed of the process, since at times, it happens that individuals other than NCs attend events and plan and negotiate for tasks, which are then delegated to the NCs
- Support and create capacities at country-level for example: i) through the participation of the NC and the Alternate in the global and regional workshops; and ii) through regional meetings organised to validate country reports
- Support to NCs in the process of data collection and coordination with different sectors
- Ensure work continuity by engaging NCs and keep them linked with the FRA process regularly even if no longer affiliated with the institution within which they were nominated initially. They could be the core of a country or regional network
- Developing countries that do not have reliable forestry statistics need to be supported to produce and complete data collection, especially countries that lack a forestry inventory and education specializing in forestry management
- Produce a large number of country reports to ensure a widespread dissemination of results and organize information workshops to diffuse report results further
- Providing a note-taker at regional workshops is the minimal requirement that the FRA Team should provide[11]

Despite a small sample size of National Correspondents who responded to the survey and the correspondingly higher risk of biased responses (only the most opinionated National Correspondents responding to the survey), some of the suggestions made through open comments are concordant with the findings of the 2005 evaluation (Kamelarczyk, 2005), for example:

- the need to improve regional NC networks through training workshops, and
- the overall positive evaluation of FRA focal points supporting NCs.

2.3.3 FRA Advisory Group

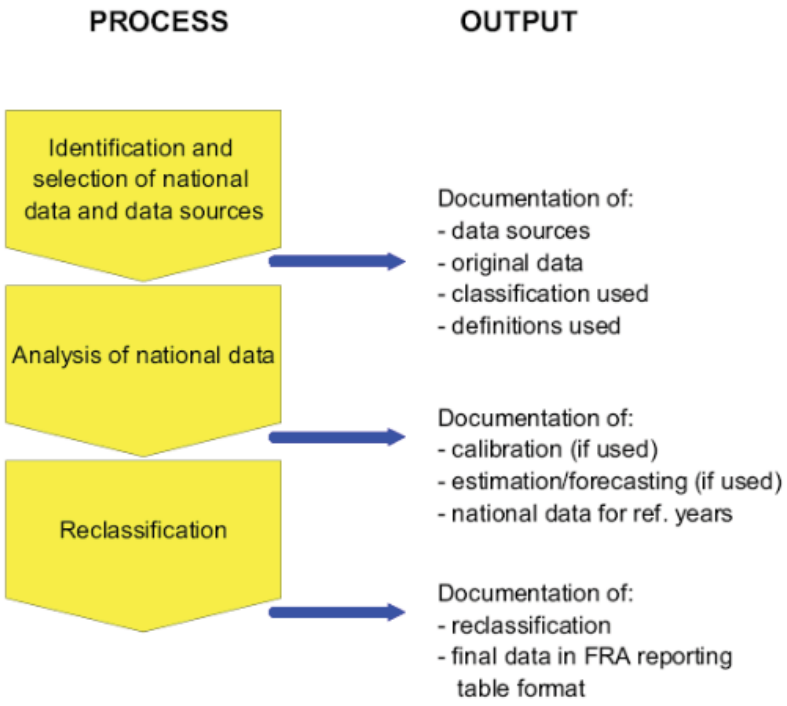
Like the NCs, many of the members of the FRA Advisory Group interviewed commended the FRA Team for doing excellent work. Recommendations were made on the organization and management of the FRA Team, that is, the need to:

- Establish an *oversight function*, in terms of the use of FRA data and information (e.g. to monitor objectives, results and outcomes achieved of the FRA AG; to prevent misleading use; monitor the uptake by policy decision-makers and other users);
- Formalise a *feedback mechanism* between the FRA Advisory Group and the FRA Team for collecting systematic user feedback.

Internally, the feedback and oversight functions applied to the FRA Advisory Group would feed into results-based management activities of the FRA programme. In achieving these propositions, FRA Advisory Group members are aware that a commensurate increase in human resources in the FRA Team would also be needed.

[11] The FRA Team actually provides a note-taker, as well as a detailed report after the workshops. The comment reflects lack of awareness on the issue.

Figure 6: Outline of the standard methodology for country reporting to FRA 2005

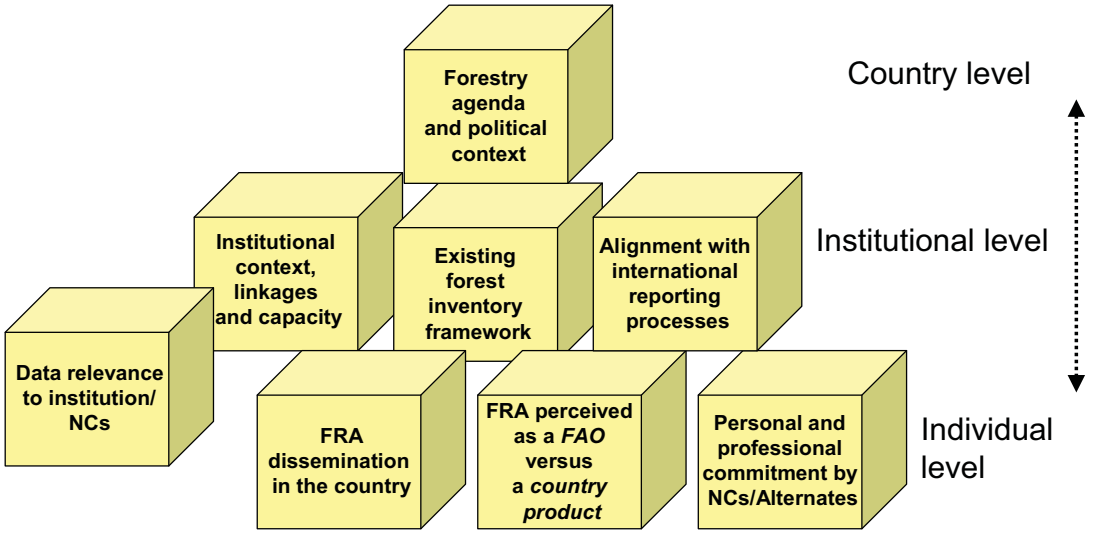


Source: FAO (2004). Global Forest Resources Assessment Update 2005.

Trade-off between effort and benefits. The nomination and formation of a National Correspondent network for FRA 2005 is considered a major milestone in strengthening the country reporting process. The formal nomination process commits the elected focal point affiliated with a national (forestry or non-forestry) Ministry or forestry organization through designated Terms of Reference to report to the FRA Team and provide national data on forestry resources according to FAO standards and specifications. Although the responsibility does not accrue any financial remuneration, NCs do obtain certain *tangible* and *intangible* benefits through the process. However, the trade-off between costs and benefits for *some* NCs may be becoming somewhat out of balance driven by the trend to report on an increasing number of FRA variables, but also due to a shifting reporting framework between each reporting cycle. However, when asked the extent to which participating in the FRA process was worthwhile after *"balancing all the effort invested with all the benefits gained",* all 19 respondents reported that it was worthwhile (n=12) or very worthwhile (n=7).

Mediating factors. The performance and outputs achieved by the NCs, as well as the quality of the process may be hindered or enhanced by existing factors outside the control of National Correspondents but also within, such as the level of personal commitment and motivation. As Figure 7 illustrates, the following mediating factors turned out to be relevant, as perceived by the regional focal points of the FRA Team, members of the FRA Advisory Group and the NCs themselves.

Figure 7: Mediating factors influencing the outcome of country reporting



The management of the NC network and in particular, managing the incentives dynamics, is not as simple as it may appear, especially given that the approach is global, and hence managing the asset cannot be effective with a *one-size-fits-all* approach.

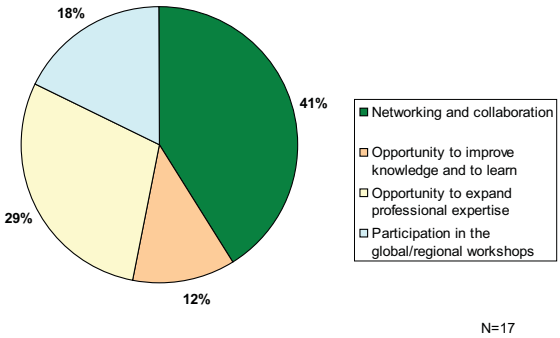
> *"Organise forums where old and new NCs meet to continue sharing experiences on how best to improve the process. Attrition of NCs, even if only a change of office, may disrupt participation in FRA."*
>
> **- A National Correspondent**

While the capacity-building that the FRA Team offers is limited to enabling NCs to deliver the needed outputs according to set standards and is much needed (consisting of the global and regional workshops, and the review process), the factors that mediate the outputs and outcomes at national level are many and may vary widely with respect to their mediating strength. Clearly, the FRA Team can conscientiously decide to shape these factors to some extent. For example, empowering National Correspondents through the existing capacity-building workshops may have longer lasting effects and hence may be a worthwhile investment. Empowerment in this context may mean guiding NCs on how to (better) use the data, how the data can be used for policy formulation, raising awareness on the importance of disseminating the country report and FRA data further, and on the importance of and the know-how on developing country teams etc.

Given the complexity and diversity of the country and institutional contexts, individual level factors, particularly commitment and motivation are additional mediating dimensions to consider. When NCs were asked what represents the *most significant added value to participate in the FRA*, most expressed networking and collaboration (Figure 8).

Indeed, this characteristic was expressed by some interviewed National Correspondents as more valuable than the actual tangible outputs produced (the country reports).

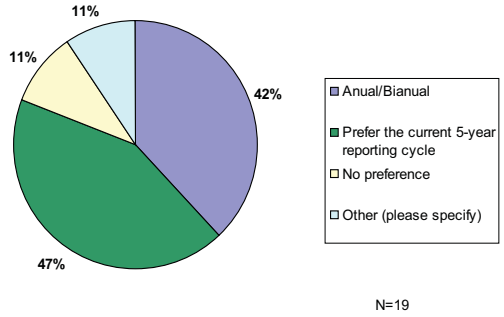
Figure 8: The most significant added value to participate in FRA



A key factor not directly expressed in the Figure 7 appears to be the *institutional standing of the nominated National Correspondent*. Some insight into global trends on institutional standing of forestry respective to other national entities will be revealed in FRA 2010 in the chapter on policy, legal and the institutional framework (e.g. forestry programmes are mostly within the purview of Ministry of Agriculture, with only one third of Head of Forestry agencies reporting directly to the Minister).

According to the experience of the FRA regional focal points, the most important success factor for a National Correspondent to effectively manage the reporting process is that s/he is a person that is *well connected* and *networked* within the affiliated institution, as well with relevant external data providers and *is competent to effectively mobilise other stakeholders*. Thus, it is the human resources potential that the National Correspondent role need to unleash to achieve the prescribed tasks and optimally in an *enabling institutional environment*. In terms of establishing indicators to measure capacity-building effort, the extent to which the nominated NC is the same person that also attends all the workshops and writes the country report, and the institutional standing of NCs can be considered as variables. Where the National Correspondent nominated attends the workshops but assigns more staff to write the report who did not directly receive the capacity training intended to enable the NC to write the report to FAO standards, the NC need to make sure that the capacity training is *transferred* also to report writers. Ten compared to thirteen nominated NCs and Alternates did not attend the global workshop, as reported in the National Correspondents survey.

Figure 9: Would you prefer the annual/biannual reporting or the current reporting every 5 years?



Frequency of reporting. No particular concerns were raised by informants about the timing and deadlines related to FRA reporting. However, National Correspondents were asked about their preferences regarding the existing 5-year period for reporting and a possibility to report more frequently – annually or biannually. Although small in numbers (n=19), the National Correspondents mostly thought that the annual/biannual proposal is reasonable (84 percent thought it was reasonable or very reasonable, whereas 16 percent that it is not so reasonable). However, when asked about preference, they were divided between the current 5-year reporting frequency and the proposed annual/biannual reporting. According to a NC, more frequent reporting is desirable but only with adequate support from the FRA Team.

ICT solutions for reporting and analysis. A number of informants from the FRA Advisory Group, the FRA Team and National Correspondents recognised that more flexible information and communication technology needs to be used for reporting but also for enabling users to produce analytic outputs customised to their needs. This would require establishing an interactive online database that enables producing outputs according to parameters users enter to produce a scaleable overview of spatial and temporal variation in quantitative information. FAO has such in-house tools recently developed that could be applied to the wealth of FRA data also making it more accessible

to the general public and more "usable" for regular users[12]. Currently, NCs report through a questionnaire and mostly e-mail communication with the regional focal points from the FRA Team. An electronic interface for reporting would enhance access, availability and use of reported data.

2.4 Dissemination of FRA data and information

Efficiently and effectively sharing, managing and overseeing the use of data, information and the knowledge generated through FRA is relevant to enable assessing impact achieved through data and information dissemination efforts – the main objective of the FRA programme. Since a comprehensive monitoring system and data is lacking, user feedback is the basis for evaluating the dissemination of FRA. Accordingly, this section primarily examines how users – internal (FAO), external and National Correspondents evaluate dissemination of FRA data and information, followed by considering other comparative publications and whether branding in the case of FRA is desired, and finally who could be using FRA data and information but is currently not doing so.

> *"It is important to invest in creating awareness in Member Countries about the FRA reports. Reports mostly reach only national offices and do not trickle down to the regions and divisions."*
>
> **- A National Correspondent**

2.4.1 Publications, data and information

A distinction should be made between the distribution of FRA publications, and the next stage of using FRA data and information (or FRA results), which addresses dissemination outcomes (section 7 - programme effectiveness). A systematic repository of all FRA publications is accessible on the FRA website[13]. User evaluations of existing FRA data and information products are covered in the next section.

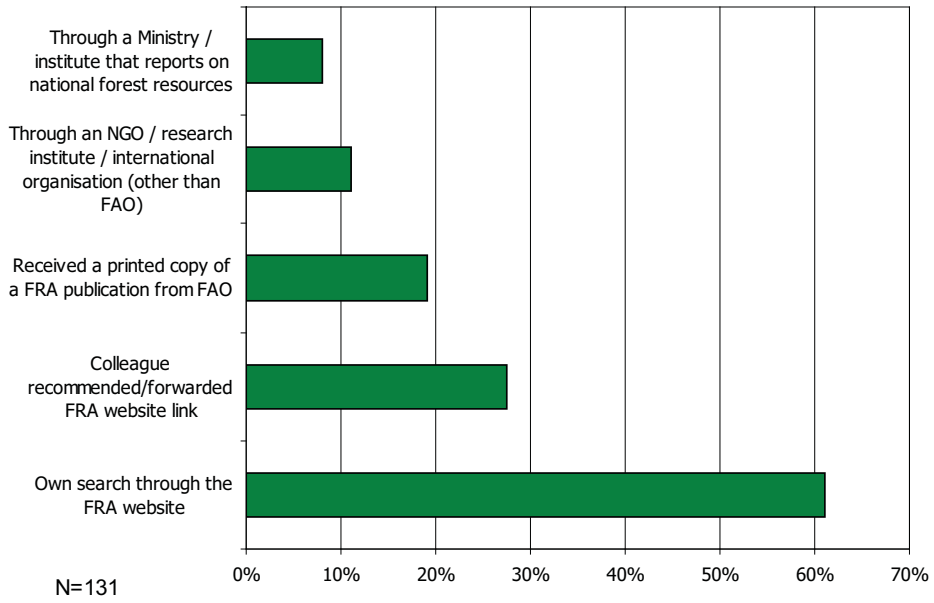
> *"Provide more CD copies and a FRA regional synthesis to NCs to further distribute to institutions."*
>
> **- A National Correspondent**

How do users find out about FRA data and information? Users (internal and external) were asked how they first learnt about FRA data and information.

[12] For example, the Global Livestock and Health Production Atlas or GLiPHA, produced and maintained by the Animal Production and Health Division and powered by KIDS-3g technology, the third generation of the Key Indicator Data System: http://kids.fao.org/glipha/

[13] http://www.fao.org/forestry/fra/1194/en/

Figure 10: How did you first learn about FRA data and information products?



Over 60 percent of the 131 internal and external users, who responded to the question, discovered FRA for the first time *by visiting the FRA website*. Web traffic analysis shows that the average daily number of visits to the FRA website is healthy: about 300 visits (Annex 7). Word-of-mouth is also relatively strong with about a quarter of the sample reporting that colleagues recommended and/or forwarded the FRA website link. Receiving a printed copy from FAO accounts for 19 percent.

Regarding the actual distribution of publications, including the FRA 2005 Main Report, the Key Findings, the CD-ROM and related information products, FOIM/FOMA does not have a comprehensive monitoring system to track the outreach and coverage of publications disseminated at meetings and conferences or, and more importantly, to track some rudimentary form of user feedback on whether the publications were actually used and for what purposes, although the FRA 2005 evaluation did solicit feedback on the FRA 2005 Main Report. User feedback is absolutely essential if dissemination impact is to be measured directly and with a certain level of methodological confidence.

> *"To improve the distribution of FRA products at national level, quality of the information needs to improve first the by giving more support on the collection of data."*
>
> **- A National Correspondent**

Suggestions for FRA dissemination improvements were inventive and ranged from suggestion to prepare ready-made and freely available teaching course material based on FRA to download from the FRA website[14], promoting the FRA reports through the FAO Representations, through to preparing a DVD overview on FRA results and uploading it on YouTube.

2.4.2 User feedback

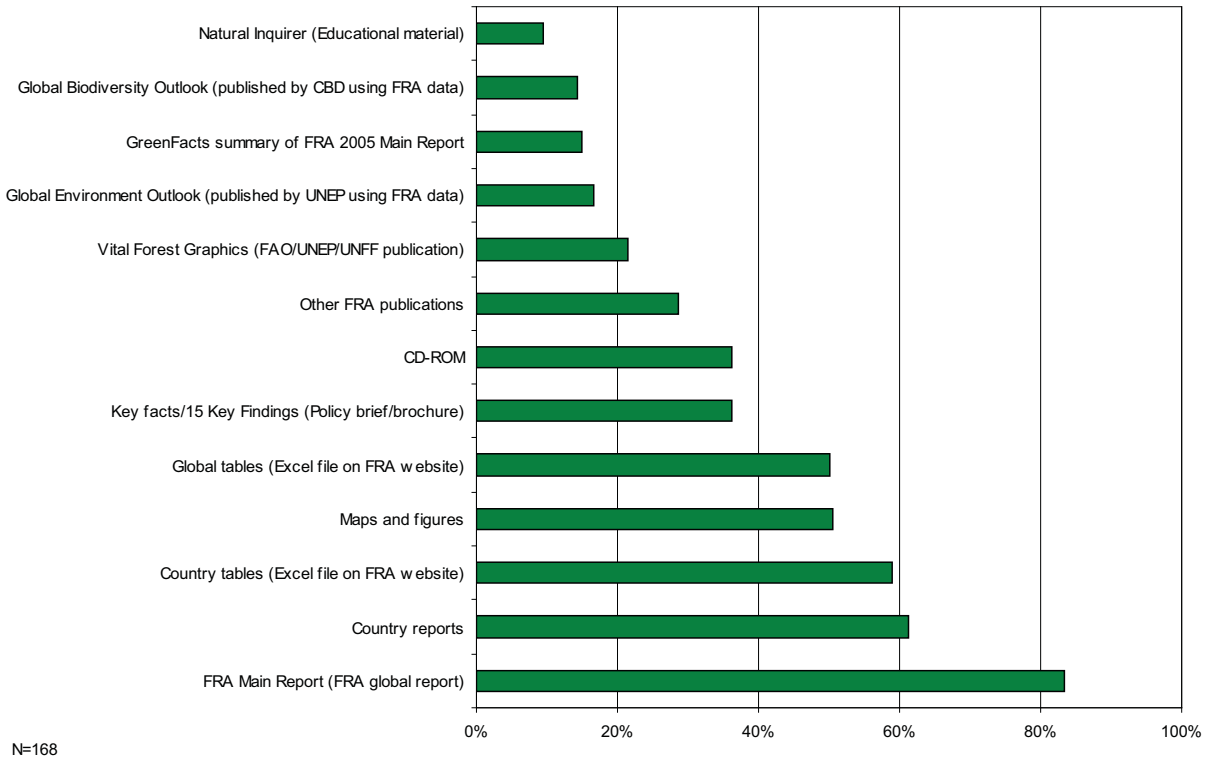
The following sections outline the habits and perceptions of users – internal, external as well as the National Correspondents.[15]

[14] Some teaching material exists and can be downloaded from the FRA website in English: ftp://ftp.fao.org/docrep/fao/010/i0105e/ , in French: http://www.fao.org/docrep/012/i0105f/i0105f00.pdf or in Spanish: http://foris.fao.org/static/data/fra2010/Natural_Inquirer-es.pdf

[15] Please note that while most questions were applied to all 3 respondent groups, some excluded National Correspondents.

Familiarity and frequency of using FRA information products. The FRA Main Report and its derivative information products (e.g. CD-ROM, maps and figures, country tables etc.) that are available on the FRA website, as well as some distinct publications using FRA data (e.g. GreenFacts summaries, Vital Forest Graphics, Global Environment Outlook) were provided as possible response options representing FRA information products that users may be familiar with.

