Annex 3: Plenary presentations and statements (Monday 3 March)

Annex 3.1: Opening remarks

Mr Jan Heino
Assistant Director-General
Forestry Department

Mr Chair, Excellencies, Distinguished Permanent Representatives to the FAO, Dear participants, colleagues, Good morning!

It is my pleasure and privilege to welcome you all to FAO and to this Technical Meeting of the National Correspondents to the Global Forest Resources Assessment 2010. I am very pleased to see so many familiar faces, but above all to see so many new ones. I hope to be able to talk with many of you during the week ahead of us.

No doubt, all of us in this meeting have high expectations of the world's forests. For us forests are important for a number of reasons. They are to provide raw materials and energy, maintain biological diversity, mitigate climate change, protect land and water resources, provide recreational facilities, improve air quality and help alleviate poverty.

At the same time, forests are affected by fire, air pollution, pest and invasive species – and are the primary targets in many countries for agricultural and urban expansion. Competing interests in the benefits offered by forest resources and forest lands are omnipresent and the need for a sound basis for analysis and conflict resolution has never been greater.

This requires on-going monitoring and assessment of trends that can measure progress in protecting, conserving and using forest resources in a wise and sustainable manner. FAO's Member Countries have entrusted the Forestry Department with the organization and promotion of this important task.

This year FAO celebrates the 60th anniversary of the publication of the results of its first Global Forest Resources Assessment – the Forest Resources of the World. This survey, which was started in 1946, was based on a questionnaire sent to all countries of which 101 responded, representing 66 percent of the world's forests.

As stated in the report, "a comprehensive inventory of the world's forests requires a truly international approach, entailing international acceptance of definitions as well as concerted and sustained efforts to encourage completion of adequate surveys of those forested areas for which reliable data are lacking." I think we can all subscribe to these words today, 60 years later.

The Global Forest Resources Assessment 2010 - or FRA 2010 as we call it - will be the most comprehensive and reliable assessment yet. Most comprehensive because it will cover 235 countries and territories and will provide the basis for reporting on progress towards:

1. The Millennium Development Goals;
2. The Convention of Biological Diversity's target of achieving a "*significant reduction of the current rate of biodiversity loss at the global, regional and national level*" by 2010;

3. The Global Objectives on Forests of the Non-legally Binding Instrument on forests recently adopted by members of the United Nations Forum on Forests; and
4. The International Tropical Timber Organizations' Objective 2000.

It will also help countries report on land use and land use change for the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

It will be the most reliable assessment ever, thanks to advances in technology and expanding global communications and to stronger support from countries and forest-related organizations. Within FAO, FRA 2010 will indeed be a cross-divisional and cross-departmental effort.

One of the innovative components of FRA 2010 is a new and ambitious global remote sensing survey which takes advantage of the latest technologies to provide better information on global forest change and the land uses that are replacing forests. You will hear more about this later today and on Thursday.

The support offered to FAO for FRA 2010 has been overwhelming.

One hundred and seventy five countries have responded to our request to nominate a National Correspondent to FRA 2010. I am very pleased to note that most of you, the National Correspondents, are here today. We have more than 220 registered participants from 165 countries and over 10 major forest-related organizations. This provides the FRA process with very strong links to countries and their national efforts to assess and monitor their forests and other wooded land.

We are all very much aware that the requests for information keep increasing. FAO is making strong efforts to help harmonize forest-related reporting with other organizations to avoid duplication of efforts and to reduce the reporting burden on countries. You will hear more about these efforts later today and during the rest of the week. However, we are also fully aware that the task laying ahead for the National Correspondents is not an easy one and we very, very much appreciate the substantial efforts and contributions made by each and everyone of you.

We recently completed a joint meeting of two of the FAO Regional Forestry Commissions: the Near East Forestry Commission and the African Forest and Wildlife Commission. One of the conclusions of this meeting was the following, and I quote:

"The Commissions agreed to provide their national correspondents to FRA 2010 and their teams with the support they needed to prepare the country reports and to participate in the remote sensing survey and any special studies that may cover their countries."

I am sure the National Correspondents from these two regions are pleased to learn this. I hope we will receive similar commitments from the Heads of Forestry at the meetings of the remaining Regional Forestry Commissions this year. We, at FAO stand ready to provide any technical assistance needed to fulfil your important tasks.