Figure 11: Familiarity with FRA information products

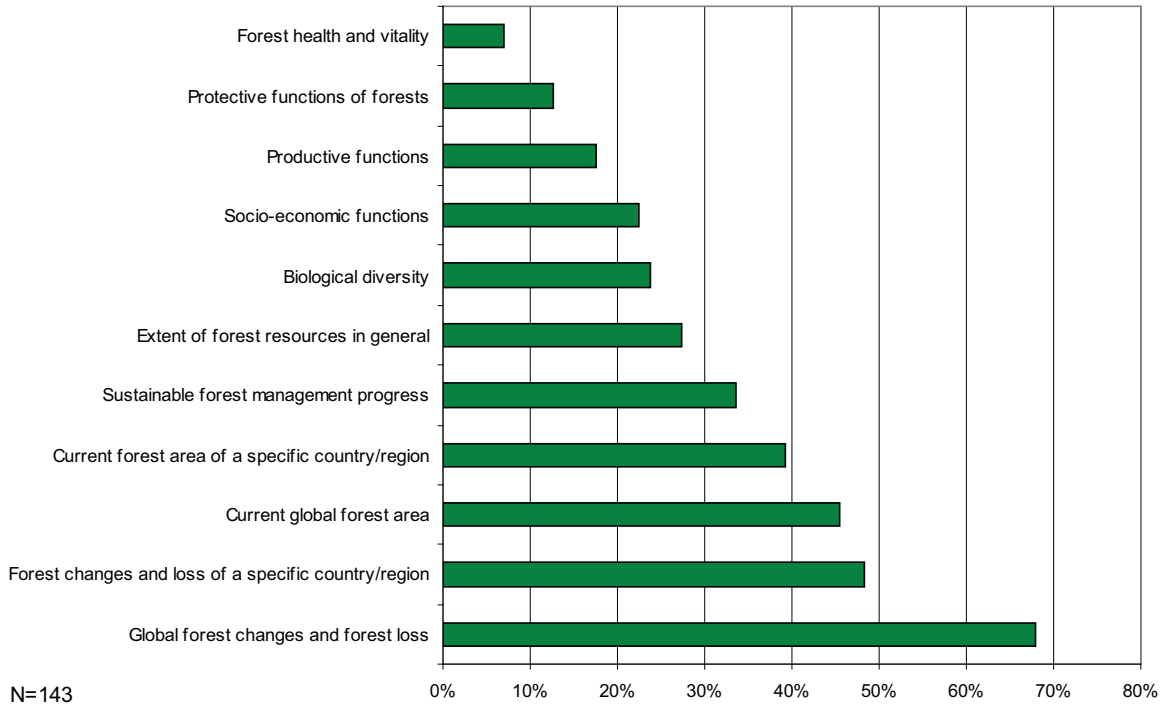


As Figure 11 demonstrates, most users are familiar with the FRA Main Report, followed by country reports and tables, but also with the maps, figures and global tables available from the FRA website. The Key Findings publications, CD-ROM and other FRA publications are known by at least a quarter of the sample. A similar pattern applies when examining results for internal and external users, as well as the National Correspondents separately.

The pattern of responses regarding familiarity closely follows the frequency of using FRA data and information products. Interestingly, while for internal users and National Correspondents the order of frequency of use is: FRA Main Report (first), country report (second) and country tables (third); the top 3 pattern for external users is: FRA Main Report (first), country report (second) and *maps and figures* (third).

FRA themes of interest. Internal and external users were asked about their themes of interest within the SFM framework.

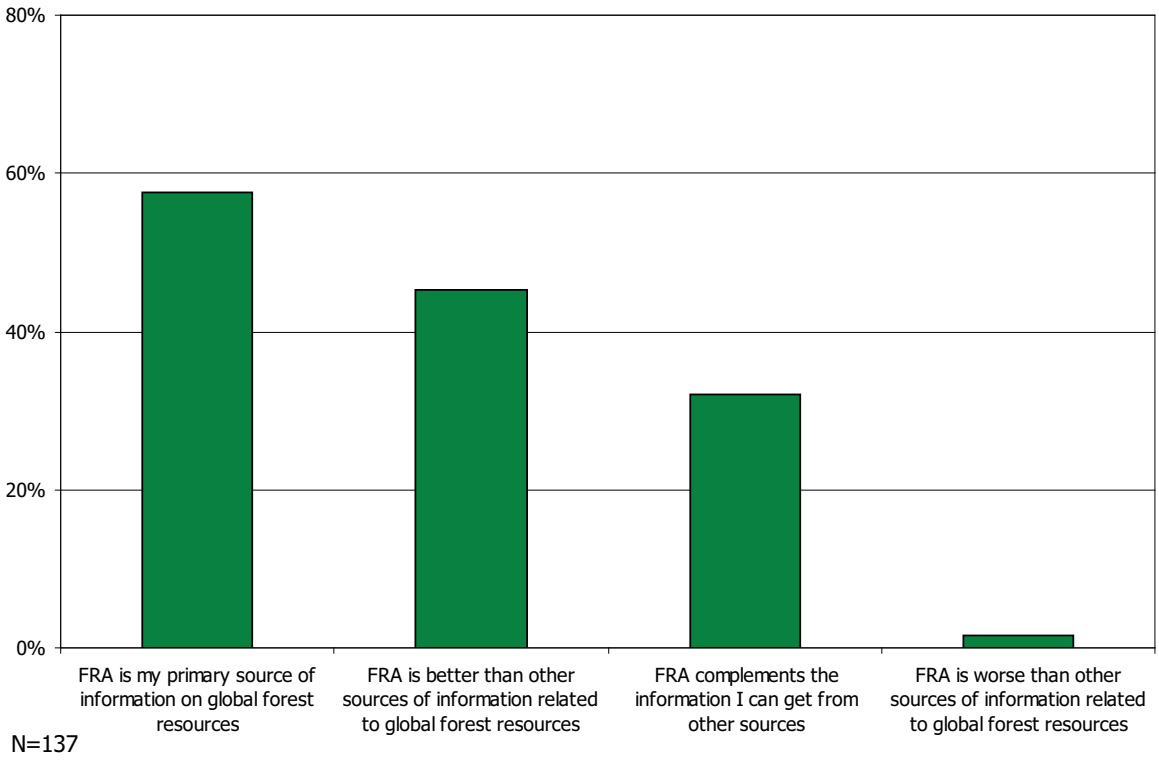
Figure 12: Themes of interest within the FRA Main Report to internal and external users



As can be seen from Figure 12, most interest lies in discovering what the global forest changes and forest loss are (close to 70 percent of respondents out of 143). This is not surprising, given that deforestation is a "hot topic" in the post-Kyoto, discussion moving towards accounting for carbon emissions, which subsumes sustainable management of natural resources, especially the world's forests. This interest in global forest changes and forest loss is also purported through the citation analysis – most FRA citations are in the context of global forest loss rates, *albeit* often neither FAO nor FRA is quoted (Annex 6). Interviewed participants, including NCs and members of the FRA Advisory Group frequently affirmed that the use of global forest loss or deforestation rates is closely associated with the use of FRA.

Comparative ratings and alternative sources. External and internal users were asked to compare FRA to other forest resource data and information, as well as to comment on whether they would be able to find alternative sources of forest-related information if FRA ceased to exist.

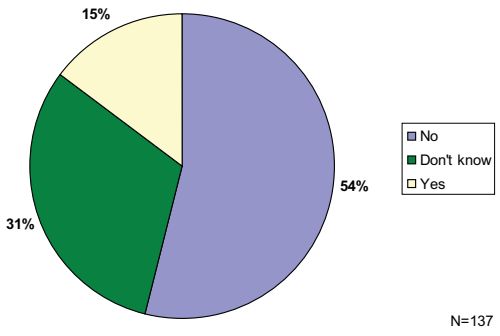
Figure 13: How does FRA compare to other sources of forest-related data and information?



Over half of the 137 respondents – internal and external users – reported that FRA data is their *primary source of information on global forest resources* and also thought that *FRA is better than other sources of information* related to global forest resources (the question was multiple choice, hence percent add to over 100 percent). FRA also complements to a large extent information users' other sources.

Although no specific other sources were benchmarked against FRA, the ratings explicitly describe the positioning of FRA as one of the authoritative information sources on global forest resources that exist.

Figure 14: If FRA data and information products would cease to be published....able to find alternative sources?



A question on alternative sources to FRA data revealed that only 15 percent out of the 137 respondents said that they would be able to find an alternative substitute(s) for FRA. Specific examples include: country studies and data (n=4), journal articles, Government and national forestry website sources, NGO data, The World Bank, other international databases ("*although they mostly reproduce FRA data*"). Notable comments include that while alternative sources always exist, the question is the extent to which these alternative sources are *complete, scattered, country-consistent, reliable and comparable*; and how efficiently they can be *accessed and processed*. Thus, some of these attributes speak of the needs of users and the comparative advantages of the FRA process.

Using FRA data and information. Respondents were asked about the purpose and type of analysis for which they use FRA data and information. As seen in Figure 15, most are used for own research and analysis, providing support to statements in academic papers, in policy documents, or as complementary input to respondents' work at FAO.

Figure 15: Purposes of using FRA data and information

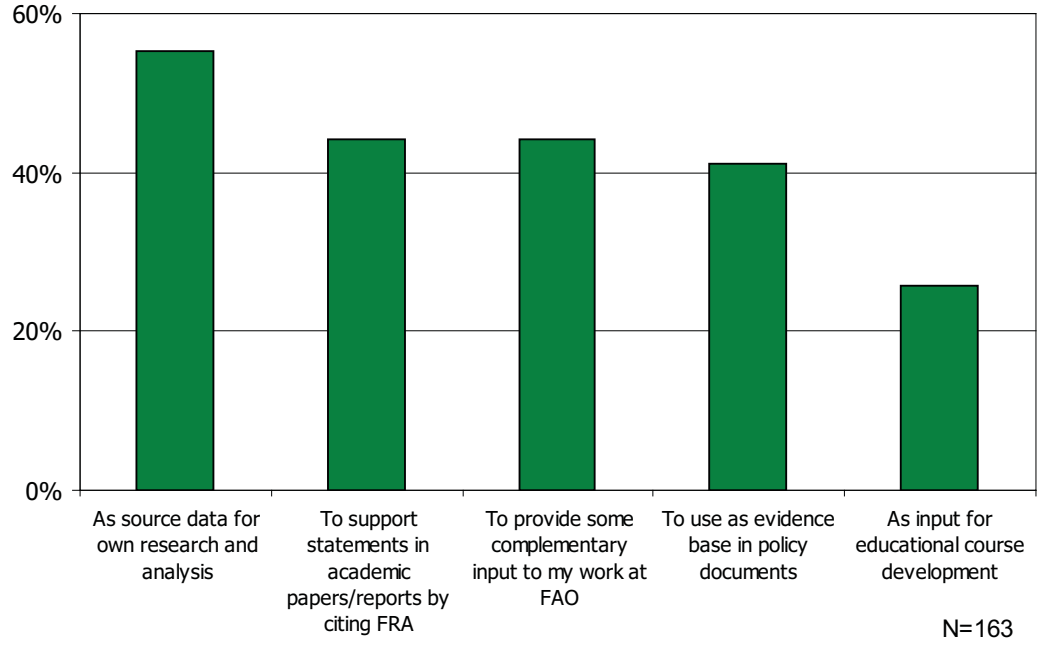
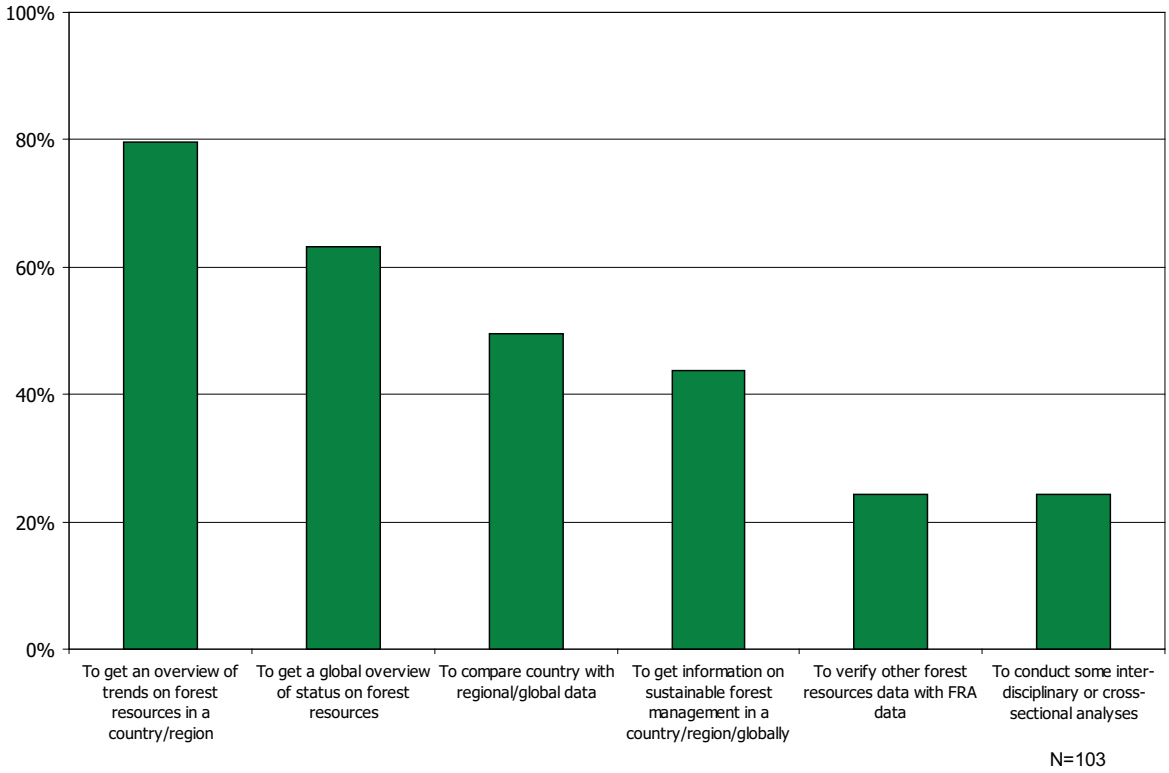


Figure 16: Type of analysis for which FRA data and information is used

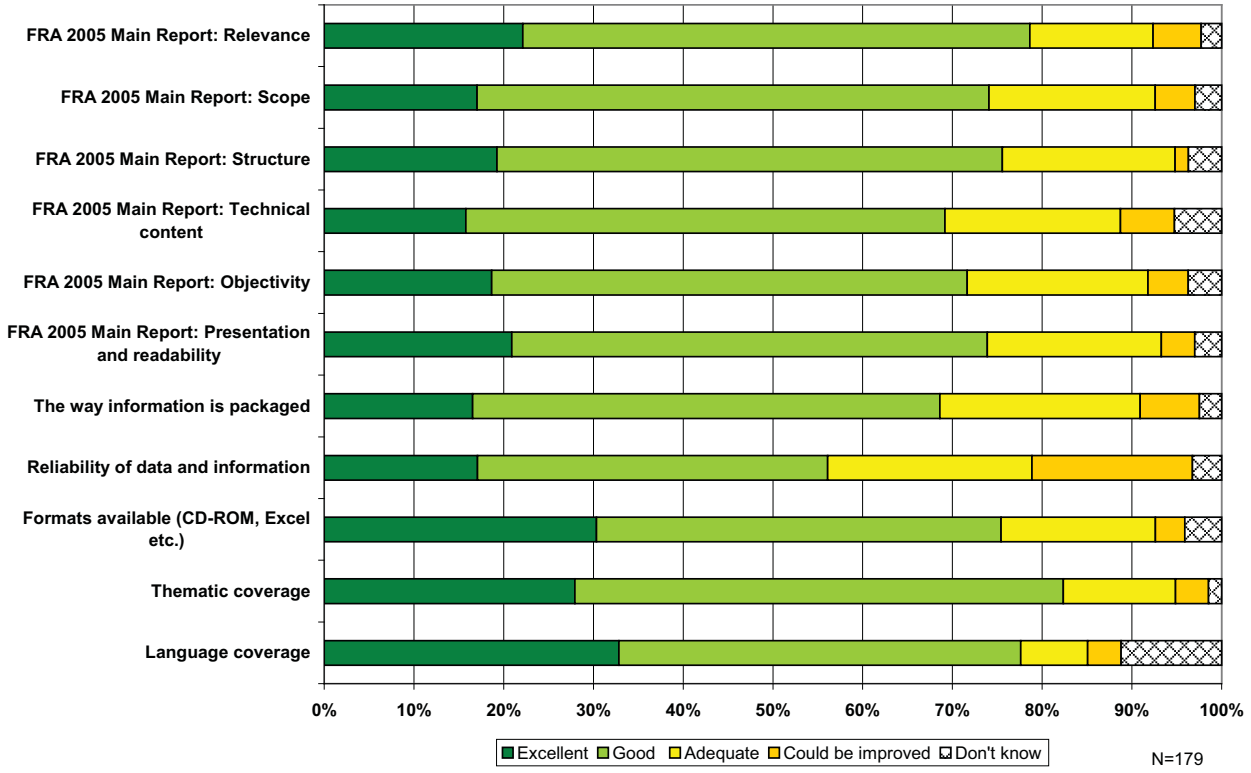


In terms of the analyses for which FRA data and information is used, getting a regional or country overview is important, followed by a global overview of forest resources. However, FRA data and information is not as frequently utilised to conduct some interdisciplinary or cross-sectional analyses, perhaps it is not surprising since the majority of the people surveyed are from the forest sector.

Respondents also provided specific *examples of analyses* for which FRA data and information was used[16]. Notable examples regarding internal users include using FRA data and information as input in *Director General Briefs*, as *presentations to international conferences, seminars and workshops* and use in *policy-relevant status and trends data.* External users utilize FRA data and information as input for *REDD*, as a source on *deforestation rates*, as a base for *educational material* or study, but also for a wide range of specific issues and trend data that can be found in FRA (Annex 8).

Evaluation of FRA information product features. Respondents were asked to rate a set of features of the FRA 2005 Main Report, as well as some general features of the FRA data and information.

Figure 17: Evaluated features of the FRA 2005 Main Report and FRA data and information

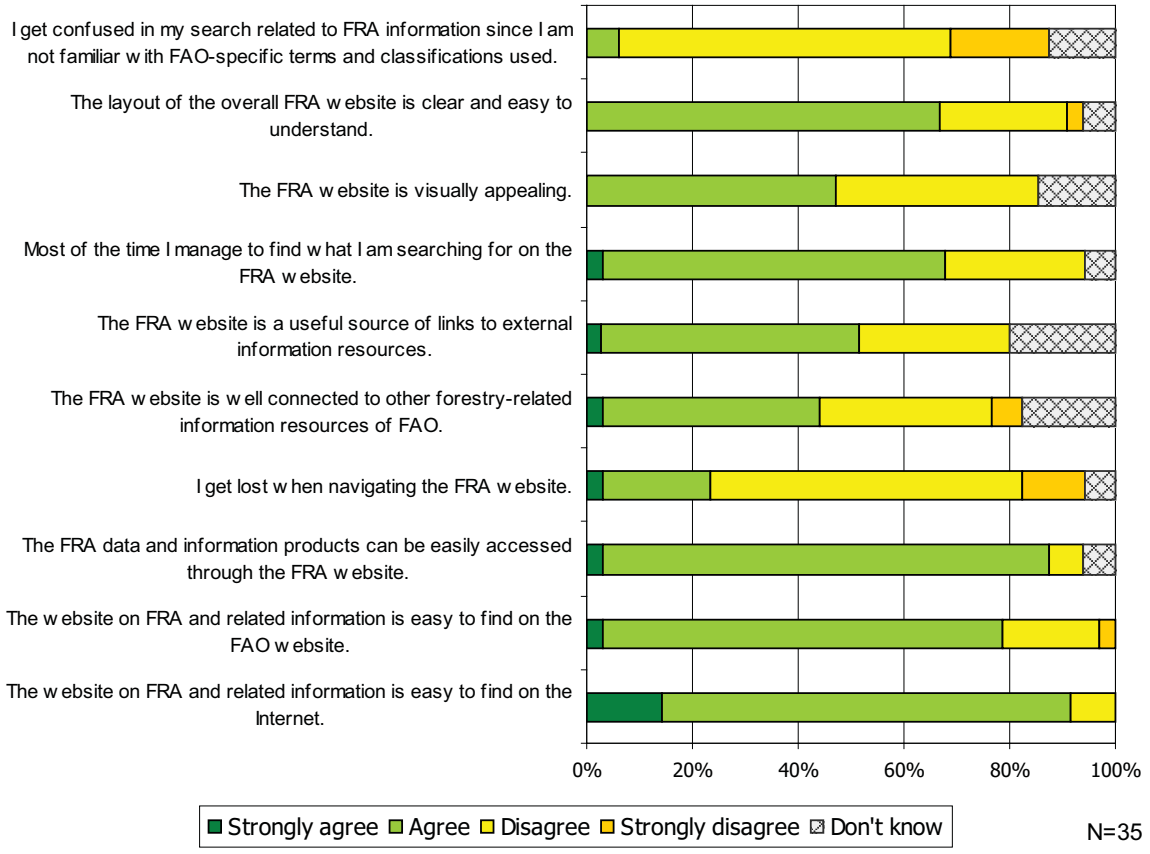


[16] Although National Correspondents were not explicitly asked to supply examples of analyses, they were asked to provide examples of impact at international, regional, national and sub-national levels, some of which revealed specific uses of FRA data and information (discussed in section 2.7).

Figure 17 shows that on average, most features are positively evaluated, with close to 80 percent of the 179 respondents rating each feature as *excellent* or *good*. Unsurprisingly, *reliability of data and information* was the only feature that had a somewhat higher proportion of respondents (close to 20 percent as "could be improved"). In the 2005 evaluation, *presentation and readability* were attributes rated with most scope for improvement (Kamelarczyk, 2005).

FRA website usability. Internal users were asked additional questions on the usability of the FRA website. It would have been useful to gather external users' perspectives; however, due to the length of the online External user survey, the website usability question was omitted (although open comments were nevertheless received from external users regarding the FRA website).

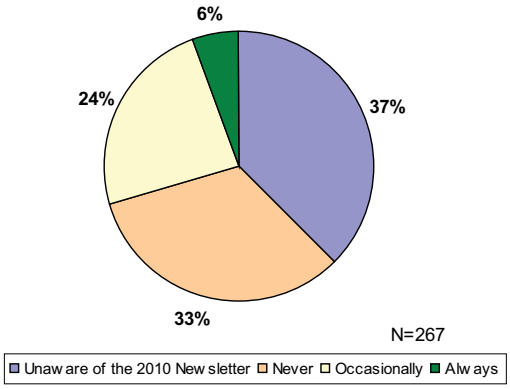
Figure 18: FRA website usability as evaluated by internal FAO users of FRA data and information



It appears that internal users– most of whom are from the Forestry Department – that responded to the website usability question are implying that the website is rather easily navigable and in general easy to find on the Internet. Of course, as seasoned users of the FRA website, the response pattern is unsurprising. First time and external users would offer a more meaningful insight on website usability, given that they are less biased from habituation effects.

Use and evaluation of the FRA 2010 Newsletter. Out of 267 respondents (all 3 user groups combined) roughly about a third are readers, another third are non-users, whereas a third were unaware of the FRA 2010 Newsletter (Figure 19). Of those who were aware and read the Newsletter, the majority found it useful. Clearly, there is room to expand the readership and raise awareness that it is *not* intended solely for specialists of FRA 2010, as one respondent commented.

Figure 19: Do you read the FRA 2010 Newsletter?



Final user comments and suggestions. All three surveys offered the opportunity for respondents to make final suggestions and recommendations for the FRA Team and FRA programme. Only external users elaborated here and offered some new perspectives, such as:

- conduct evaluations to assess public awareness levels of FRA;
- provide more specific information on methodology, e.g. how country data is validated; and
- enable a more flexible, country-specific reporting design to ultimately provide more value to forest data users and better reflect the country context.

2.4.3 Other comparative publications

The State of the World's Forests publication (SOFO) is one of FAO flagship publications, with the first edition launched in 1995. SOFO reports on the status of forests, recent major policy and institutional developments and key issues concerning the forest sector. While FRA has a much longer existence, SOFO is a well-known publication in the "State of.." publications series of FAO.

SOFO 2001 and SOFO 2007 explicitly disseminated findings of the Global Forest Resources Assessments (FRA 2000 and 2005, respectively). SOFO 2001 covered issues such as an in-depth look at forests and climate change, the conservation of forest biological diversity, and illegal activities in the forest sector. SOFO 2007 reviewed regional progress across the seven thematic elements of sustainable forest management, followed by 18 specialized forestry topics.

The issue of timing and launching of SOFO and FRA has been discussed by the FRA Team to strategise the positioning of both flagship products. A separate launch has the advantage to shape distinct identities and contribute towards "branding", whereas launching them simultaneously in one "package" has the advantage of merging the unique readerships and using a more cost-efficient approach. Given that FRA describes the state and changes in forest resources, some representation in SOFO is rational, but having a FRA publication is also a justified activity, given the scope, complexity and length of the process to produce the output. Perhaps a middle way to link FRA and SOFO sensibly is possible, by publishing key indicators of SFM in SOFO and on the basis of FRA results.

UNDP's global reporting on human development. While the exact mechanism through which countries report towards The Human Development Report (HDR) is less clear, HDR and the Human Development Index (HDI) are openly promoted as advocacy tools *"designed to appeal to a wide audience, the reports can spur public debates and mobilize support for action and change"*[17] (Box 4). The HDR is owned by regional, national and sub-national teams and accordingly, over 600 regional, national and sub-national reports have been produced to date in over 140 countries. Furthermore, National HDRs (NHDRs) are prepared according to UNDP's corporate policy guiding both national and regional HDR teams and include the following 6 principles that characterize excellence in NHDRs including:

Box 4: The first Human Development Report (HDR) was launched and commissioned by UNDP in 1990, along with 4 indices, including the Human Development Index (HDI) – a summary composite index that measures a country's average achievements in *health, knowledge*, and a *decent standard of living*. The HDR Office of UNDP leads the reporting process. The HDR is considered an independent report and data gaps, as well as discrepancies between some national data and HDR data, are acknowledged and explained.

- National Ownership
- Participatory and Inclusive Preparation Process
- Independence of Analysis
- Quality of Analysis
- Flexibility and Creativity in Presentation
- Sustained Follow-Up

The key strengths of UNDP's reporting on human development are ownership and use of the HDR at regional, national and sub-national levels; as well as the engagement in high-level national policy dialogues facilitated by the HDI product[18]. While FRA offers the "traffic lights analysis", and with it the indicators of SFM, an overarching composite index such as the HDI is not developed to date.

FRA and HDR represent distinct sectors, with human development arguably being a less ambiguous field than sustainable forest management[19], having a longer history of reporting, being simpler in scope and measurement of the HDI. However, both processes are global and the intended aims are fundamentally similar: influencing policy-makers to help shape a healthier human development and healthier forest resources globally. To this end, the HDR appears to have the comparative advantage over the FRA in terms of: i) using better the data they collect (by publishing the HDI to engage high-level policy makers); ii) engaging regional stakeholders to a greater extent (existence of both national and regional teams and HDRs); and iii) promoting excellence in national reporting (by adhering to UNDP's corporate policy).

The Millennium Ecosystem Assessment. Policy makers and scientists identified a need for an international ecosystem assessment to review the consequences of ecosystem change for human well-being. The proposal to implement a millennium ecosystem assessment (MEA) arose in 1998 by the World Resources Institute. More than 1,360 experts worldwide were involved in the MEA from 2001 to 2005. The MEA was operated by a board, secretariat, panel, authors, reviewers and an exploratory committee. The reports offer a global and sub-global level of assessment, covering themes such as biodiversity, desertification, wetlands and water. Other resources include graphics (e.g. figures, maps, posters, logos), videos, slide presentations, a framework for assessment. The findings provide a scientific appraisal of the condition and trends in the world's ecosystems and the

[17] http://hdr.undp.org/en/humandev/reports/

[18] FRA data is utilized for reporting on the UN Millennium Development Goals (MDGs) under the goal of ensuring environmental sustainability. Similarly, UNDP is also streamlined to report under the MDGs, but in addition, gains visibility in publishing the HDI in its own right.

[19] That is, it is clearer what is being measured in human development, as an uncontested and simple operational definition exists. Child malnutrition is *always* bad news, whereas increasing forest cover in a certain country context, driven by certain national priorities is not necessarily good news.

services they provide, as well as the scientific basis for action to conserve and use them sustainably. The core Team staff adds to six members. Partner institutions included: CGIAR, FAO, UNEP, UNESCO, UNDP, UNFCCC, IUCN, CBD, GEF and WHO.

Global Biodiversity Outlook. Preserving biological diversity and preventing the extinction of species was the driving force of the United Nations Environment Programme (UNEP) convening an Ad Hoc Working Group of Experts on Biological Diversity in November 1988. The work of the group resulted in an international convention on biological diversity – *The Convention on Biological Diversity* – signed by 150 government leaders at the 1992 Rio Earth Summit. The Convention was also the basis for producing periodic Global Biodiversity Outlook (GBO) reports since 2001, with a second edition published in 2006.

For preparing the third edition of the GBO, which will be launched in 2010, four series of national reports were received as input, which will also be used to asses progress towards the 2010 Biodiversity Targets. An independent peer review mechanism is utilized for data validation. A strong link with implementing partners is also a hallmark of the GBO, including a Clearing-House Mechanism with a mission to contribute considerably to the implementation of the Convention through the promotion and facilitation of technical and scientific cooperation, among Parties, other Governments and stakeholders. The GBO reports are available in seven languages: English, French, Spanish, Arabic, Chinese, Russian and Portuguese. The structure and status of the trust fund contributions is transparently accessible from the public website. A National Reports Analyzer tool enables users to produce simple but flexible country and regional outputs on the basis of their user needs.

The GBO reporting is global in outreach and is supported by national focal points as in the case of FRA. Other similarities with FRA include: an informal advisory group, subregional and regional networks, reliance on a vast range of partnerships for implementation, and thematic databases. *However, the Team that coordinates the GBO reporting process is supported by six divisions, including the Scientific, Technical and Technological Matters Division; Implementation and Technical Support; Resource Management and Conference Services, totalling nearly 100 staff members.*

The forestry chapter of the 2010 version is largely built on FRA 2010.

Global Environmental Outlook. As the GBO, the Global Environment Outlook (GEO) is UNEP's flagship assessment process reviewing the global environment. The GEO assessment reports, produced since 1997 aim to provide comprehensive and reliable scientifically-credible, policy-relevant assessments on the interaction between environment and society.

GEO is promoted as a decision-making, capacity building and communication tool and the reports are available in Arabic, Chinese, English, French, Russian and Spanish. The GEO Year Book, parallel to FRA's SOFO, identifies key emerging issues for consideration by the UNEP Governing Council and feeds into the GEO process. Among the GEO information products, the educational range offers an introductory book written by youth for youth; a teacher's guide; a GEOActive CD-ROM that offers interactive games, videos and databases; GEO Juvenil – a youth assessment of the state of the environment in Latin America and the Caribbean; and TUNZA – Acting for a Better World – a youth publication based on Taking Action 1995 and the GEO-3 report. The GEO Data Portal is an online database containing more than 500 variables at national, subregional, regional and global statistics or as geospatial data sets, covering themes such as Population, Forests, Climate, Disasters, Health and Emissions. Although not a relational database that enables flexible user tailored outputs, the database enables display of data as maps, graphs or data tables.

The UNEP-GEO Team is composed of 12 staff members, including the core team and regional coordinators. The GEO assessment process is also supported by a world-wide network of Collaborating Centres. As the GBO, a comprehensive peer review and consultative mechanism with governments, non-governmental organizations and scientific institutions and an advisory group guide the assessment process.

The Annual Transparency Report 2009. When compared to the Report Card (see Box 5), the *policy, legal and institutional framework* of FRA 2010 will offer complimentary data and insight regarding the situation within the forest sector globally. Some issues of common interest (and potential overlap with FRA's framework) include: i) existence and extent of Forest Laws; ii) information dissemination systems operated by the forest authorities; and iii) data accessibility. The distinct advantage of the Report Card is a holistic and cross-sectoral overview of the country context, including cultural and environmental services; coverage of tenure and land use; legal access to information; and extra-sectoral activities affecting forests.

Box 5: The Annual Transparency Report 2009: Making the Forest Sector Transparent is a report built on the work undertaken by Global Witness, over the last fifteen years, related to forestry industry transparency and forest monitoring. It produced a Report Card 2009 for four pilot countries – Cameroon, Peru, Ghana and Liberia, assessing 70 transparency indicators across 15 themes ranging from *'Is there a Freedom of Information Act?'* to *'Are logging contracts made public?'* and *'Is the government public about meeting its tax redistribution commitments?'*. It also integrates existing key transparency indicators for each country, such as The World Bank's Governance Indicators and The Corruption Perception Index of Transparency International (see: http://www.foresttransparency.info/about-us/the-project/).

2.4.4 Is branding of FRA needed?

The American Marketing Association (AMA) defines a brand in a commercial context as a *"name, term, sign, symbol or design, or a combination of them intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of other sellers"* [20]. The process of rendering sellers, customers or users identify with a service or product is commonly known as *branding*. In order to be able to develop branding, the user needs to be aware of the product first. Common elements to branding include: i) delivering a clear message; ii) confirming and reaffirming credibility; iii) emotional connection with users; iii) motivating the user; and iv) promotion of user loyalty. In terms of existing stakeholders of FRA, the FRA product and process seem well predisposed to the elements of branding. For example, FRA is delivering clear messages and promotes loyalty through engaging with users via a Newsletter, email and publication distributions; with information providers through the FRA regional focal points delivering training and capacity-building; and with other stakeholders through technical meetings and consultations to build overall credibility (in particular, data credibility). There is an underlying intended emotional connection motivating users, by the nature of the subject matter: forest resources are being depleted at alarming rates – about 13 million hectares per year, as reported in FRA 2005. Simultaneously, according to the authoritative Stern review on climate change, protecting the world's forests is a highly cost-effective way to cut carbon emissions and mitigate climate change (Stern, 2006). One could argue therefore that there are excellent reasons on the basis of which FRA can strengthen its key messages and findings, in terms of its emotional appeal, motivating and promoting stakeholder engagement.

[20] http://marketing.about.com/cs/brandmktg/a/whatisbranding.htm

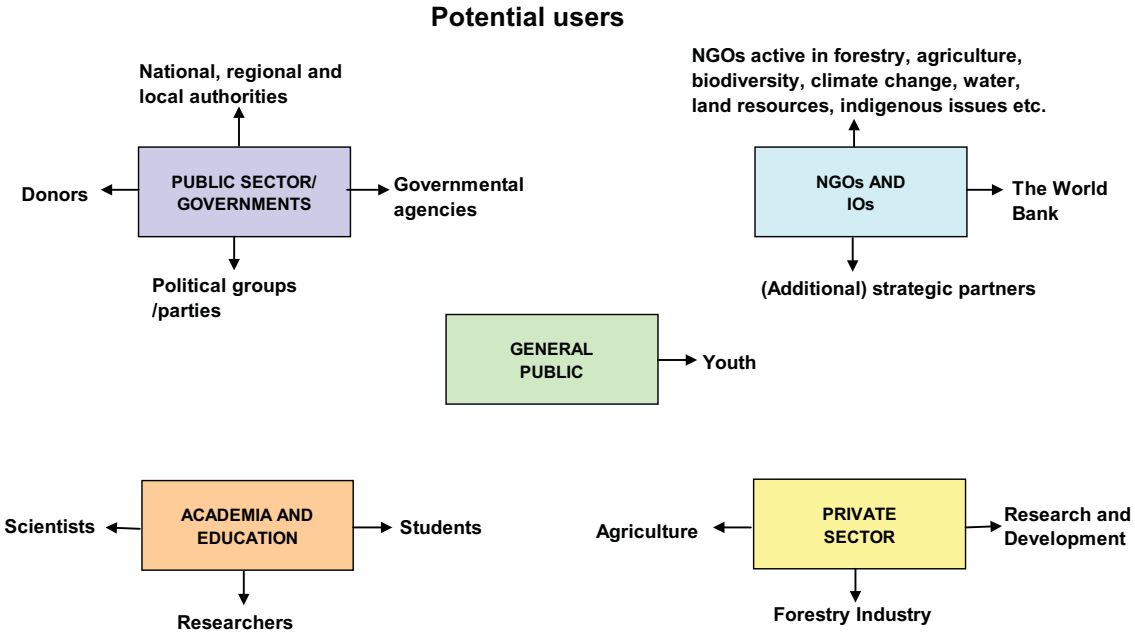
Considering the evaluation findings and feedback discussed to this point, the rationale for branding FRA can be based on the following points:

- Relevance of FRA to current global issues, such as deforestation and climate change
- Uniqueness of the FRA approach that includes a participatory country reporting process, fostering buy in from Member Countries; the verification and quality assurance conducted by the FRA Team, capacity-building provided to Member Countries and the National Correspondent network
- The advocacy and communication focus in the new logframe forming a core function of the FRA
- Diversification of users of the FRA data and information is needed – not just in terms of the general public but also in terms of the academia and research institutions
- Convincing donors to invest in monitoring global forest resources through an assessment such as the FRA, especially given the reliance of FRA operations on extra-budgetary funds calls for investment into branding and more proactive communication about the publication. As one member of the FRA Advisory Group put it – FRA is ideally positioned to attract funds, given today's environmental age and investment opportunities in environmentalism activities and global monitoring
- User feedback points toward the need to "brand" – that is to target dissemination to specific user groups to enhance impact – some suggestions were to create a regional key findings publication similar to the existing global findings, as well as a range of special policy publications. In terms of the more technical use of the FRA data and information, some users pointed out the usefulness of showing the potential use of the data and information – such as an analysis to create country indicators (to enable customization of country data use).

2.4.5 Existing versus potential users

To optimise the use of FRA data and information, users who could/should be targeted but are currently not were considered. Figure 20 illustrates the feedback on envisaging potential users from evaluation participants. On the whole, potential users that were particularly emphasized include: *forestry policy-makers* and those in *related sectors*, the *general public*, and diverse *Non-Governmental Organizations*.

Figure 20: Potential users as envisaged by evaluation participants



Some insight as to why FRA information is used and why it is not was gained from the perspective of National Correspondents who were directly asked this question[21]. Analysis of the open comments reveals that FRA *is* used, since it is a *comprehensive, valuable and valid source and reference on forest resources*. On the contrary, it *is not used*, mostly due to *institutional challenges,* such as insufficient advocacy by Ministry officials (Annex 8).

Reaching out to potential users. While internal users did not suggest ways to reach out to potential users who may not be aware of FRA, external users noted that media attention and advocacy to promote FRA is needed, among other suggestions, such as linking up FRA with Wikipedia, and providing interactive online programmes (Annex 8).

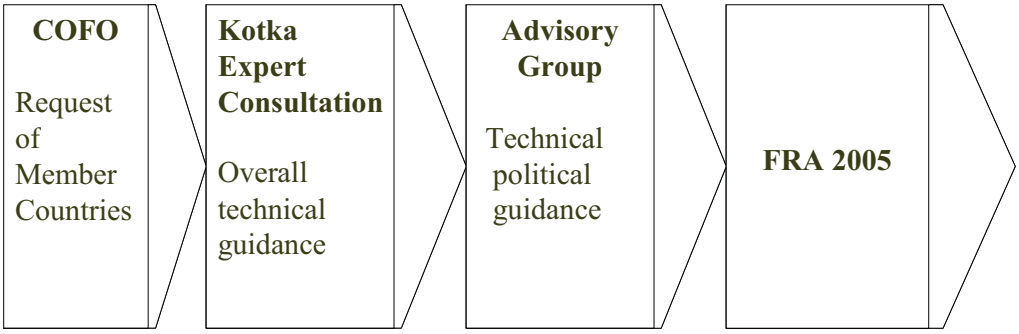
2.5 Technical efficiency and soundness

Having examined the FRA country reporting process and dissemination, the broader process and related procedures that govern the FRA are examined in this section, including the quality assurance mechanisms that are part of the FRA process.

The governance of the FRA process. The regular expert consultations held in Kotka, Finland have become traditionally known as the Kotka consultations and, in conjunction with FAO's biannual meetings of the Committee on Forestry (COFO), provide the technical (Kotka) and political (COFO) governance mechanisms for Global Forest Resources Assessments together with the FRA Advisory Group (Figure 21).

[21] Internal users who less frequently use FRA data and information reported that the reason is simply because it is not relevant for their work.

Figure 21: The governance mechanisms of the FRA process



Recommendations stemming from COFO, the Kotka expert meetings and the FRA Advisory Group regularly feed into the FRA process. Examples include: creation of a global network of National Correspondents (Kotka IV); reporting on FRA results in line with the Sustainable Forest Management framework (FRA Advisory Group and Kotka IV); the Remote Sensing Survey (Kotka V); including the legal, policy and institutional framework and integrating the 2010 Biodiversity Target (Kotka V); integrating the UNFF Global Objectives on Forests (COFO, 2007). The direction shaped by the recommendations seems to be fitting as evidenced by the overall positive evolution of the FRA process. Most recently, harmonization efforts have been increasing and contributing to streamline FRA with other international reporting processes. Apart from the governance and harmonization mechanisms, there are some in-built quality assurance processes driving FRA in terms of its technical efficiency and soundness.

2.5.1 Kotka expert consultations and the FRA Advisory Group

FAO, UNECE and Metla (the Finnish Forest Research Institute) have organized five expert consultations to date in the town of Kotka in Finland, with the first one held in 1987, the latest in 2006, which have strategically driven FRA. The key milestones of Kotka consultations throughout the 20-year period are outlined in Annex 10.

The most recent Kotka consultation (Kotka V, 2006) concluded that progress has been made with FRA towards a truly global assessment of forests and of sustainable forest management. Meeting the needs of users and harmonization of forest-related reporting has been increasing. While the reporting burden for National Correspondents was acknowledged, Kotka V identified future challenges including information on: i) the extent of trees outside the forest; ii) carbon sequestration and emissions from forests; iii) forest degradation and biodiversity; iv) the extent, removals and value of NWFPs; v) the value of environmental and socio-cultural services provided by forests; vi) the role of forests in providing livelihoods and reducing poverty; and v) the area of forest under sustainable management.