I would also like to extend our gratitude to the large number of forest-related organizations who have helped shape FRA 2010 and who will either help FAO implement FRA 2010, provide complementary data through their own efforts or help further disseminate the knowledge generated through this process. In this respect, allow me to give recognition to the Expert Consultation held in Kotka, Finland in June 2006, to the many bilateral consultations and to the FRA Advisory group. The FRA process is a truly international partnership of individuals, countries and

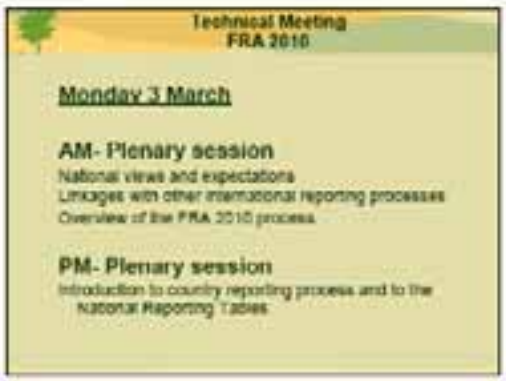
organizations. We express our gratitude to all of those participating in and contributing to this effort.

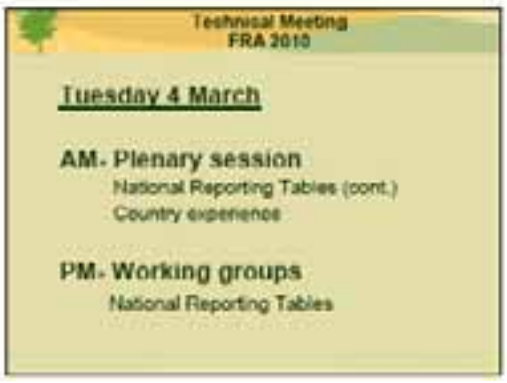
Last, but certainly not least, I would like to thank for the extra-budgetary funding provided to help carry out FRA 2010. Special thanks go to Australia, Finland, NASA, EU, GEF, the German Aerospace Centre and ITTO. We hope that even more partners and donors will join this process.

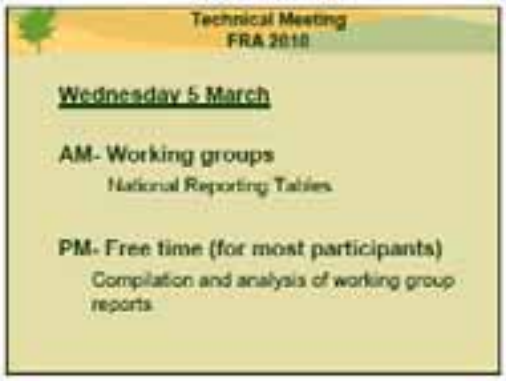
Colleagues, you have a challenging programme in front of you this week and over the next couple of years. However, I am personally convinced that given the strong support and the excellent collaboration which is already evident, FRA 2010 will be the best assessment ever.

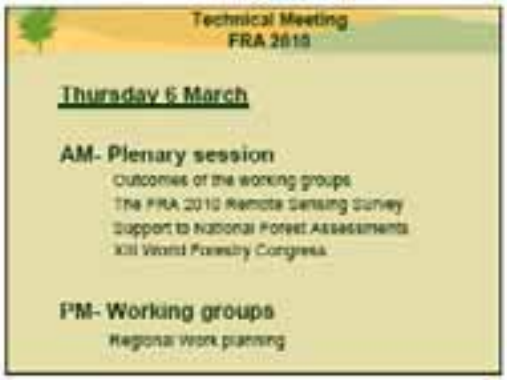
Thank you.

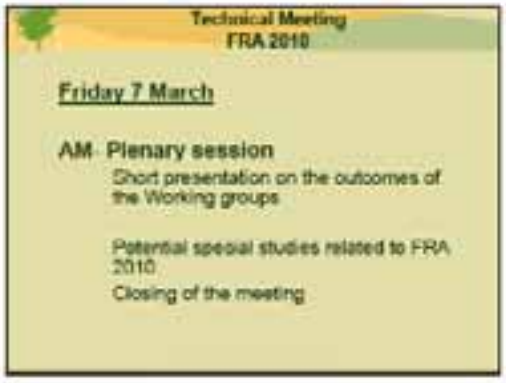
Annex 3.2: Objective of the meeting and Agenda






Technical Meeting
FRA 2010
Wednesday 5 March
AM- Working groups
National Reporting Tables
PM- Free time (for most participants)
Compilation and analysis of working group reports


Technical Meeting
FRA 2010
Thursday 6 March
AM- Plenary session
Outcomes of the working groups
The FRA 2010 Remote Sensing Survey
Support to National Forest Assessments
XIII World Forestry Congress
PM- Working groups
Regional Work planning


Technical Meeting
FRA 2010
Friday 7 March
AM- Plenary session
Short presentation on the outcomes of the Working groups
Potential special studies related to FRA 2010
Closing of the meeting

Annex 3.3: Statement from ITTO

Executive Director, ITTO Technical Meeting of the National Correspondents to the Global Forest Resources Assessment 2010

Mr. Jan Heino, FAO colleagues, ladies and gentlemen,

First of all, I very much regret not being able to present this statement in person to such an important meeting due to ITTO's heavy workload. ITTO will be represented at this meeting later in the week but I sincerely apologize for not being present for the opening session. I appreciate the kind offer of our friends in the FAO Forestry Department to have a brief written statement read on my behalf during the opening session of your meeting.