The FRA Advisory Group provides the strategic planning, organization, process and time frame of FRAs, and advises on implementation impacts of the broad recommendations of the expert consultations. Members of the AG have expressed that while the informal nature of the group is overall welcome, its structure could be tightened and its function more involving, for example in terms of providing analytic input and output to review country data and to consider alternative sources in filling missing data gaps.

2.5.2 The evolution of FRA

Comparing FRA 2000, FRA 2005 and FRA 2010. In analysing the latest changes for FRA 2010[22], it is clear that while there is the continuing trend on increasing number of variables, there is also a certain degree of flexibility to accommodate new needs and values, which shape the new cycle of FRA. Accordingly, out of the 11 significant changes introduced for FRA 2010, 7 represent additions or expansions of existing tables, whereas 4 represent redesigns or simplifications to existing tables and variables. Examples include:

- 4 new tables in response to the request to also report on forest laws, policies and institutions
- a new table added on forest establishment and regeneration to respond to information needs to monitor progress towards Global Objectives on Forests; and
- simplification of the table on forest designation to now only cover forests – as a response to a low completion rate for other wooded lands in FRA 2005.

The flexibility to introduce change to the FRA process is enabled through various *feedback channels*, including the Kotka expert consultations (FRA 2005 evaluation), COFO, the FRA AG, but also on the basis of the conclusions and recommendations of special studies (e.g. thematic study on forest ownership in FRA 2005), as well as through harmonization with international processes (e.g. C&I and the 2010 Biodiversity Target) and consultation with all NCs. These changes show that the FRA process is a continuously improving, flexible and dynamic process, at least in its most recent history. As a member of the FRA AG summarised it: FRA 2000 offered a benchmark, FRA 2005 was strengthened by the global network, whereas FRA 2010 provided the Remote Sensing Survey as a validation tool (Table 3).

[22] http://www.fao.org/forestry/45520/en/

Table 3: Comparison of FRA 2000, FRA 2005 and FRA 2010

Features	FRA 2000	FRA 2005	FRA 2010[23]
Participation	**172** country focal points (160 countries participated actively), **298** contributors	**172** NCs, **229** country reports and **800+** contributors	**178** NCs, **233** cleared country reports. **900+** contributors
Coverage, scope and information reporting	**213** countries and territories	**229** countries and territories	**233** countries and territories
	Global, regional and subregional overview; new parameters on environmental and social services	6 areas of SFM - Institutional framework was not included.	7 areas of SFM - Institutional and legal framework was included in 2010
	16 tables	**15** tables + **6** special studies	**17** tables + **5** special studies + remote sensing component
	10 main variables	**40** variables	**90** variables
	357 pages (main report, excluding annexes)	**160** pages (main report, excluding annexes)	**200** pages (tentative, main report excluding annexes)
	Temporal dimension: 1990 and 2000	Temporal dimension: 1990, 2000 and 2005	Temporal dimension 1990, 2000, 2005 and 2010 for most variables
	47% of national forest classifications were highly compatible with FRA 2000 global classes *	Harmonized reporting with international processes	Designed to cover information needs for monitoring progress towards the 2010 Biodiversity Target of the Convention on Biological Diversity (CBD) + Global Objectives
Weaknesses	Reliance *solely* on country information (supply and analysis), except the RSS for tropical forest cover[24]	World forest map missing (satellite data)	7 additions or expansions to reporting tables, thus continuing to increase the reporting burden
	10% coverage of the pan-tropical RSS	No regional reports provided (but regional summaries were presented in SOFO 2007)	New data required (e.g. gender-disaggregated) unavailable, hence incompletion rates are high for some tables
	Change in definitions affecting temporal comparability and requiring retroactive revisions	Workload cost to document country data in a report	
Innovations/ improvements	RSS for tropical forests	More transparent reporting process	Global coverage of RSS Pre-filling of country reports
	Country profiles	Enhanced national capacity in data analysis and reporting	• capacity-building through RSS (opportunity for countries to scale up) • two nominated NCs and alternate per country • more involvement of regional forestry officers in revising results and chapters of the main report
	Development of an integrated forest information system (FORIS)	Active, direct involvement of countries – network of National Correspondents	Legal and institutional framework and some gender disaggregated data included
Overall approach used	Bottom-up with global level verification (pan-tropical RSS)	National Correspondent network as a key asset	National Correspondents *and* Alternates with global level verification (global RSS)

* The % refers to a calculation made on the basis of data from FRA 2000 reporting table 2, whereby country correspondents reported compatibility (as high, medium or low) of national forest classifications with FRA 2000 global classes.

[23] See: http://www.fao.org/forestry/45515/en/ on country reporting for FRA 2010 and http://www.fao.org/forestry/45520/en/ for "What's new in FRA 2010"

[24] While reliance on country information may be considered a weakness initially, it may also be considered a strength, depending on the country context.

Harmonization with other international reporting processes. The extent of harmonization with international reporting processes at country level can be measured by considering the relevance of the FRA national reporting tables for international processes other than FRA. The FRA Team produced two useful cross-tabulation matrices mapping each of the 15 tables of FRA 2005 with:

- common thematic areas of the *Criteria and Indicators processes* (extent of forest and other wooded land, contribution to global carbon cycle, forest ecosystem health and vitality, biological diversity, productive and protective functions, social and economic functions); and
- selected *international processes, conventions, protocols and agencies* (e.g. UN Millennium Development Goals, Convention on Biological Diversity, UNFF, UNFCCC, IUCN, ITTO, UNECE/FAO, MCPFE, the Millennium Ecosystem Assessment).

External reviews of FRA. Mather (2005) – a scholar at the University of Aberdeen, Hoare (2005) on behalf of the Rainforest Foundation, and Matthews (2001) from the World Resources Institute offer some critical insights on the FRA methodology, process and product, including technical efficiency.

Mather calls FAO "*the main actor in assessing the world's forests*" (p. 268) but alerts that data of individual countries can show vast variation and that the greatest challenge is to compile a reliable *time-series data for the global forest area*. He points out the initial interest in remote sensing in relation to tropical deforestation began as early as 1969 (Lanly, as cited by Mather, 2005), however, it took FRA 2010 to use remote sensing systematically and to start building country capacity for remote sensing[25]. Mather considers the opportunity to establish a top-down approach through remote sensing as a complement to the established bottom-up approach, reviews the use of country data and methodological challenges, and concludes that the FRA *process*, offering a potentially significant instrument of global forest governance (it may be argued that it already is) may be considered just as important as the *product*.

Hoare's methodological review focuses on *definition issues*, particularly net forest change, forest degradation, definition of forests and plantations and the FRA definition of temporarily unstocked forest area and argues that accordingly FAO's global figures may be viewed as misleading. On the other hand, any definitional parameter is arbitrary: the strength of FRA originates from its globally agreed reporting framework and the transparent methodology showing *how* global figures have been aggregated.

Similar to Mather and Hoare, Matthews (2001) argues that tracking long-term trends in global deforestation is made more challenging as new estimates for 1990 have been produced in FRA 2000 than the previous estimates for that particular year, since a definitional change occurred in FRA 2000 for industrial countries. New estimates were indeed needed, since new data should result in a revision of trends. Hence, FRA 2005 required countries to report on 3 points in time (1990, 2000 and 2005) to produce consistent trends.

Matthews also draws a distinction between loss of natural forests and loss of planted forests, arguing that FRA data is misleading in terms of the actual destruction of natural forests because FRA's net rate of global forest change is calculated by aggregating both natural and planted forests data. However, FRA 2005 and 2010 both allow for distinctly tracking changes in natural and planted forests separately.

[25] Remote sensing was also used in FRA 1980 where country information was lacking and in FRA 1990 and FRA 2000 for all the pan-tropical region.

Rhett Butler, an independent conservation activist and owner of the Mongabay website, also recognised that FRA is the most comprehensive source for forest-related information, although at times limited by the data provided by countries. He highlights the need to have high quality and reliable data available for policy and that alternative estimates, especially from scientific institutes, should be used in cases where data gaps for certain countries exist.

2.5.3 Quality assurance mechanisms

Review of FRA country data by the FRA Team. Each NC was assigned a focal point in the FRA Team to facilitate communication, technical support and review of the FRA country reports, before the final approval of the FRA country reports by the FRA Team and by the Heads of Forestry of the reporting countries. This *data and information quality* review is an in-built mechanism of the FRA process to ensure that the best possible data and information is provided, in terms of *completeness, consistency, methodology and transparency* (particularly in cases of non-standard reporting methodology). The FRA Team also conducted comparisons with FRA 2000 and Forest Products Statistics before finalizing the review and computation of global tables.

The FRA Team monitors the review process by tracking changes to the original submission of country data and information for each country and region and thus in this way contribute to the transparency and management of the review process. The process is finalised after validation letters are sent to the Heads of Forestry by the Assistant-Director General of the Forestry Department[26].

Informants, particularly the National Correspondents, appreciated the review process as a valuable function of the FRA Team to ensure reliable data. Simultaneously, the FRA Team has emphasized that the analysis and interpretation of the country data should be carefully checked with the National Correspondents before being validated by Heads of Forestry for publication. To make the validation process by the various parties involved more efficient and manageable, country reporting could be supported by an online mechanism.

Ex-post technical evaluation of FRAs. An evaluation of the forest resources assessment process and outputs is conducted regularly by the FRA Team immediately following the completion of the assessment, implemented since FRA 2000. The systematic ex-post technical evaluation of FRA provides an additional in-built quality assurance mechanism (in addition to the real-time review process prior to publishing FRA).

Gap analysis. As part of the evaluation for FRA 2005, a gap analysis has been conducted on the basis of quantitative and qualitative data collected in FRA 2005, including the observations and experiences of FRA focal points (e.g. main shortcomings in country reporting). Thus, countries were ranked in terms of the following criteria:

- **Percentage of global forest area** (of a given country) criterion
- **Assessment method**[27] (of forest area status and trend estimation) criterion
- **Table completeness** criterion

[26] The validation letters officially call for country approval to publish the final country data and related analysis of the global report, which was first submitted by NCs, and then reviewed by the FRA focal points.

[27] The score of the assessment method criterion is most complex to calculate from the 3 criteria, and aggregates sub-scores of: i) year-corrected (since last forest assessment) forest area status; ii) forest area trend; and iii) stock/unit area trend.

The scores of the criteria were aggregated to calculate a *total country ranking* or *index*. Country rankings were also made on the basis of individual criteria scores. For example, on the basis of *reporting table completeness* scores, Sweden, China, The Russian Federation and India were ranked high; whereas Venezuela, Australia, Angola and the Democratic Republic of Congo scored low in completeness. Of course , interpretation as to *why* this is the case may be as diverse as the number of reporting countries and one needs to be extremely careful in drawing generalizations.

There is no evidence that the total country rankings *per se* have served a wide purpose and use, apart from reporting to the FRA Advisory Group in 2007 and using selected data (e.g. assessment method criteria scores) in advocating for extra-budgetary resources to support national forest assessments and exploring potential partnerships. However, the potential of more widely using such a ranking system can be considered. Although a country rankings method has its shortcomings, it may be a useful advocacy tool provided it is contextualised (e.g. consideration of main shortcomings and consideration of most relevant variables used in calculating a final country rank); the methodology of scoring is transparent; and the rankings interpreted meaningfully and used sensibly. If these conditions are fulfilled, a scoring system can provide a long-term monitoring of country capacity and can be used as a tool for prioritizing capacity-building efforts, both in the context of FRA and NFMAs, but also beyond (e.g. to be used in the design of a Forest Development Index, discussed in the recommendations section).

2.6 Managerial efficiency

This section briefly examines the managerial input that drives the FRA process, including the leadership and decision making, as well as the coordination efforts.

2.6.1 FRA leadership and decision-making

Building partnerships. When eliciting feedback on partnerships, informants were generous with regard to expressing favourable feedback on the ongoing efforts of the FRA Team and the FRA Coordinator to nurture partnerships. No change in strategic partnerships was invoked, except to continue the ongoing approach of wide-ranging partnerships related to harmonization efforts and building country partnerships[28].

Use of financial resources. The managerial competency to find resourceful ways in creating efficiencies is particularly relevant in the FAO context. FRA 2005 had a couple of major donors, while there were more than a dozen donors for FRA 2010. Most of the donations were in the order of 50 000 to 200 000 Euro, with the exception of the EC and Finland which provided the majority of the funding needed for FRA 2010.

2.6.2 Coordination of the reporting process

Various levels of responsibility for facilitating the coordination of the reporting process and the analysis of the data are shared by the NCs, FRA staff at FAO Headquarters, Forestry Officers in Decentralized Offices, subject specialists from FAO and the FRA Advisory Group. The FRA Team facilitates the process by providing:

- Specifications, guidelines and reporting format disseminated in English, French, Spanish, Russian and Arabic

[28] A member of the FRA Advisory Group expressed that FAO/FRA should engage in more strategic partnerships, such as with The World Bank and Transparency International.

- Regular email contacts with NCs, including a generic FRA email account
- Data and information through the FRA web site, including the FRA 2010 Newsletter
- Subregional workshops to review draft reports
- Additional Ad Hoc support to selected countries

While suggestions to improve the coordination of the reporting process by employing a full-time focal point for each region and seeking funding to allow Alternates to attend the regional workshops have been voiced (Annex 1), overall informants recognize the complexity of the task, solely by considering the uniqueness of each country context. As mentioned earlier, NCs have acknowledged the *less visible aspects of the FRA process*, which are complex due to their scope, timeline and global outreach, and nevertheless much needed in building valuable capacity.

2.7 FRA programme effectiveness

Programme effectiveness was assessed primarily through the feedback of National Correspondents, although some indication can also be gained as to the level and extent of FRA data and information use by external and internal users (see also Annex 6 and 7 on findings of citation and web traffic analysis regarding external use). Although the National Correspondent sample was limited in size, the qualitative feedback of the interviews and questionnaires provides some indication of programme effectiveness, specifically in terms of outcomes, impact and the perceptions of National Correspondents regarding the benefits and worthiness of participation in the FRA process.

> *"FRA continues to drive developing countries to address data gaps and necessary technical support to address them"*
>
> **- FRA Advisory Group member**

Overall impact. While impact of a programme is difficult to measure, National Correspondents were asked to judge, according to their experience, whether there was *considerable*, *some* or *no impact* at all, as a result of the existence and participation in the FRA reporting process. Furthermore, perceptions of longer-term developments and outcomes at national, regional and international levels as a result of FRA – both positive and negative – were elicited during interviews (see also Figure 2).

Achieving or progressing towards outcomes. While 15 out of 19 NCs think that FRA has achieved considerable or some impact, the qualitative comments provided more insight as to *how* and *what* this means for certain countries – in terms of medium and longer-term outcomes (impact):

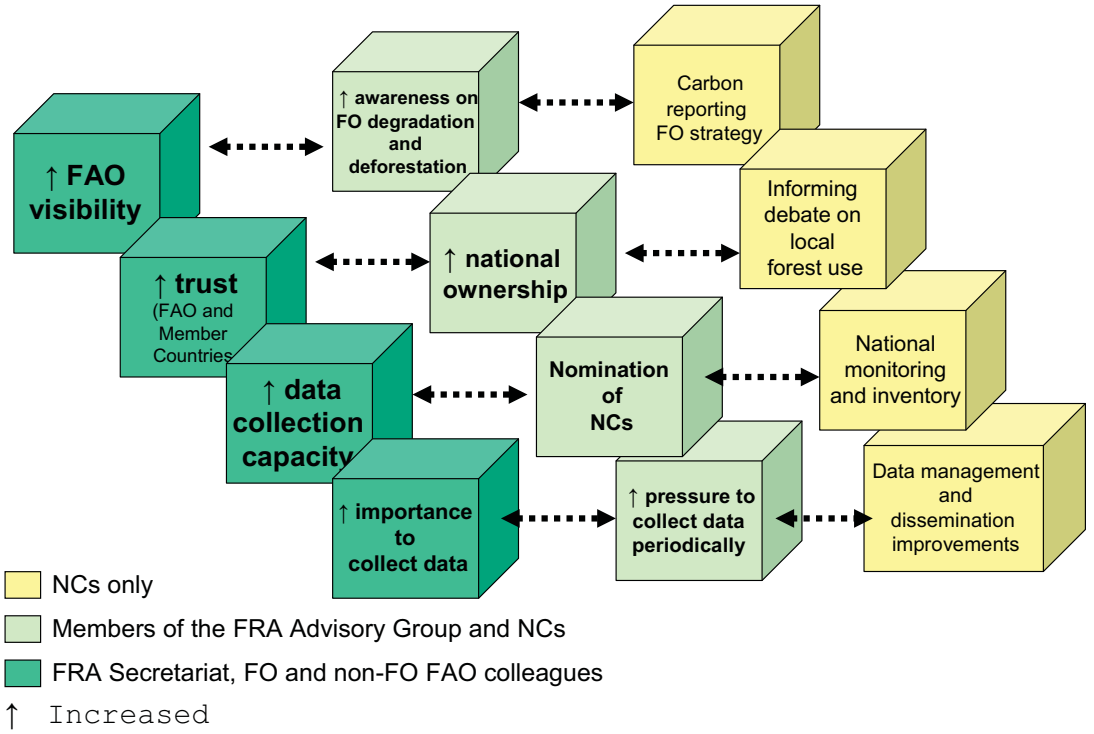
- Increased importance of the **forest sector** on the national agenda
- **Forest exploitation** by the private sector has dampened in the country
- Impact of forests in **poverty alleviation** (e.g. raised awareness on the significance of Non-Wood Forest Products for poverty alleviation among poor rural populations in Senegal)
- **The forest statistics section** has been reinforced by more effectively organizing the availability of the production and exportation data
- The FRA process has led to a reflection exercise on **forest policy and national forest program in Lebanon**.
- Current debate in Kenya about **Mau forest** is informed by FAO forest data for Kenya
- Improvements in **data management and information dissemination**
- **Harmonization** of forest related definitions

- Input to **forest legislation** in Argentina (Ley 26.331 de Presupuestos Mínimos de Protección Ambiental de los Bosques Nativos)
- Input to **Programa Nacional para el Monitoreo y seguimiento a los Bosques y áreas de aptitud forestal** (PMSB)
- Readiness Preparation Proposal to the **World Bank's Forest Carbon Partnership Facility** and to MRV for forest carbon financing mechanism (Guyana)

The National Correspondents also acknowledged the gains through participating in FRA country reporting, particularly the learning aspect and the professional development of National Correspondents.

The outcomes as perceived by interviewed National Correspondents, members of the FRA Advisory Group and the FRA Team and other internal FAO stakeholders are illustrated in Figure 22. The reported outcomes essentially link up well (arrows in the illustration below) to demonstrate the key *process* and *outcome* results the programme achieved in the past several years.

Figure 22: An overview of reported outcomes as a result of the Global Forest Resources Assessment



General outcomes appreciated were the *recognition that FRA is the best possible data on global forest resources available*, and that a *standardised, well-documented and centralized forest resources statistics* on global forest resources are produced.

Most significant change. Furthermore, National Correspondents who were involved in the reporting process prior to FRA 2010 were asked to reflect on what was the *most significant change* that they have noticed. Improvements noticed included strengthening of regional networking through engaging in joint problem analysis, the enhanced technical support provided by the FRA focal points, and more relevant information requested. A respondent commented that the improvements are relative, since data is difficult to compare due to changing definitions over the FRA cycles.

> *"In Argentina, FRA is used greatly by the public sector, but less so by the private sector, academic institutions and NGOs. The nomination of NCs has enabled to mobilise scattered sources for the purpose of integrating them in the FRA country report."*
>
> **- A National Correspondent**

Most likely an unintended yet, to some extent, useful effect, towards which the FRA country reporting process contributed is raising awareness on the *weaknesses* of forest resource information and data in country offices that coordinated the reporting through appointed National Correspondents.

Less favorable perceived outcomes voiced by the interviewed stakeholders (FRA Advisory Group, FAO Forestry and Natural Resources Department representatives) included the following developments:

- Limited consensus on forest definition preventing FRA data and information to be used at country level
- Complacency on attempts to generate better quality data, as a result of investments in a centrally driven process in FAO and in countries
- Misleading use of FRA data if not examined critically and with care
- Increasing complexity of FRA and reporting workload without a proportional increase in incentives/lack of incentives for the information providers, primarily NCs – thus weakening motivation through a heavy and increasing reporting burden;
- Intensified data collection to respond to international needs may be developing at the expense of country needs
- Unknown outcome of special studies – are they used and useful?
- The work flow of statistics on land use and FRA were not integrated as intended and silos remain
- NFMA developing somewhat independently from FRA – resulting in some internal (and external) confusion as to how they are complementary[29]

Regional initiatives. An example of a regional development is a "Monitoring Initiative on Forest Cover Change in Central and South American Forests" proposed during Kotka V consultations by a group of Latin American countries[30]. The recognition of the lack of a continent-wide monitoring system in Central and South America has lead to the proposal, building on existing programmes. The objectives of the initiative are to: i) provide continental estimates of forest land cover change; ii) provide statistics on forest extent using a sliding scale of forest definitions (10 and 100 percent canopy cover) at continental scales and for pertinent ecological areas; iii) make results accessible and freely available in user-friendly interactive formats; iv) catalyze the use

> *"FAO drives cross-country synergies – and only few institutions exist that study forest resources in depth. This effort would cease, at least in Latin American countries, if FRA were to discontinue due to other existing priorities and the relatively lower importance that decision makers attach to forest resources."*
>
> **- National Correspondent**

[29] The participant recognized that there is room to better integrate FRA and NFMA, by creating a systematic feedback loop between country reporting and country requests.