ITTO appreciates as much as anyone the huge amount of work that goes into the FRA and the importance to the global forest community of such a vital database on all types of forests. We have been users of the FRAs since ITTO came into existence in the late 1980s, and have been more closely involved in the process during the past decade as members of the FRA advisory group and (in a modest manner) as co-sponsors of some FRA related activities such as these meetings of national correspondents. We are pleased once again to be providing a small contribution to an FRA correspondents' meeting and hope that ITTO can further increase its involvement in the FRA 2010 process over the next few years.

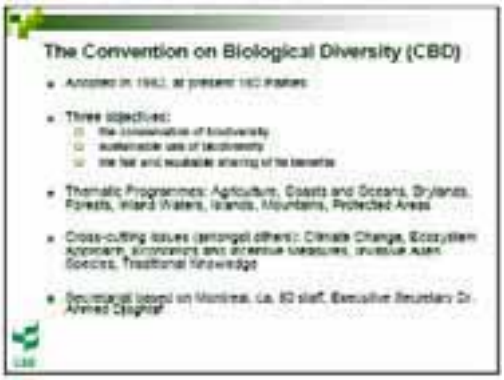
The assessment of forests and forest management is a key issue in the global arena today. Fora like CBD, UNFCCC, UNFF (not to mention national governments and our own organizations) are all clamoring for better, more comprehensive information on forests to help them meet their assorted mandates. The international community has been seeking a key, core set of forestry information for assessing forests and their management for almost as long as ITTO has existed. The evolving FRA is helping to meet these and other international forest information needs.

ITTO recently became familiar with the difficulties and costs involved in carrying out large-scale forest surveys, having assessed the status of tropical forest management in 2005. We are pleased to see that the proposals for the data tables for FRA 2010 include criteria and aspects for assessing SFM used in the ITTO study which should allow for greater synergies. ITTO has been asked to carry out a second such assessment for 2010 and preliminary funds have been pledged for this in our 2008-2009 Work Programme. We believe that the most effective way to carry out this work is in close collaboration with FAO and the FRA, and we will be consulting closely with our colleagues in the Forestry Department and interested participants at this meeting to further develop areas for collaboration.

ITTO and the FAO Forestry Department have developed an excellent collaborative relationship in recent years with a range of partnerships and cooperative activities that is too long to list here. A key factor in the establishment of this relationship has been the trust and goodwill that have built up at all levels of both Organizations. ITTO is extremely grateful to all of our colleagues in FAO for facilitating this, and to Mr. Jan Heino for actively promoting such collaboration.

Thank you again for the opportunity to address this important meeting. I wish you every success over the next week.

Annex 3.4: The 2010 Biodiversity Target: CBD Indicators and FRA 2010



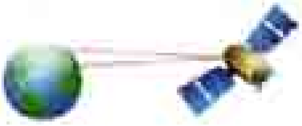
2010 Headline Indicators related to forests

- *Trends in extent of selected biomes, ecosystems, and habitats*
- *Trends in abundance and distribution of selected species*
- *Coverage of protected areas*
- *Change in status of threatened species*
- *Area of forest, agricultural and aquaculture ecosystems under sustainable management*
- *Ecological footprint and related concepts*

2010 Headline Indicators related to forests (contd.)

- *Trends in invasive alien species*
- *Connectivity / fragmentation of ecosystems*
- *Incidence of human-induced ecosystem failure*
- *Health and well-being of communities who depend directly on local ecosystem goods and services*
- *Biodiversity for food and medicine*
- *Indicator of the status of indigenous and traditional knowledge*
  - Importance of working with ILCs and UNPFII

FRA 2010, including the global remotes sensing survey, will be the main data source for the 2010 target with regard to forest ecosystems



The CBD National Reporting Process

3rd National Report: 15 May 2005; 137 received

4th National Report: March 30, 2009

Format: Narrative (with graphics, figures, tables, boxes and pictures)

Broad stakeholder participation at national level in development of national report.