30 The countries included: Argentina, Chile, Colombia, Ecuador, Guatemala, Costa Rica, Honduras, Peru, Uruguay and Venezuela.

of the information to strengthen accountability, identify priorities for action and improve forest management decisions at national and international levels; and v) provide a continuous opportunity for countries to build capacity in national level organisations. A regional network for monitoring forest cover was formed during 2006, followed by a regional workshop in Valdivia in 2007, hosted by WRI, INFOR and FAO. Regional collaboration was reaffirmed to provide full support and better organisation towards FRA and NFMA.

2.8 Internal and external partnerships

FAO Member Countries and the information providers. The FRA country reporting process is a partnership between FAO and Member Countries in order to produce a global picture on forest resources, to build capacity at country level, and to contribute towards harmonization of international reporting on forest resources. The global partnership to report on FRA has been strengthened through the nomination and training of National Correspondents and creation of a global network. FRA Advisory Group members and the National Correspondents have recognized that the partnership through the FRA process also helped build *trust* between FAO and Member Countries, and between FRA and National Correspondents.

Implementing partners for the FRA country reporting. The UNECE/FAO Timber Section assists in coordinating the country reporting process in Europe and strong links have been established between the FRA and the State of Europe's Forests reports. In 2009, they administered a questionnaire to evaluate the use of the report State of Europe's Forests 2007[31], as well as to assess the level of satisfaction of its readers in order to provide recommendations for the next report. Their Team of Specialists help address and advise on issues through specialist expertise similarly to the FRA Advisory Group.

The National Forest and Monitoring Assessments (NFMA) can be considered a complementary programme to FRA to support implementation of forest inventories. Collaborative work between Remote Sensing Survey and NFMA is already ongoing more widely in certain countries where both FRA Remote Sensing Survey and NFMA sampling plots are being integrated, such as Angola. (See Box 6)

Subject specialists in other units of the Forestry Department are involved in the design of tables, the definition of terms, the development of reporting guidelines and the analysis and use of the data received.

Box 6: The Strengthening Monitoring, Assessment, and Reporting (MAR) on Sustainable Forest Management (SFM) in Asia (GCP/INT/988/JPN) project (2006-2010) with a total approved budget of US$ 2,543,447 funded by the Government of Japan aims to contribute towards a globally harmonized forest-related national MAR system that directly contributes to improving SFM. It is complimentary with FRA to the extent that it facilitates the development of *harmonized forest related national monitoring, assessment and reporting* for contributing directly to the improvement of national SFM regimes. The initiative shares the ambition of the Collaborative Partnership on Forests (CPF) about simple, harmonised, efficient and action oriented MAR systems both at international and national levels.

Box 7: Supporting National Forest Programmes. FAO Forestry also supports National Forest Programmes (NFPs) through capacity-building and a NFP Facility since 2002 that provides targeted support to NFP processes. The NFPs are funded through a multi-lateral trust fund and governed by a Steering Committee, promoting active participation of all forest stakeholders. The recent FRA 2010 Newsletter invites National Correspondents to contact NFP focal points in order to align country reports with existing NFP data feeding into FRA reporting tables 14 to 17.

[31] http://timber.unece.org/index.php?id=33

Implementing partners for the FRA 2010 remote sensing survey. Current remote sensing partners include: the European Commission's Joint Research Centre (The TREES-3[32] and FOREST projects[33]), US Geological Survey[34], South Dakota State University[35] and others with whom *A Global Forest Resources Assessment portal* has been inaugurated in 2008. FAO/FRA will conduct a global processing of samples mainly in collaboration with JRC.

The Environmental Assessment and Management Unit (NRCE) is one of the internal partners of FRA in the remote sensing survey. NRCE is mainly concerned with global monitoring of land cover to detect the unprecedented changes occurring to ecosystems, including the damaging transformation of forest into agricultural land. A joint effort on evaluating methodologies in the context of application of the RSS for FRA 2010 has been carried out and a common methodology, functionalities and tools developed, as well as a common information gateway.

> "FAO has gone out of its way to yield synergies in the context of FRA partnerships."
>
> **- FRA AG member**

Harmonization related partnerships with international organisations. The IEE noted that the FRA took advantage from an agreement from Member Countries to use a common reporting format, in collaboration with partner institutions, such as UNEP and ITTO. FRA partnerships have evolved and to date include close collaboration with the following international forestry institutions committed to streamline reporting, represented during the last Kotka meeting in 2006 to plan for FRA 2010: CBD, ITTO, IUCN, MCPFE, UNEP-WCMC, UNFCCC, UNFF and WRI (and to a lesser extent The World Bank, INBAR, ICRAF, UNEP, ACTO and IUFRO). Strong efforts were for example made to harmonise reporting with ITTO, CBD, MCPFE and UNFF for FRA 2010.

Google and Group on Earth Observations. Whilst FRA is a truly unique global product, given its global coverage and country participation, other global forest monitoring systems are being developed to respond to the needs of the emerging carbon market. These include Google, the Group on Earth Observations (GEO), The World Bank's Forest Carbon Partnership Facility and The Prince's Rainforests Project[36]. Preliminary consultations with FAO have taken place to explore the feasibility and value of partnering. Although a somewhat controversial proposal given that Google is a commercial company, other UN agencies have been using Google, such as UNHCR to track refugees and its humanitarian work to help them, and UNICEF showing place marks regarding projects they carry out on water and sanitation. The comparative advantage of FRA is that the remote sensing survey in combination with field verification will strengthen the validity and reliability of data on forest area change, which is a fundamental requirement for carbon reporting, monitoring and verification, particularly for the REDD mechanism (Wilkie, Press Release on Global forest monitoring to help mitigate climate change, 2009).

2.9 Resources management

One of the objectives of the auto-evaluation was to respond to the question of whether there was an efficient use of human and financial resources made available to the programme. Cost efficiency and effectiveness is admittedly challenging to conduct in the context of ongoing reforms since 2005 onwards and the more recent changes to the overall Organizational structure. However, on the basis of available data from the PIRES database, FOIM and FODP records on staffing and financial

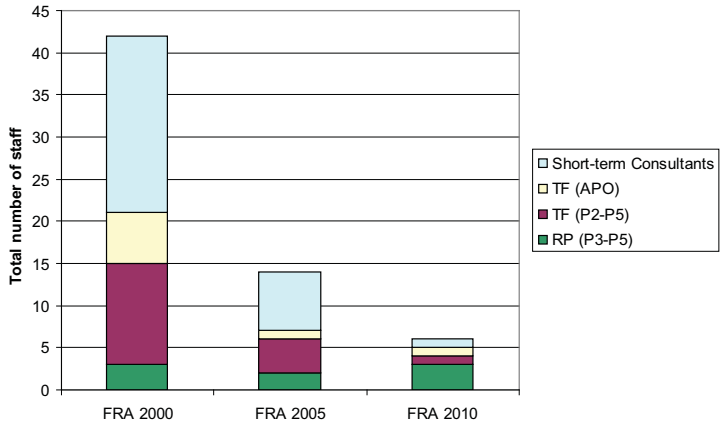
[32] http://gem.jrc.ec.europa.eu/index.php/pages/GlobalForestResourceMonitoring/4
[33] http://forest.jrc.ec.europa.eu/forest-mapping
[34] http://www.usgs.gov/
[35] http://globalmonitoring.sdstate.edu/people.php?name=hansen
[36] http://www.google.org/forest-partners.html

allotments and expenditure, as well as the financial monitoring records of the Forestry Department, the following trend analysis was assessed in terms of human and financial resources.

2.9.1 Human resources

Data on human resources assigned for FRA 2000, FRA 2005 and FRA 2010 is compared in Figure 23, which shows that the number or people assigned to FRA 2000 was eight times more than for FRA 2010. However, it should be kept in mind that many of the consultancies for FRA 2000 were short-term compared to those for FRA 2005 and FRA 2010. Furthermore, FRA 2000 also included support to specific countries for capacity building and implementation of national forest inventories. The downward trend is reflected in the reduction of short-term consultants, and staff including Associate Professional Officers funded by trust funds. The only category that remained stable is the regular programme funded staff – who are nevertheless low in numbers across the FRA cycles, given the scope of the FRA – that is, less than four in any of the FRAs compared.

Figure 23: Staff assigned for implementing FRA 2000, FRA 2005 and FRA 2010



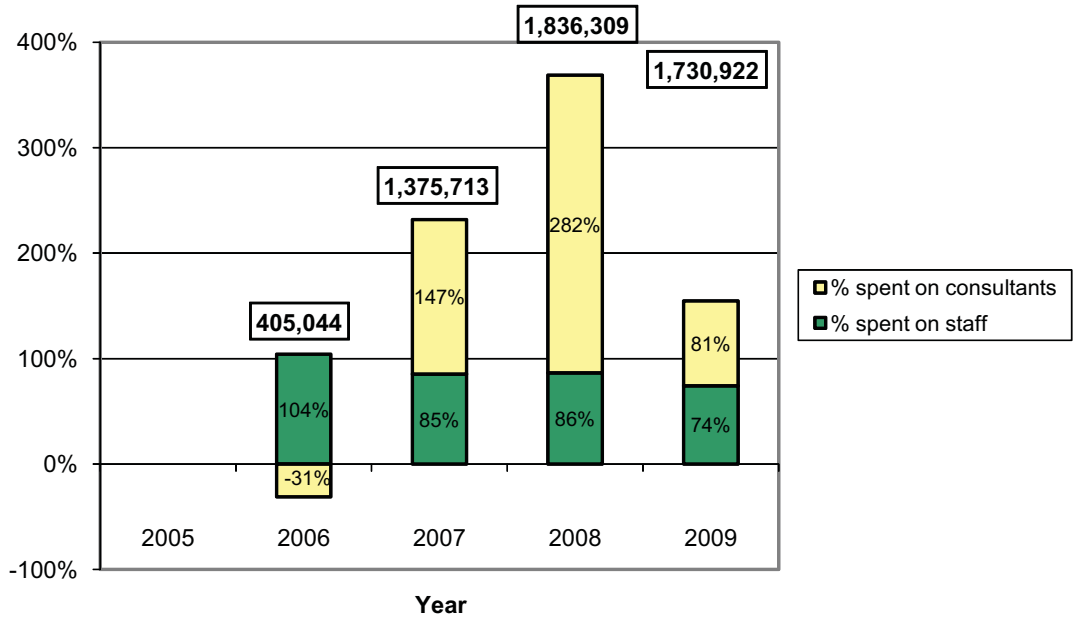
Note: Two of the staff positions shown within the RP category for FRA 2010 are currently vacant and vacancies have been advertised.

Clearly, when the complexity of FRA is evidently increasing over the reporting cycles, country participation increasing and more emphasis is called for the verification process run by the regional focal points at the FRA Team, as well as for the new major component of the FRA 2010 (the Remote Sensing Survey), the overall downward trend for human resources is alarming.

2.9.2 Financial resources

Figure 24 shows three key variables concerning the regular programme financial resources: the annual allotment for the FRA programme (amount in US$, 000 in boxes above the bars), the percentage of the allotment spent on staff, and the percentage spent on consultants each year. In addition (not shown in the graph), the income received through the European Commission Multilateral Trust Fund (GCP/GLO/218/MUL titled: “Contribution to the Global Forest Resources Assessment Programme”) provided an additional 3.1 million Euro over the period 2008-2011.

Figure 24: Financial resources and expenditures on FRA (2006-2009)



While 2006 was a year with relatively few financial resources, which can be explained by the first operational year of a newly established unit (FOIM), the allotments for 2008-2009 were considerably healthier. The trend also shows that hiring consultants is overall highly variable with peaks at different points in the reporting cycle, with 2008 marked by a considerable portion spent on consultants (282 percent), whereas the portion spent on staff is more regular (as also shown in Fig. 23 showing trends on regular programme staff). Consultant expenditures were considerably reduced for FRA 2010 (2009), as can be seen from the 2009 bar of the graph, in concurrence with the FRA 2010 bar of Figure 23.

2.10 Emerging issues

Emerging issues related to FRA are many, however only selected ones are presented here: i) implications and opportunities related to the Remote Sensing Survey of FRA 2010; ii) the role of forest resources in mitigating climate change; and iii) gender and livelihoods data in forestry. Gender and livelihoods, although currently not as topical as the climate change negotiations, has been a longstanding issue and is only recently "emerging" in the FRA work – and as such, deserves acknowledgment.

2.10.1 The FRA 2010 Remote Sensing Survey

Design and preparation of the Remote Sensing Survey initiated in 2006 with analysis and final reporting envisaged for 2011 during the International Year of Forests. The Remote Sensing Survey will enable producing updated and – due to a higher resolution – more precise *global forest maps* on forest cover and more detailed statistics on forest change, which are essential products for the international community to inform them on the global scale of deforestation.

While driven by the need to obtain better quality and more detailed forest resources data – particularly on trends in the extent of forest types – the Remote Sensing Survey is mutually beneficial for participating countries, by for example:

- further assisting in building country capacity for developing forest monitoring systems;
- providing the opportunity for countries to strengthen their national remote sensing capacity in a relatively cost-efficient and effective way; and
- facilitating carbon monitoring, reporting and verification (feed into the objectives of the UN-REDD Programme).

The Remote Sensing Survey also offers opportunities for further developing internal and external partnerships, in particular with the concurrent UN-REDD Programme, NFMA and the recently launched Google Forest[37]. Given the need to build support and maintain the effort, sharing data collection and widely using the Remote Sensing Survey data is an imperative. Additionally, with a wide range of stakeholders relevant for FRA, such as the scientific community, NGOs, international conventions and the community at large[38], there is an opportunity to build and share information top-down, but also bottom-up.

2.10.2 Forests and climate change mitigation

Despite a less than successful outcome at the International Climate Change Conference (COP15) in Copenhagen, the event has ensured that deforestation and forest degradation have been firmly placed on the global political agenda (Box 8).

Issues of significance for FAO and most notably, the Forestry Department as a result of the climate change talks are:

- political visibility of forests being at an all-time high
- capacity-strengthening for countries taking on increasing urgency
- the likelihood of REDD funding dramatically increasing in the short-term
- REDD attracting many interest groups, thus resulting in increasingly complex demands and controversy
- agricultural work programme proposed at the COP15

Box 8: The Copenhagen climate change negotiations were held in December 2009. While expectations on the outcomes of the post-Kyoto negotiations were high, the media overall provided a bleak picture of the event, partly due to the fact that the Copenhagen Accord was "noted", but not approved and thus *not* binding. Although the Ad Hoc working groups were unable to conclude their work, which resulted in extending their terms; and divides between and within groups were evident, *progress*, as well as *political visibility* in addressing *forest issues* was evident (Braatz, 2010).

Despite not reaching a binding agreement, countries did agree on *international monitoring of emissions*, as well as *funding* (e.g. industrialized countries pledged US$ 3 billion a year for the next 3 years and up to $100 billion a year by 2020) for mitigation and adaptation in developing countries. Altogether, an enormous potential presents itself for strengthening and funding FAO's work in climate change mitigation through its forest and related sector work.

2.10.3 The gender dimension

Despite women being significant users of forests through their involvement in food production, fuel wood collection, medicinal plant collection, small-scale wood industries and in some countries being significant forest owners, they rarely have decision-making power either at macro or micro levels (UNECE/FAO Team of Specialists on gender issues and forestry, 2006).

[37] http://www.google.com/hostednews/afp/article/ALeqM5j4dCO6c-YK2xBy36xtnIX7B6RR5A
[38] See for example, how communities and individuals can take part in constructing and sampling the world through the use of Web2: www.confluence.org.

UNECE/FAO Team of Specialists. The UNECE/FAO Team of Specialists on gender issues and forestry (ToS), established in 2004, published a report "Time for action: Changing the gender situation in forestry" in 2006. The objective of the ToS was to *"raise visibility of women and women's involvement in the forestry sector and to understand the gender structures throughout the sector"*. The report examined three themes across 34 countries, mostly European, namely, gender structures in forestry organisations, forest ownership and gender perceptions of forests and forestry. It notes that the report also notes the scarcity of gender data and information available, including the private sector; but also the formation of a number of women networks, mostly forest owners, providing support to women in forestry.

Gender and livelihoods in FRA. There is a necessity to capture a gender dimension in monitoring forest resources, if women are significant users who can facilitate sustainable forest management. However, as noted in UNECE/FAO report in 2006, the lack of gender data in European countries is the rule rather than the exception. Country data providers were requested to provide gender disaggregated data for selected variables in FRA 2010[39], which is a step in the right direction.

Livelihood dependence on forest resources appears to be gender based. As FAO's gender unit cites, in Andhra Pradesh, 77 percent of women's income in some areas is entirely derived from forest resources (Gender, Equity and Rural Employment Division, 2009). A special study on forests, poverty and livelihoods is underway for FRA 2010, which aims to assess linkages between poverty and forests. Developing better knowledge of the linkages will enable the development of programmes that target poverty more effectively and that apply appropriate interventions for those living in remote forested regions and those living nearer to markets and roads.

Gender-disaggregated data in FRA 2010. Gender reporting in FRA 2010 is in line with gender mainstreaming in FAO's New Strategic Framework (2010-2019), which sets a target for FAO to collect *gender-disaggregated data on employment in public-funded forest research centres and graduation from forestry educational institutions*. Two tables in the Institutional framework of FRA 2010 were explicitly eliciting gender-disaggregated data, for two temporal data sets (2000 and 2008):

- staff in public forest institutions
- graduates in forest-related education

Regarding the data availability or completeness rates of gender-disaggregated data required for these national tables for FRA 2010, it is clear that in best case scenarios, half of the reporting countries were able to supply gender-disaggregated data and somewhat more easily when it comes to the education of employed professionals, rather than student graduates. Interestingly, out of the 177 National Correspondents for FRA 2010, only 20 or 11 percent are women[40].

Given the importance and the relative neglect of gender issues in forestry, sensitising national counterparts at the monitoring and policy level, through FRA and NFMA seems logical and may be strengthened by teaming up with the forest policy and gender units in FAO. Indeed, UNECE recommended in 2006 that FAO and Member Countries apply the FAO gender-sensitive indicators for natural resource management to forestry. Furthermore, they affirmed that mainstreaming gender

39 Gender disaggregated data will be reported in the Institutional framework section (Table 15b), under "human resources within public forest institutions"; and in the Education and research section (Table 16.4), under "graduation of students in forest-related education" for 3 temporal data sets (2000, 2005 and 2008).

40 They mostly come from the Latin American countries, but also from Australia, Barbados, Bhutan, Canada, Croatia, Denmark, France, Fiji, Greece, Jamaica, Mozambique, Palau, Paraguay, Peru and Vanuatu.

in forestry implies all Member Countries of the Montreal and MCPFE processes take responsibility to develop their own national gender-sensitive indicators. FRA 2010 has taken a small but significant step in building capacity in this direction.

3 OVERALL CONCLUSIONS AND RECOMMENDATIONS

3.1 Overall conclusions

On the basis of evaluation findings, it can be concluded with confidence that the FRA programme is widely recognized among specialized groups of users. Furthermore, it produces a valuable and global public good, which could be made more usable for the most important intended users (policy-makers), but also for the general public. Ample space exists for improvements across various areas, which need to be prioritized and coordinated for achieving most programme effectiveness and efficiency, given the limited resources.

A more targeted communication and dissemination strategy would ensure more impact at policy-level. Country reporting need to continue to be managed delicately – the process and people - with the ever increasing complexity and quantity of information required from the information providers. Without an adequate incentive for information providers, as well as without investments into succession planning[41], the minimal quality and overall sustainability of reporting cannot be maintained. The end-product is not a perfect picture of global forest resources, but it is the best available comprehensive global dataset on forests, and is improved with each reporting cycle. The National Correspondent network is considered a critical asset and a key resource in the FRA country reporting process. The FRA Advisory Group mechanism can be optimized in many ways, as suggested by the members themselves, particularly in terms of membership issues regarding the renewal and maintenance of members, as well as the results-based management of the advisory process by the FRA Team.

Overall strategy of FAO's Global Forest Resource Assessments. The direction of the assessments, as perceived by core stakeholders is a continuously evolving process providing the best possible data on global forest resources available. There is also strong opinion that data quality and reliability should be the hallmarks of FRA and should not be compromised, but only continuously improved. It has been concurred that *prioritised capacity-building* is a must if FRA is to improve on the data reliability and overall quality aspects. The FRA Team already has the *internal know-how and the data on the basis of which prioritisation decisions can be made, but lacks adequate human and financial capacities to be able to bring about any larger scale capacity-building impact.* Nevertheless, the supporting NFMA, UN-REDD Programme, FAO-Finland Programme and the NFP Facility programmes exist to this end. There is scope for more systematic consolidation between NFMA, UN-REDD, FAO-Finland Programme and FRA, which should also be visible externally, explaining *how the two processes work together for the ultimate aim of FAO in providing the best possible data on global forest resources*.