Further information

www.cbd.int

e.g.:

-List of CBD National Focal Points

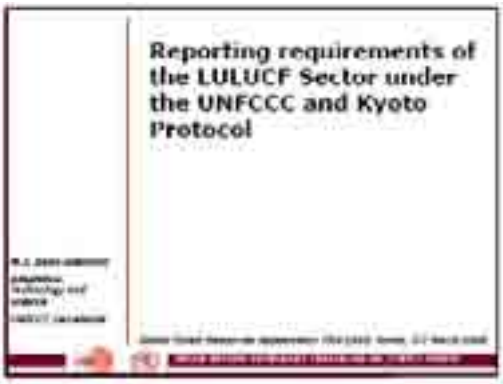
-Your 3rd National Report (focusing data on forest biodiversity)

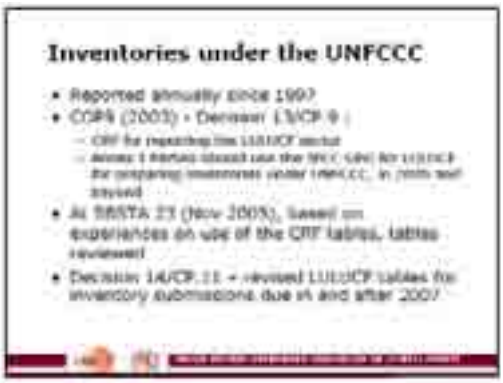
-CBD Decisions, e.g. Programme of Work on Forest Biodiversity and Programme of Work on Protected Areas

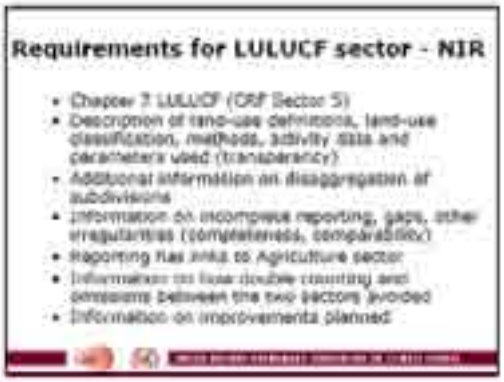
-Publications: cross-sectoral tool-kit for forest biodiversity; Rio Convention note on forests, etc.

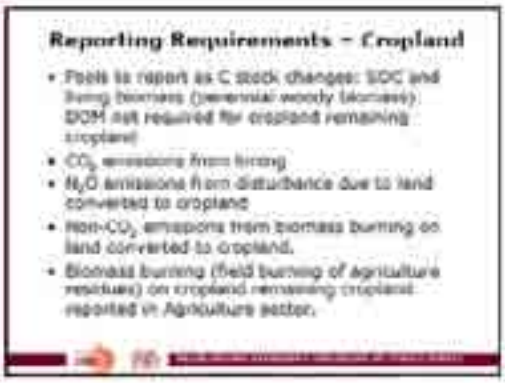
Thank you. Gracias. Merci.

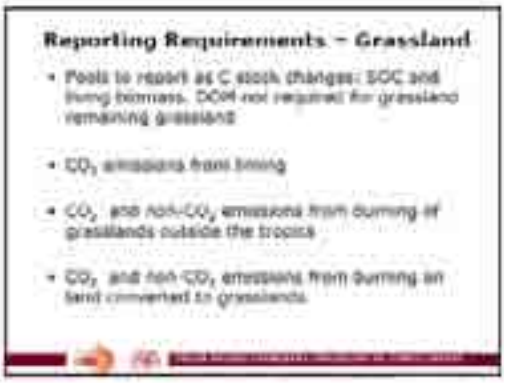
Annex 3.5: Reporting requirements of the LULUCF Sector under the UNFCCC and Kyoto Protocol