Country reporting and the National Correspondent network. *The process of collecting country data is a critical element of the FRA programme for both the National Correspondents and for the FRA Team*. FRA country reporting has its distinct complexities and challenges driven by the

[41] Succession planning in this context refers to training successive National Correspondents and current Alternates regarding the FRA country reporting process, task and responsibilities.

country context. *It is also clear that the National Correspondent network is a major asset, valued by both the FRA Team and the National Correspondents themselves, and acknowledged as such by the members of the FRA Advisory Group.* It is a valuable *comparative advantage* of FAO over other entities that have similar mandates to FRA. There is indication that National Correspondents have preference for more frequent reporting than is currently the case, but would expect more support from the FAO in doing so, in return. A suite of small-scale changes may contribute towards optimising the country reporting process and strengthening the National Correspondent network further.

The FRA Advisory Group mechanism is adding transparency to the FRA process and is functional to the extent that it provides strategic direction and management to the FRA process. However, remarks were made on the need to also manage and oversee the functioning and results achieved of the Advisory Group by the FRA Team, in other words, to manage it using a *results-based management framework.* This would be a timely endeavour, given the FAO-wide revival of results-based management in the Organization, as one of the Immediate Plan of Action recommendations of the IEE (IEE, 2007). Improvements regarding terms on tenure, membership and specific responsibilities and deliverables of individual members of the Advisory Group were suggested in rendering the mechanism more robust and cohesive.

Communication and dissemination strategy. The most relevant stakeholders and intended users of the outputs of the FRA programme are the policy-makers in the forestry and related sectors. The gains of using FRA outputs are assumed to also benefit forest managers, the international community of scientists and researchers, students and the academic community, indigenous people and communities, and the general public. *The FRA programme has the potential to realign its user base to achieve a better fit between actual and intended users, then this calls for a change in the communication and dissemination strategy.*

Much of what has been concluded on the basis of participant feedback in this auto-evaluation resonates on the findings of an earlier evaluation of FRA in 2005, and a technical evaluation of FRA 2000. What can be considered new in this attempt are the innovative, pragmatic and concrete recommendations introduced by several individual participants. It is hoped that these recommendations will be favourably evaluated and considered for adoption by the FAO Forestry Department's Senior Management to enable the implementation of constructive change to the FRA programme (Annex 1).

3.2 Recommendations

FRA is overall appreciated both as a product and as a process. The Programme is seen to continuously evolve in a positive manner, as demonstrated more recently by the implementation of the global remote sensing survey of forests for FRA 2010. However, the lack of secure, long-term funding to support the key roles and functions of the FRA Team is a serious concern. While FRA is perceived as the best global source of information on forest resources, the opportunity to take FRA to the next level could be fulfilled through more fine-tuned capacity building efforts provided by the FRA Team to address limitations in country data and thus data quality on the world's forest resources. Following is an outline of recommendations drafted in consideration of auto-evaluation results, but also in the context of FAO's Forestry Strategy and the ongoing issues facing the FRA Team. An action plan detailing the implementing strategy of each recommendation is provided in Annex 1.

3.2.1 Funding – a need to raise additional resources for a "continuous project"

Recommendation: Establish a full-time P4/P5 post for outreach and fundraising, for example, at Departmental level.

3.2.2 Maintain involvement of countries, organizations and regional officers

Recommendation: Employ a focal point for each region (Latin American countries, Africa, Asia-Pacific, UNECE)[42].
Recommendation: While continuing with the current approach, seek funds to allow Alternates to participate in workshops.

3.2.3 Continue with harmonization of forest-related definition and reporting

Recommendation: Re-vitalise CPF Task Force and regional C&I groups.
Recommendation: Harmonise removals data with those collected through the Joint Forest Sector Questionnaire.

3.2.4 Make data more user-friendly and relevant

Recommendation: Create a user-interface to the FRA database.
Recommendation: Develop a relational database of FRA country data, which will enable FRA more flexible outputs according to user needs.

3.2.5 Improve data quality

Recommendation: Provide targeted[43] support to key countries by linking with NFMA and existing FAO projects, supporting sub-regional networks/workshops, enabling country visits by FRA regional focal points and by using the results of the remote sensing survey.

3.2.6 Maintain role as key provider of comprehensive, timely, high quality data and information

Recommendation: Provide more frequent updates of key variables.
Recommendation: Develop a FRA communication and dissemination strategy in line with the FRA mandate and with the FAO Forestry strategy.
Recommendation: Create modules for regional workshops on using and disseminating FRA data and information.
Recommendation: Continue work on the global remote sensing survey of forests and secure long-term funding.
Recommendation: Ensure more effective visibility through better outreach of existing good quality publications, such as: the Natural Enquirer, Green Facts, Vital Forest Graphics, World Atlas on Mangroves.
Recommendation: Produce more targeted policy-briefs.
Recommendation: Regularly asses user needs and conduct (auto-) evaluations.

[42] Currently, there is one P4 (UNECE) and one P3 (Latin American countries) post and there is a need for at least two additional full-time posts (also concordant with the ES statistics recommendation).
[43] The targeted support should be prioritized on the basis of gap analysis conducted for FRA 2005 (and currently being conducted for FRA 2010).

ANNEX 1: MANAGEMENT RESPONSE MATRIX TO THE FRA AUTO-EVALUATION RECOMMENDATIONS

Recommendations	Further (RP or extra-budgetary) funding required (yes or no)	**Acceptance by Management**			**Comment**	**Action to be taken**		
		Accept	Partially Accept	Reject		Actions	Timing	Unit Responsible
1. Funding the Global Forest Resources Assessment programme								
Recommendation 1.1 Establish a full-time P4/P5 post for outreach and fundraising, for example, at Departmental level..								
2. Maintain involvement of countries, organizations and regional officers								
Recommendation 2.1 Employ a focal point for each region (Latin American countries, Africa, Asia-Pacific, UNECE)								
Recommendation 2.2 While continuing with the current approach, seek funds to allow Alternates to participate in workshops.								
3. Continue with harmonization of forest-related definition and reporting								
Recommendation 3.1 Re-vitalise CPF Task Force and regional C&I groups.								

Recommendations	Further (RP or extra-budgetary) funding required (yes or no)	Acceptance by Management			Comment	Action to be taken		
		Accept	Partially Accept	Reject		Actions	Timing	Unit Responsible
Recommendation 3.2 Harmonise removals data with.								
4. Make data more user-friendly and relevant								
Recommendation 4.1 Develop a relational database of FRA country data, which will enable FRA more flexible outputs according to user needs.								
Recommendation 4.2 Provide more frequent updates of key variables.								
5. Improve data quality								
Recommendation 5.1 Provide targeted44 support to key countries by linking with NFMA, sub-regional networks/workshops, enabling country visits by FRA regional focal points and by using RSS results.								

[44] The targeted support should be prioritized on the basis of gap analysis conducted for FRA 2005 (and currently being conducted for FRA 2010).

Recommendations	Further (RP or extra-budgetary) funding required (yes or no)	Acceptance by Management			Comment	Action to be taken		
		Accept	Partially Accept	Reject		Actions	Timing	Unit Responsible
6. Maintain role as key provider of comprehensive, timely, high quality data and information								
Recommendation 6.1 Develop a FRA communication and dissemination strategy in line with the FRA mandate and with the FAO Forestry strategy.								
Recommendation 6.2 Create modules for regional workshops on using and disseminating FRA data and information.								
Recommendation 6.3 Continue work on RSS and secure long-term funding.								
Recommendation 6.4 Ensure more effective visibility through better outreach of existing good quality publications, such as: the Natural Enquirer, Green Facts, Vital Forest Graphics, World Atlas on Mangroves.								

Recommendations	Further (RP or extra-budgetary) funding required (yes or no)	**Acceptance by Management**			**Comment**	**Action to be taken**		
		Accept	Partially Accept	Reject		Actions	Timing	Unit Responsible
Recommendation 6.5 Produce more targeted policy-briefs								
Recommendation 6.6 Regularly asses user needs and conduct (auto-) evaluations.								

ANNEX 2: AUTO-EVALUATION TERMS OF REFERENCE

Key issues/questions to be addressed

DRAFT

Considering that the FRA Programme is a key programme entity of the Forestry Department and that significant efforts have been made in this area, it is appropriate to evaluate the overall efficacy of the programme and, in particular, to what extent the programme has contributed to enhancing access to relevant information, especially to the various stakeholders and to what extent such information helps in improved decision making. In particular the evaluation is aimed to provide recommendations to how the efficacy of programme implementation can be enhanced, helping to redefine the objectives and implementation approaches. Specifically the evaluation will attempt to answer the following:

- Are the objectives of the programme entity realistic and meeting identified needs?
- Are the objectives of the programme entity being accomplished?
- Are there any other agencies or organizations undertaking similar work at global, regional and country level and what are the comparative advantages of FAO in the area of provision of regional and global information on forests and forest resources?
- To what extent have the various information products added value to the ongoing efforts of the Forestry Department? Is the information generated providing a better foundation for the FAO Forestry Department's intervention in other areas of its concern?
- Are the various outputs produced cost-effectively? What are the costs involved and are they commensurate with the benefits?
- Are the approaches for providing information appropriate and technically valid? Are there better approaches and methodologies to improve the provision of reliable and timely information?
- Are there better ways of analysing and packaging the information to make it more user-friendly?
- To what extent has the FRA programme and FAO Field activities been mutually benefiting to each other?

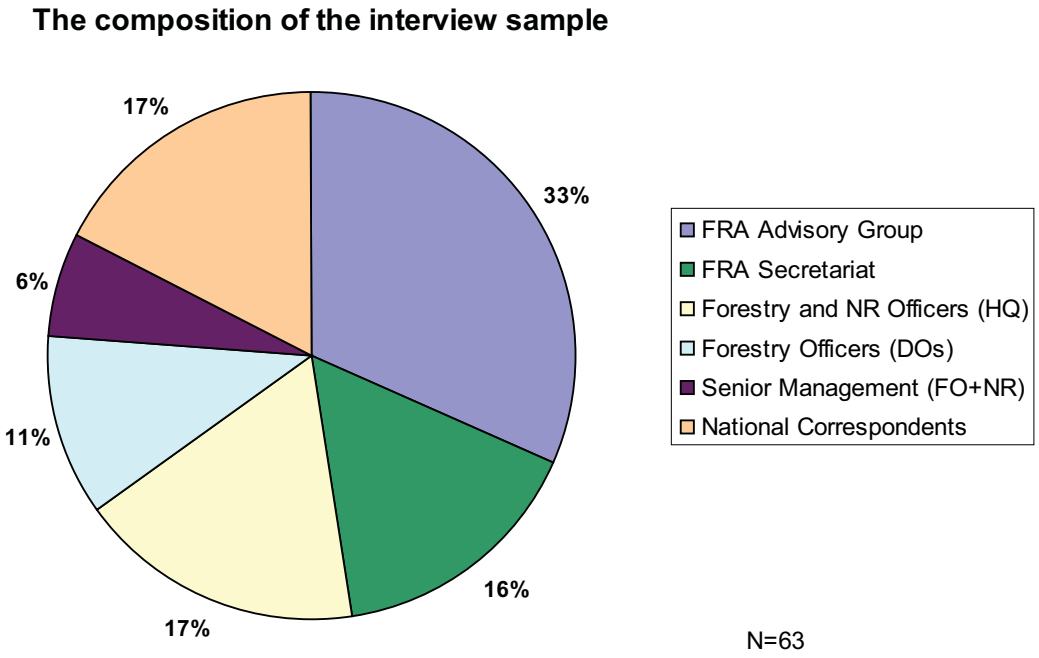
In attempting to answer the above questions, the auto-evaluation will focus on the following:

1. Relevance of the programme entity to the priorities and needs of the member countries and other stakeholders, including bilateral and multilateral agencies, private sector, non-governmental organizations and civil society in general;
2. Clarity, logical consistency and realism in the conceptualisation and design of the programme entity, especially as regards the specification of objectives, approach to implementation, inputs, outputs and outcomes;
3. Institutional arrangements, especially how involvement of the various partners were secured and to what extent they were adequate and efficient;
4. Efficiency in the implementation of the programme entity, especially as regards the timely provision of financial and human resources; Specifically the evaluation should examine whether there are any other more cost-effective approaches to obtaining the outputs envisaged.
5. Results including outputs to-date and to what extent they are adequate in comparison with what was stipulated when the programme was designed;

6. Adequacy of the efforts to disseminate the outputs and the information therein; in this regard specific attention need to be paid to assess how the products of the programme entity were disseminated, especially whether the efforts were adequate and commensurate to the objectives, depth and breadth of dissemination, language coverage and whether the information is appropriately packaged and made widely accessible; specifically consider the way information is packaged and made user-friendly;
7. Outcomes of the various outputs of the programme entity, especially whether the long term objectives of improving policy formulation and sector planning were achieved. The evaluation should specifically identify the indicators of change in relation to the expected outcomes and to what extent the outputs under the programme entity have contributed to the outcomes; and what follow up action were initiated by FAO and member countries and other institutions;
8. The most salient messages conveyed or relayed by the various information products and the extent to which they have influenced decision-making and processes in forestry at the national, regional and global levels.
9. Contribution to addressing social equity and gender issues and in particular the contribution to the Gender Plan of Action and if any, the contribution to PAIAs;
10. Prospects for sustaining the results by the primary users and partners; Specifically take into account whether the programme entity requires sustained support by FAO (including the nature of such support) or whether the countries and partners are in a position to sustain the efforts without the involvement of FAO;
11. Prospects for establishing close and dynamic collaboration/partnership with national and Regional Organizations mandated in the generation and management of information on forest resources in view to avoid duplication of efforts, contradictory approaches and to optimize the use of available expertise and resources.
12. Identify, if any, emerging issues that may alter the need and scope of the programme entity that the management and the member countries need to be aware of; specifically take note of the rapid changes in information and communication technologies and to what extent the information platforms being used now are relevant and accessible, especially from the point of view users from countries where developments in ICT are slow.

ANNEX 3: INTERVIEW AND QUESTIONNAIRE SAMPLES

A) Interview sample



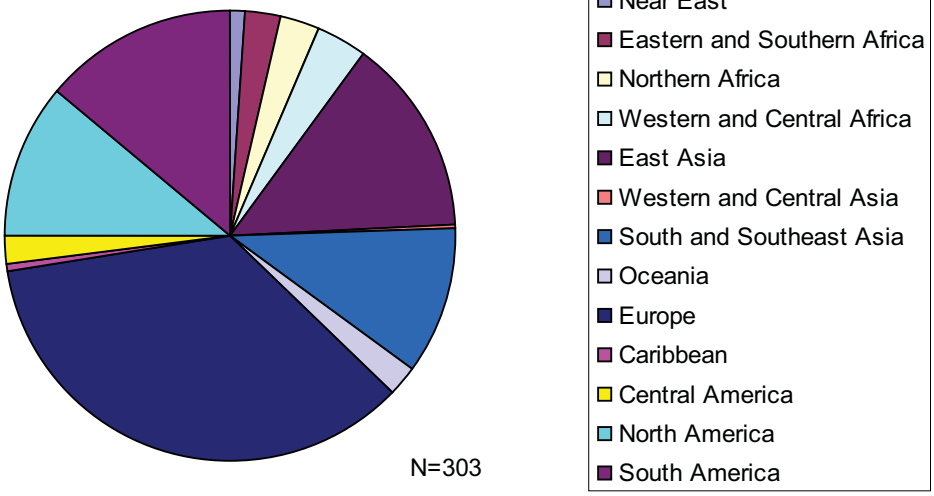
B) External users

The following graphs show consolidated summary of data to questions 1-4 of the External user survey. Results of individual language groups can be viewed on the following links:

- English: http://www.surveymonkey.com/sr.aspx?sm=0ktcl_2blZ8uiuejY4IsLPikFEMwbuvnE19cp_2fdQ5Re8E_3d
- Spanish: http://www.surveymonkey.com/sr.aspx?sm=aOTS2t54fUEhnnBNG_2fGOu59_2bdQfL0xJZHSu9iupALZI_3d
- French: http://www.surveymonkey.com/sr.aspx?sm=Q_2beCDB9Wnt7lc8UJPh8FJNkJZuivQuG1bxd4IzdCW3M_3d

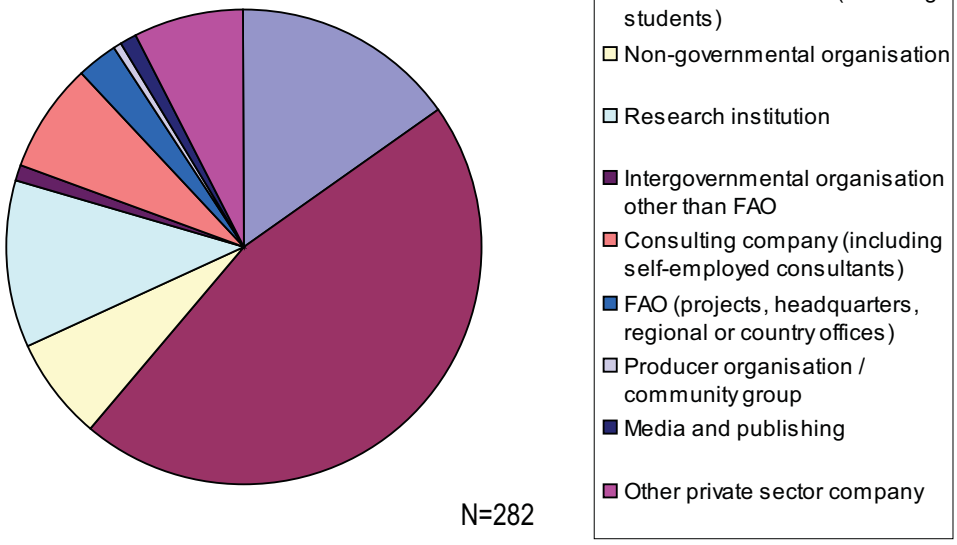
Out of the 297 external user respondents, 32 percent were female and 68 percent male.

What region are you from?

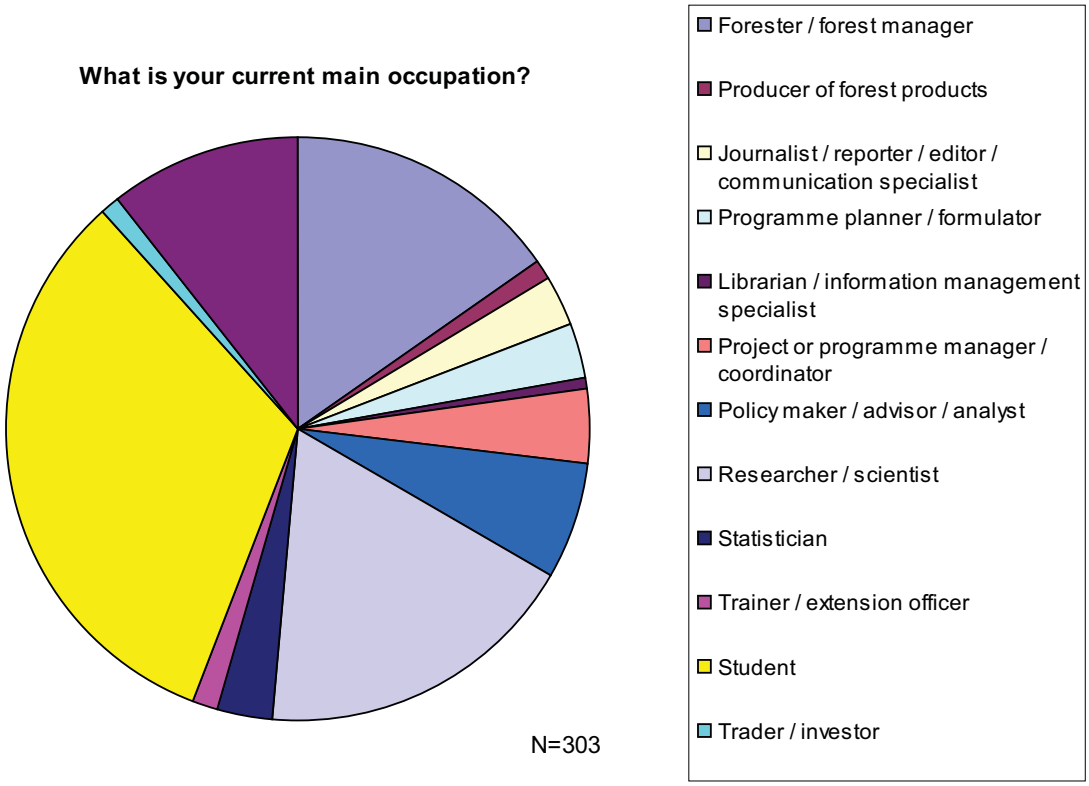


N=303

What organisation/institution are you affiliated with?

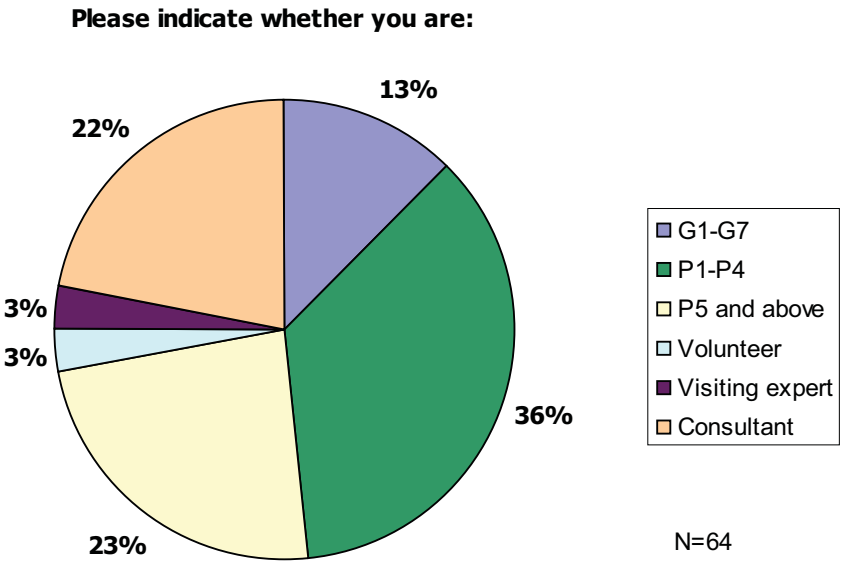


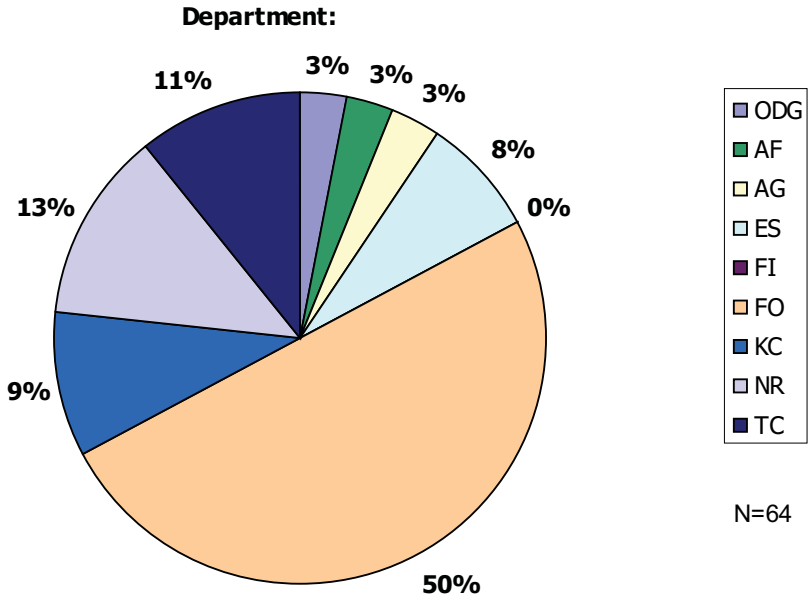
N=282



C) Internal users

The following graphs show consolidated summary of data to questions 1-5 of the Internal user survey. Results of the survey can be viewed on the following links: http://www.surveymonkey.com/sr.aspx?sm=zAUlVletwuzo0FhkaRf561QLMBtorjntPFnJtxJ_2f1XM_3d. Out of the 64 internal user respondents, 40% were female and 60% male.



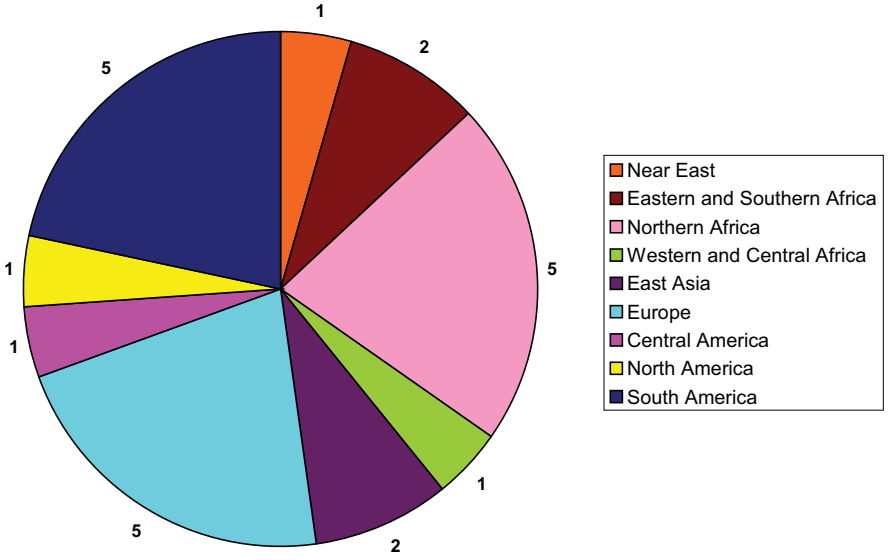


Out of the 64 internal user respondents, the majority were from FAO Headquarters (87%), 6 from Regional office, 1 from Subregional and 1 from a FAO Liaison office. Most have been working in FAO for over 3 years (40%), whereas 19% for less than 6 months.

D) National Correspondents

While National Correspondents were only asked regarding the region they come from in the questionnaire, out of the 177 National Correspondent pool for FRA 2010, only 20 or 11% are women.

The regional composition of the National Correspondents who responded to the questionnaire



N=23

ANNEX 4: QUESTIONNAIRE SURVEYS

An overview of online questionnaire results (and simultaneously the structure and format of the online questionnaires) can be viewed on the website links provided in the previous Annex. Online and a Word document format was available for respondents, as well as 3 language versions: English, French and Spanish.

The Internal and External user surveys were most similar, given the same focus; and the questionnaire for National Correspondent somewhat different due to their primary role as information providers rather than users of FRA data and information. Therefore, following are two samples of the online questionnaire in English: the External user survey and the National Correspondents survey.

A) External user survey – The key sections and list of questions

Basic information

Q1. What region are you from?

Q2. What organisation/institution are you affiliated with?

Q3. What is your current main occupation?

Q4. Gender

General awareness

Q5. Were you aware that FAO publishes a global forest resources assessment at 5 year intervals?

General use and awareness

Q6. How frequently have you been using FRA data and information?

Q7. How familiar are you with FRA data and information?

FRA user habits

Q8. How did you first learn about FRA data and information products? (Please tick all that apply)

Q9. Which FRA information products are you familiar with? (Please tick all that apply)

Q10. Which are the top 3 FRA information products from the list above that you use most frequently in your work?

Q11. What are the top 3 FRA themes and issues that are of particular interest to you?

Q12. What theme/issue of interest have you searched for in FRA 2005, but did not find:

Q13. If FRA data and information products would cease to be published, would you and your colleagues be able to find alternative sources to compensate for the forest information and analyses which you need in your work?

Q14. How does FRA compare to other sources of forest-related data and information? (Please tick all that apply)

Q15. For what purposes do you use FRA information resources and products? (Please tick all that apply)

Q16. For what analyses do you use FRA information resources and products? (Please tick all that apply)

Q17. Please provide specific examples of some analyses or studies that you have conducted, using FRA data and information:

FRA information products

Q18. How would you rate the following aspects of the FRA information products and in particular, the FRA Main Report?

Q19. Do you have any suggestions for improving the dissemination of FRA information through the FRA website or through other ways?

Q20. For what reasons have you not been using FRA data and information more frequently? (Please tick all that apply)

Q21. Do you have any suggestion on how to capture the attention of potential users who may be interested in the data and information generated through the FRA, but are not aware of their existence?

Q22. Any final comments or suggestions you would like to make?

FRA 2010 Newsletter

Q23. Do you read the FRA 2010 Newsletter (available on the FRA website or emailed to you)?

Q24. To what extent do you find the FRA 2010 newsletter useful?

B) National Correspondent survey – The Word document format

Survey on FAO's Global Forest Resources Assessment programme 2009

Thank you for participating in this survey, which is part of an evaluation of the outcomes of FAO's Global Forest Resources Assessment (FRA) programme in the past 5 years.

Your role as an information provider is crucially important to FAO, to enable us to continuously improve the country reporting process by making it less burdensome. Unlike the previous evaluation survey that was distributed to all National Correspondents in 2005 and focused on directions and input into FRA 2010, the current survey focuses on the outcomes and uses achieved by the FRA 2005.

All your responses are treated with confidentiality and survey results will be aggregated and presented in a summary format. The survey takes about 15 minutes to complete and has 5 sections. You will have the opportunity to offer comments and suggestions on any aspect of the FRA programme at the end of the survey. You can respond either by:

- Completing an online survey by clicking on: http://www.surveymonkey.com/s.aspx?sm=QnwJS5CMyNhqva2fTtubnw_3d_3d;
- Typing in your answers in the Word survey, and once completed, saving the document and emailing it to fra@fao.org as an e-mail attachment; or
- Writing in your answers on a printed copy of the Word survey, and once completed, posting it to the FRA Secretariat:

Mette Løyche Wilkie
Forest Assessment and Reporting Service (FRA Secretariat)
Forestry Department
Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla
00153 Rome, Italy

Should you wish to contact us for further information and clarification on this survey and the FRA programme, do not hesitate to contact:

Mette Løyche Wilkie FRA Senior Forestry Officer Mette.LoycheWilkie@fao.org
Hivy Ortiz Chour FRA Forestry Officer Hivy.OrtizChour@fao.org
Judita Jankovic FRA Evaluation Consultant Judita.Jankovic@fao.org

Your feedback to this survey is greatly appreciated!
The FRA Secretariat

Basic information

1. What region are you affiliated with?

☐ Eastern and Southern Africa	☐ Oceania
☐ Northern Africa	☐ Europe
☐ Eastern and Central Africa	☐ Caribbean
☐ East Asia	☐ Central America

☐ South and Southeast Asia	☐ North America
☐ Western and Central Asia	☐ South America

2. How long have you been involved in the FRA reporting process? (Please tick all that apply)

☐ FRA 2010 ☐ FRA 2005 ☐ FRA 2000 ☐ Earlier than FRA 2000

3. **If involved earlier than FRA 2010**, what is the most significant change that you have noticed since you have been involved in the FRA process and activities up to now?

☐ Improved
☐ Remained the same
☐ Worsened

(Please explain and provide examples, if possible:

)

4. In March 2008, a global training workshop for National Correspondents was held in Rome. Did you attend?

☐ Yes
☐ No

5. If yes, to what extent did the global workshop in Rome fulfil the following objectives?

	Fully	Partially	Poorly	Not at all	Don't know
Provided an opportunity to learn about the FRA process	☐	☐	☐	☐	☐
Provided an opportunity to influence the content and design of FRA 2010	☐	☐	☐	☐	☐
Provided an opportunity to exchange experience with colleagues from other countries	☐	☐	☐	☐	☐
Facilitated the compilation of the country report	☐	☐	☐	☐	☐
Provided the opportunity to develop national and regional work plans for implementation of FRA 2010	☐	☐	☐	☐	☐

6. Please comment on the global workshop and give suggestions for improvements:

FRA information products

The following questions focus on the use of the 2005 FRA information products. As a reminder, FRA 2005 produced the following (please also refer to the website view below):

- FRA Main Report (FRA global report)
- Key findings
- CD-ROM
- Global tables in Excel

- Maps and figures
- Key facts
- Country reports
- Country tables
- Other FRA publications on the FAO website, including: reports, working papers, publications on expert consultations

FRA information has also been used:

- to prepare educational material (Natural Inquirer: http://www.naturalinquirer.org/);
- to summarise the FRA 2005 main report by the NGO GreenFacts (www.greenfacts.org/en/forests/);
- to provide input to annual MDG reports since 2006 (http://www.un.org/millenniumgoals/);
- Vital Forest Graphics (http://www.grida.no/_res/site/file/publications/vital_forest_graphics.pdf);
- Global Biodiversity Outlook (http://www.cbd.int/gbo/); and
- Global Environment Outlook (http://www.unep.org/geo/).

Website view: FAO's Global Forest Resources Assessment 2005 website

7. Which FRA information products are you familiar with? (Please tick all that apply)

☐ FRA Main Report (FRA global report)	☐ Country tables
☐ Key findings	☐ Natural Inquirer
☐ CD-ROM	☐ GreenFacts summary of FRA 2005 Main Report
☐ Global tables in Excel	☐ Annual MDG reports
☐ Maps and figures	☐ Vital Forest Graphics
☐ Key facts	☐ Other FRA publications, including: reports, working papers, publications on expert consultations
☐ Country reports	
☐ Global Biodiversity Outlook	☐ Global Environment Outlook

8. Which are the top 3 FRA information products from the list above that you, or your colleagues, use most frequently in your work? (Please type in)

First:

Second:

Third:

9. What are the most common reasons for which you, or your colleagues, use FRA information products? (Please tick all that apply)

☐ To get an overview of trends on forest resources in country/region
☐ To get a global overview of status on forest resources
☐ To get information on sustainable forest management in a country/region/globally
☐ To support claims by citing in academic reports
☐ To use as evidence base in policy documents
☐ To present FRA-related results achieved within the Ministry/Institution I work for
☐ To present FRA-related results to external stakeholders
☐ To source data in own research and analysis
☐ To compare country with regional/global data
☐ Other (please specify:)

10. If FRA information products would cease to be published, would you and your colleagues be able to find alternative sources to compensate for the forest information and analyses which you need in your work?

☐ Yes ☐ No ☐ Don't know

11. If **Yes**, what would these alternative sources be:

12. Please evaluate the following aspects of FRA information products and the 2005 Main Report:

FRA information products overall:	**Excellent**	**Good**	**Adequate**	**Could be improved**	**Don't know**
Variety of FRA information products available (maps, tables, analyses, reports)	☐	☐	☐	☐	☐
Format of FRA information products available (printed copies, website, CD-ROM etc.)	☐	☐	☐	☐	☐
Language coverage of FRA information products	☐	☐	☐	☐	☐
Accessibility (e.g. website navigation, downloading FRA information, distribution of printed copies)	☐	☐	☐	☐	☐
User-friendliness (e.g. presentation and design; comprehensiveness and clarity of content etc.)	☐	☐	☐	☐	☐
Quality of information presented	☐	☐	☐	☐	☐
Quantity of information presented	☐	☐	☐	☐	☐
Overall outreach of FRA information products to country partners	☐	☐	☐	☐	☐
FRA 2005 Main Report:	**Excellent**	**Good**	**Adequate**	**Could be improved**	**Don't know**
Presentation and readability	☐	☐	☐	☐	☐
Objectivity	☐	☐	☐	☐	☐
Technical content	☐	☐	☐	☐	☐
Structure	☐	☐	☐	☐	☐
Scope	☐	☐	☐	☐	☐
Relevance	☐	☐	☐	☐	☐

Please provide suggestions on aspects that could be improved:

13. Why is FRA information overall used or not used?

14. Do you have any suggestions for improving the dissemination of FRA information?

15. Do you receive the **FRA 2010 newsletter**?
☐ Yes ☐ No (If no, and would like to, please send a request to fra@fao.org)

16. If yes, do you read it:
☐ Never ☐ Occasionally ☐ Always

17. To what extent do you find the **FRA 2010** newsletter useful?
☐ Very useful ☐ Useful ☐ Not so useful ☐ Not useful at all

If not so useful or not useful at all, what would you change about the newsletter?

FRA reporting process, stakeholders and results

18. The following are a set of statements relating to various aspects of the FRA reporting process, stakeholders and results. Please respond by ticking your level of agreement with each statement.

Statements:	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
The information collected and processed in FRA country reports is considered indispensable in terms of **forestry policy formulation and sector planning** in the Unit/Service/Department that I am working in.	☐	☐	☐	☐	☐
The Unit/Service/Department I am working in devotes **sufficient attention and time to the FRA country reporting process.**	☐	☐	☐	☐	☐
The FRA country reporting process facilitated the formation of a **country team**.	☐	☐	☐	☐	☐
The collaboration with the FRA focal points at FAO Headquarters (the FRA Secretariat) for the **review of reported data enhances the credibility** of the reporting process.	☐	☐	☐	☐	☐
The FRA focal points **facilitated considerably the compilation** of the country report.	☐	☐	☐	☐	☐
The FRA **country reporting** is harmonized with other international reporting requirements.	☐	☐	☐	☐	☐
Participation in FRA activities (training, workshops, revision process and liaison with FRA focal points) has improved national forest monitoring and reporting capacities.	☐	☐	☐	☐	☐
Participation in FRA activities has stimulated learning on national forest resources in the Unit/Service/Department that I am working in.	☐	☐	☐	☐	☐
Participation in FRA activities has built capacity at the regional level.	☐	☐	☐	☐	☐
Participation in FRA activities helped raise the profile of forest policy in the Ministry/institute I work for.	☐	☐	☐	☐	☐
Even if FRA discontinued, **National Correspondents** in the region would continue to develop their networks and collaboration.	☐	☐	☐	☐	☐
The **FRA country and global reports** are used extensively within the Ministry/Institution I work for.	☐	☐	☐	☐	☐
The **FRA country report** is proactively disseminated to external forestry-related organisations and stakeholders in the country.	☐	☐	☐	☐	☐

Please elaborate if you rated "Strongly agree" or "Strongly disagree" for any of the above and provide examples, wherever possible:

19. Please also comment on any other *positive* or *negative* developments, as a result of the FRA process:

Overall experience with the FRA

20. Given your experience with the FRA process and activities, what represents for you the **most significant added value** to participate in the FRA? (Please choose only one from the list)

☐ Networking and collaboration
☐ Participation in the global/regional workshops
☐ Opportunity to improve knowledge and to learn
☐ Opportunity to expand professional expertise
☐ Other (please specify:)

When answering the following two questions, please keep in mind that your response may also include specific references to chapters/country tables from the FRA 2005 Main Report:

21. What would you **drop** or **change** from the reporting activities or content of future Global Forest Resources Assessments?

22. What would you **add** to the process or reporting activities of future Global Forest Resources Assessments?

23. The FRA country reporting may present several challenges to National Correspondents and alternates. To what extent are the following issues real challenges in your experience with the FRA country reporting so far?

	Very challenging	Challenging	Not so challenging	Not a challenge at all	Non-applicable
Reporting deadlines as set by the FRA Secretariat	☐	☐	☐	☐	☐
Financial and/or time commitment needed to compile the country reports	☐	☐	☐	☐	☐
Analysis and processing of national data (including reclassification, calibration etc.)	☐	☐	☐	☐	☐
Revision and liaison with the FRA focal point	☐	☐	☐	☐	☐
Mobilizing technical support and resources	☐	☐	☐	☐	☐
Internal work organisation and administration	☐	☐	☐	☐	☐
Forestry data (e.g. unavailability, reliability etc.)	☐	☐	☐	☐	☐
The use and application of supporting documents: guidelines, specifications and reporting templates	☐	☐	☐	☐	☐

Are there any other major challenges?

24. Balancing all the effort invested with all the benefits gained by your own and your Ministry/Institution's involvement with the FRA exercise, how worthwhile was to participate?

☐ Very worthwhile ☐ Worthwhile ☐ Not so worthwhile ☐ Not worthwhile at all
☐ Don't know

25. In your experience, how would you rate the performance of the FRA Secretariat in terms of the following:

	Excellent	Good	Adequate	Could be improved	Don't know
Facilitating the compilation of the country reports	☐	☐	☐	☐	☐
Analysis of FRA data	☐	☐	☐	☐	☐
Distribution of FRA publications	☐	☐	☐	☐	☐
Country support and capacity-building	☐	☐	☐	☐	☐
Networking facilitators in the region	☐	☐	☐	☐	☐

Please provide suggestions on areas that could be improved:

26. Considering the overall FRA programme, including the process, inputs, activities, outputs and results, what is the extent of the impact - positive or negative, intended or unintended - the programme has had on national level policy decisions in the past 5 years?

☐ Considerable impact ☐ Some impact ☐ No impact ☐ Don't know

Please provide specific examples of impact at national level, if possible:

Please provide examples, if any, of impact that FRA had at any other level, such as international, regional or local:

Future developments on FRA reporting

There may be advantages to implement annual or biannual reporting on key selected forest related variables (e.g. forest area, growing stock, biomass, carbon), in addition to compiling and elaborating on comprehensive country reports every 5 years, as it has been the case so far. For example, annual/biannual reporting would allow a more frequent liaison with the FRA Secretariat, as well as a "rolling" update on key variables. Reporting would only be needed for updated estimates on key variables and would therefore be a much simpler and lighter reporting process than the current 5-year reporting.

27. In your view, is this proposal overall reasonable?

☐ Very reasonable ☐ Reasonable ☐ Not so reasonable ☐ Not reasonable at all
☐ Don't know

Please elaborate if you rated "Not so reasonable" or "Not reasonable at all"

28. Would you prefer the annual/biannual reporting or the current reporting every 5 years?

☐ Annual/Biannual ☐ Prefer the current 5-year reporting cycle ☐ No preference
☐ Other:

29. Please provide any suggestions and recommendations on improving the work of the FRA programme:

For the latest information on developments on the FRA process, activities and events, please refer to FAO's Global Forest Resources Assessment website: http://www.fao.org/forestry/1191/en/

Again, thank you for your effort and time to complete this questionnaire! The FRA Secretariat

ANNEX 5: INTERVIEW QUESTIONS

Interviews were semi-structured and specific questions were tailored on the basis of the interviewee's background. Interview questions on the FRA programme revolved around: potential and existing FRA data and information users, most significant outcomes, partnerships, challenges around the country reporting process and improvement suggestions.

FRA Advisory Group members were asked a set of questions on the FRA programme and another set on the FRA Advisory Group mechanism. Questions for National Correspondents centred on key challenges and outcomes of the FRA reporting process and ways to improve the reporting process and dissemination (see Annex 3A) for the composition of the interview sample).

Following are two samples of interview questions: for internal FAO stakeholders, followed by those used for National Correspondents interviewed.

A) Discussion questions for internal FAO stakeholders

Auto-Evaluation of the Global Forest Resources Assessment (FRA) programme

The auto-evaluation of FRA is focusing on the outcomes achieved in the past 5 years. Results of the auto-evaluation will be used to learn more about existing and potential users of FRA data and information products and to formulate forward-looking improvements of the FRA programme.

Discussion questions:

1. In your view, what are the **most significant outcomes** (positive and negative) of the FRA programme?

2. Who could be **potential FRA users** that have not been targeted so far? Should FRA knowledge and information be reaching certain **user groups** that it is currently not? If yes, who are these user groups and how best to reach them?

3. How have **FRA partnerships** with national and regional organisations evolved in the past 5 years? Is there a need for a strategic change regarding FRA partnerships? If yes, what would this change be?

4. Are there better ways of packaging the information in the **FRA information products** to make it more user-friendly?

5. How can the FRA programme best achieve its **long-term objectives of improving policy formulation** and sector planning through the process and activities FRA engages in and the outputs it produces?

6. What **comments and recommendations** would you provide to the FRA programme in general?

B) Discussion questions for National Correspondents

Auto-Evaluation of FAO's Global Forest Resources Assessment (FRA) programme

The auto-evaluation of FRA is focusing on the outcomes achieved in the past 5 years. Results of the auto-evaluation will be used to formulate forward-looking improvements related to the FRA programme.

Your input to the evaluation, as an information provider to the FRA reporting process is needed and highly appreciated.

Discussion questions:

1. What are the **key challenges** you are faced with when reporting towards the Global Forest Resources Assessment (FRA)?

2. Who should be reaching FRA data, information and results in your country but is not currently (**potential users**?)

3. In your view, what are the **most significant outcomes** or results (positive and negative) of the FRA programme (overall and at country level), if any? Please provide examples, if any.

4. How can the FRA programme best achieve **policy impact** at country level?

5. There may be advantages to implement annual or biannual reporting on key selected forest related variables (e.g. forest area, growing stock, biomass, carbon), in addition to reporting on comprehensive country reports every 5 years, as it has been the case so far. For example, annual/biannual reporting would allow a more frequent liaison with the FRA Secretariat, as well as a "rolling" update on key variables. Reporting would only be needed for updated estimates on key variables and would therefore be a much simpler and lighter reporting process than the current 5-year reporting.

   In your view, is this proposal overall reasonable? Would you prefer the annual/biannual reporting or the current reporting every 5 years?

6. What **comments and recommendations** would you provide for the FRA programme in general and the FRA Secretariat?

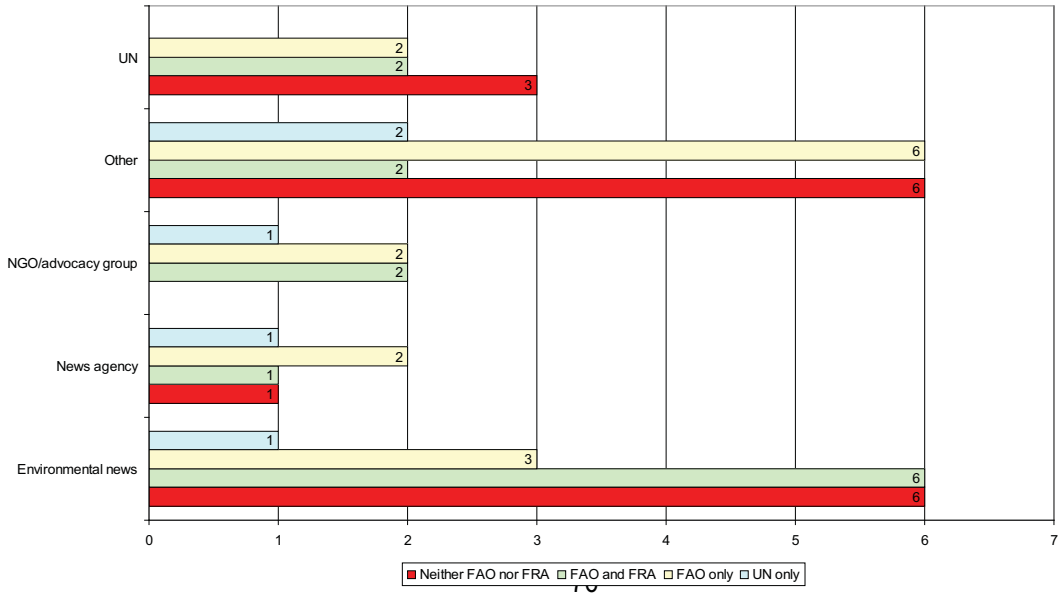
ANNEX 6: CITATION ANALYSIS

A citation analysis was carried out in Google regarding the extent and source of citations on the global deforestation figure (13 m ha), excluding self-citations and using the following parameters:

- "13 million hectares deforestation" OR
- "forest loss" OR
- "loss of forest"

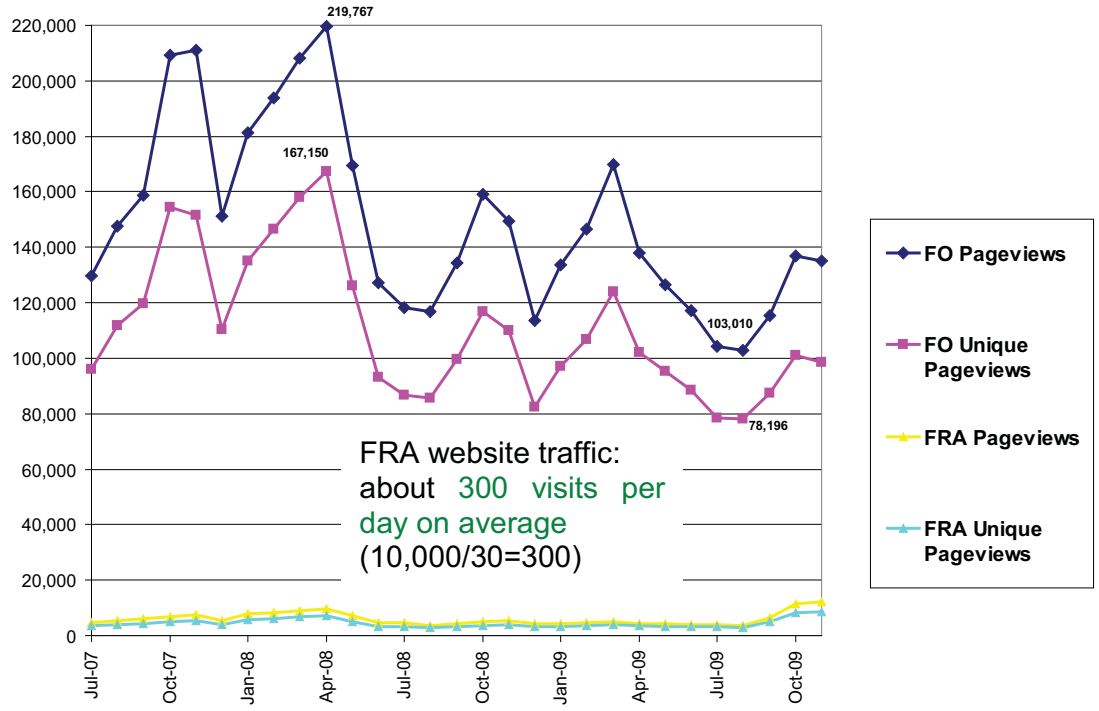
Most relevant (that is displayed) search results showed 687 citations and the first 50 were further content analyzed to categorize the source of each citation. Results show that while NGOs acknowledge the FAO/FRA source, surprisingly, UN agencies tend not to.

Citations of global deforestation rate in the first 50 Google search result sources



ANNEX 7: WEB TRAFFIC ANALYSIS

The following shows the resulting trend of the web traffic analysis conducted, using extracted web traffic data for the Forestry Department and FRA websites. The graphs outlines page views of the websites over the 2007-2009 period. Web traffic data was extracted using GoogleAnalytics. Calculating the daily average of traffic on the FRA websites, it appears that about 300 views of the FRA website appear per day (10,000 page views on average divided by 30 days).



ANNEX 8: SUMMARY OF OPEN COMMENTS

Comments on the global workshop (National Correspondents):

Favorable comments:

- Well-organised and coordinated (n=2)
- Informative and facilitated understanding to report on tables (n=2)
- Networking and exchanges were useful (n=2)
- The organization of discussions is interesting so is the availability of documents.

Improvements and suggestions:

- Invite Heads of Forestry
- Send invitations as soon as possible indicating how many representatives each country can invite
- Highlight the level of accuracy and completeness of each report, and highlight the best reports to motivate NCs
- More resource persons needed for regional groups
- Responses to group questions not adequately answered
- More exchange of information with NCs about the results of the AG and Kotka meetings as they are the professionals who at the end need to complete the report
- The level of participation and empowerment of NCs in the country needs to be improved, in addition to participating in the workshop. I have the impression that everything has been decided in advance.

Searched in the FRA 2005 but could not find (external and internal users):

- species information (n=3) including wildlife data (n=1) and particularly threatened species in countries (n=1)
- forest carbon stocks, including changes (3) and carbon sequestration per ha of tropical rain forest (1)
- global forest area maps (4)
- community forestry (2)
- validation data on forest statistics; information on data accuracy (2)
- % of country/region's forests covered by forest management plans; management effectiveness (2)
- global forest environmental consciousness, changes in forest ethics in the world
- regional and local practices of sustainable forest management
- indicators of sustainable forest management
- indicators on forest genetic diversity
- changes in forest degradation
- industry value-added
- comparisons of forest loss
- validation data on forest statistics
- trade of wood products
- example of sustainable forest management to develop applicable indicators of SFM
- proportion of coniferous species/broadleaves in each country
- continental distribution of forest
- true primary/virgin forest area
- reliable data on forest cover in the Caribbean

- closer link to FAOSTAT publication and FAO corporate statistics

Evaluation of information products (external and internal users):

Could be improved:

- Overall outreach of FRA information products to country partners (n=4)
- Accessibility (n=1)
- Quality of information presented (n=1)
- Technical content (n=1)
- Structure (n=1)
- Scope (n=1)

Suggestions to improve dissemination of FRA data and information (external and internal users, National Correspondents):

National Correspondents:

- Enhance the *visibility* of FRA (n=5)
    - in international fora and meetings
    - by providing more CD copies and regional synthesis to NCs
    - use regional institutions for FRA information dissemination
    - inter-sectoral workshops
    - produce a synthesis with good layout and distribute at the political level
- Organize relevant *national and regional workshops* to present results and address regional and cross-sectoral issues (n=4)
- Provide *support to regional institutions*, including dissemination of publications and the report to institutions other than the forestry sector
- Provide *brochures* that synthesize regional data of relevance
- Insist on the *harmonization of definitions* with other processes, for a better adoption of FRA at the national level

Internal users:

- Train national and regional institutions on how to use the FRA website
- Improve presentation of statistics
- Provide training material based on FRA results for University level teaching
- Provide pre-prepared downloadable PowerPoint and electronic graphics highlighting key messages, trends etc. for use by FAO decentralized offices and non-FAO personnel
- Provide an overview on a DVD and upload to YouTube
- Establish information services hosted by FAO Representatives to support FRA in the respective countries in terms of easily accessible information, since many forestry staff and students do not have regular access to the Internet and the FRA website
- Continue exploring multi-channel dissemination tailored contents to a range of specific user group interests. Efficient dissemination of timely data and source data quality might be the main challenges now and in the future

External users:

- Provide information on progress towards Sustainable Forest Management at the national, regional and global levels
- Send CD-ROMs to all the national Ministries and not only the forestry-related

- Promote the FRA reports through FAO Representations
- Enable provision of a hard copy of the global report upon request
- Provide GIS data (to be made available in FRA 2010)
- Supply more accessible maps with more discriminative coding

Specific examples of analyses for which FRA data and information is used (external and internal users):

External users:

- REDD: baseline estimation, commercial business plan, educational purposes (n=3)
- deforestation in Brazil (n=2)
- regional forest inventory projects
- regional data comparisons of Central African countries
- undergraduate course project
- secondary data on selected countries
- tree biomass, growing stock and carbon sequestration in terrestrial ecosystem
- increase in global CO2 emission and forest cover relations, trends in forest cover loss and for management simulations
- water quantitative management in mountainous river basins – floods
- technical papers on forest development for selected countries
- MSc thesis on SFM
- private ownership in EU countries
- digital data
- forest area loss
- mangrove cover loss
- deforestation in general
- reforestation
- course development
- review of GHG inventories
- forest genetic conservation
- forest strategy
- consequences of climate change on forests
- regulation plans for forest timber

Internal users:

- to prepare country reports e.g. Director General Briefs
- to support national forest monitoring and assessment planning and implementation for purpose of harmonisation
- data and information to strengthen presentations
- resources for presentations to international conferences, seminars, workshops
- to get data on forest types within a specific country
- to extract policy relevant status and trends data for determining forest benefits and threats to forests

Why is FRA data and information used...or not? (National Correspondents):

Used:

- Single report/data source that offers a great quantity of forest resources information (n=2)
- Country comparisons regarding climate change (n=2)

- Data originating from known, trusted and objective sources of information, and has been used for MDG reporting and the non-industrial sector
- Reliable source of historical data
- The end-product is valuable
- A source of reference on FRs
- Macro overview on forest resources
- Research and decision-making
- Mauritania: statistical data needs to be validated for accuracy, however in absence of other sources, FRA is used as a baseline
- Available on website and CD-ROM

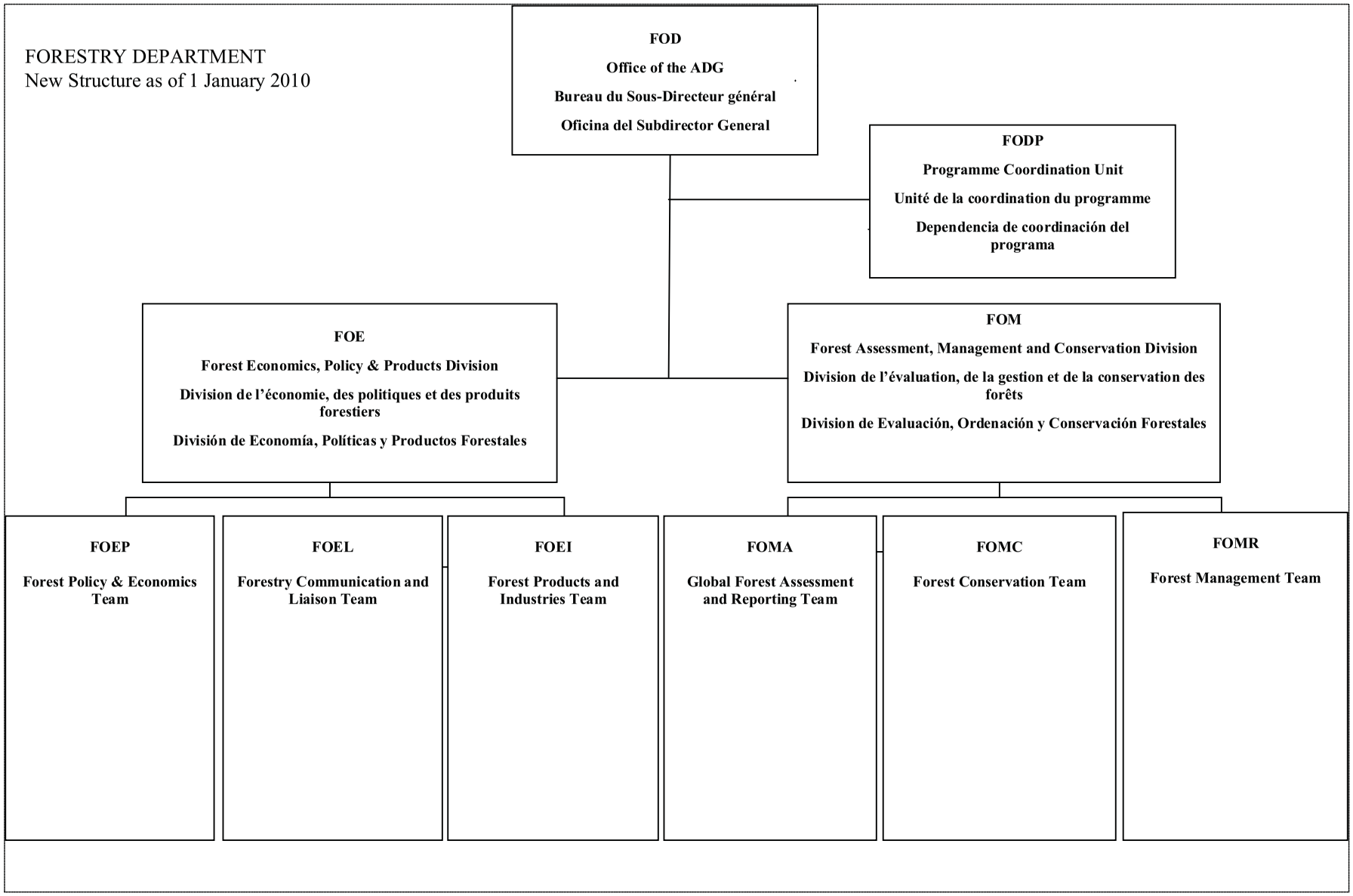
Not used:

- Some national/local stakeholders do not agree with the definitions and hence do not agree with results...or simply not used to, as definitions do not correspond to those used in country
- Not enough advocacy and distribution done by Ministry in charge of forestry in country
- Data quality is still a concern presenting an obstacle for policy-making utilization (Fr Afr)
- Many institutions have not been using it as they are simply unaware of the existence of this data (Fr Afr)

Reaching out to potential users (external and internal users, National Correspondents):

- more publicity, campaigning, media attention, commercial advertising, if it exists for FRA (n=4)
- provide interactive online programmes
- link up with Wikipedia
- regular e-mail updates or a newsletter
- promote the FRA website better
- target students by providing grants
- free distribution of FRA publications to University and research institutions
- expand language coverage
- use wider networks within country to disseminate more widely
- render the information more organised and more presentable
- provide direct links from FAO main page to specific databases

ANNEX 9: ORGANIGRAM OF THE NEW ORGANIZATIONAL STRUCTURE OF THE FORESTRY DEPARTMENT IN 2010



ANNEX 10: AN OUTLINE OF KEY MILESTONES OF THE KOTKA CONSULTATIONS

Table 4: The key themes and recommendations of Kotka consultations (1987 – 1996)

Kotka I (1987) *Milestone*: planning for FRA 1990	**The assessment of change** • establishing the framework for a global assessment (FRA) • the assessment of forest resources • the assessment of change • the productive potential of forests • other variables: ownership, legal status and management control
Kotka II (1993) *Milestone*: focus on environmental parameters; updating the forest resource database and regular remote sensing monitoring	**Common definitions and a focus on environmental aspects** • consistency and comparability • coordinated action • ecofloristic zones and national assessments of forest biodiversity • forest biomass monitoring • forest health assessment • remote sensing processing and archiving systems • a common global database (FORIS?) • an international panel (inter-governmental panel of experts) • capacity-building to strengthen the "bottom-up" component of the global assessment
Kotka III (1996) *Milestone*: global harmonization of reporting (methodology and modality of data acquisition and classification and definitions to be applied)	**Indicators of sustainable forest management** • indicators of sustainable forest management • wood supply • biological diversity • forest degradation • climate change • non-wood goods and services • contribution of remote sensing • adjustment of national data
Kotka IV (2002) *Milestone*: defining and reporting on SFM; FRA AG and NC network formed	**Linking national and international efforts** • support to national forest assessments • assessment of goods and services provided by forests • establishing an advisory group to support global forest resources assessments
Kotka V (2006) *Milestone*: assessing forest area dynamics in a more detailed way than previously; a global remote sensing survey	**Collaboration with other forest related reporting processes** • FRA 2010 overall scope and framework: addition of a 7th thematic element on the legal, policy and institutional framework • Meeting the needs of conventions and other international and national processes (e.g. 2010 biodiversity target of the Convention on Biological Diversity) • a global remote sensing survey • enhanced collaboration with other forest-related organizations (e.g. CPF) • a user assessment and a long-term strategy for the FRA programme

NOTE: Summarized from "*Kotka I-V: 20 years of expert consultations on global forest resources assessments*" publication. The bullet-point notes reflect key points on the recommendations of each expert consultation.

ANNEX 11: REFERENCES

Note that although the following references have been considered by the Auto-evaluation Consultant, not all are cited in the report.

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