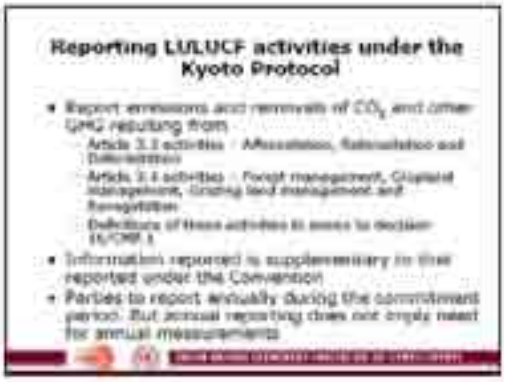


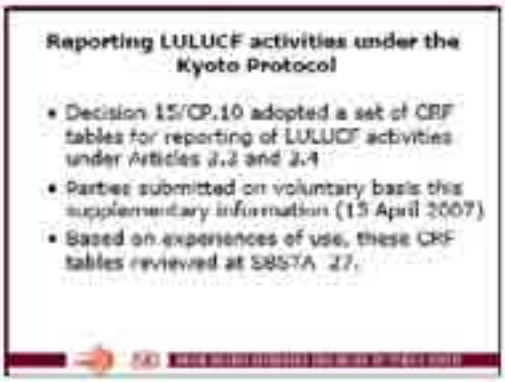



Reporting Requirements – Cropland
• Pools to report as C stock changes: SOC and living biomass (perennial woody biomass). DOM not required for cropland remaining cropland
• CO_2 emissions from liming
• N_2O emissions from disturbance due to land converted to cropland
• Non-CO_2 emissions from biomass burning on land converted to cropland.
• Biomass burning (field burning of agriculture residues) on cropland remaining cropland reported in Agriculture sector.

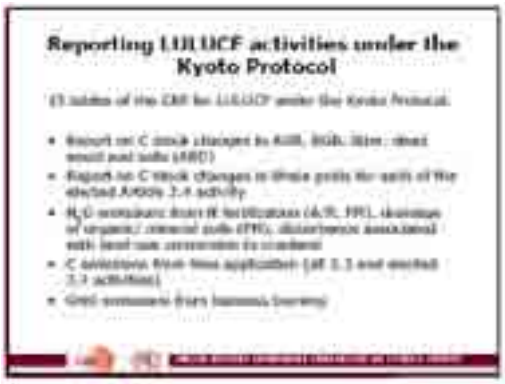

Reporting Requirements – Grassland
• Pools to report as C stock changes: SOC and living biomass. DOM not required for grassland remaining grassland
• CO_2 emissions from liming
• CO_2 and non-CO_2 emissions from burning of grasslands outside the tropics
• CO_2 and non-CO_2 emissions from burning on land converted to grasslands

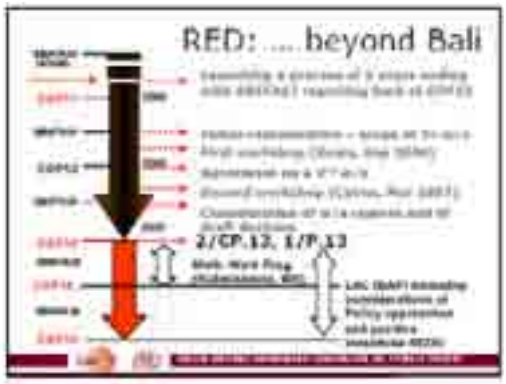

Reporting Requirements – Cropland and Grassland
• Methodologies, AD and parameters under development for many countries
• If emissions or removals are significant, development of area specific activity data on management activities and land-use changes important for more accurate estimates
• Methodologies for mineral soils need data for period of 20 years or more.

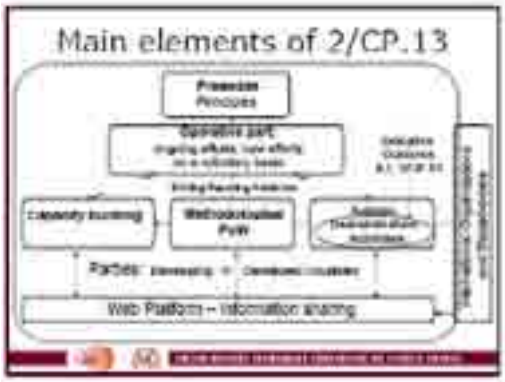

Reporting LULUCF activities under the Kyoto Protocol
• Report emissions and removals of CO_2 and other GHG resulting from
– Article 3.3 activities - Afforestation, Reforestation and Deforestation
– Article 3.4 activities - Forest management, Cropland management, Grazing land management and Revegetation
– Definitions of these activities in annex to decision 16/CMP.1
• Information reported is supplementary to that reported under the Convention
• Parties to report annually during the commitment period. But annual reporting does not imply need for annual measurements


Reporting LULUCF activities under the Kyoto Protocol
• Decision 15/CP.10 adopted a set of CRF tables for reporting of LULUCF activities under Articles 3.3 and 3.4
• Parties submitted on voluntary basis this supplementary information (15 April 2007)
• Based on experiences of use, these CRF tables reviewed at SBSTA 27.


Reporting LULUCF activities under the Kyoto Protocol
Supplementary information required:
• General information - definitions, description of how definitions apply to national circumstances and applied consistently
• Land-related information - identify lands subject to 3.3 and 3.4 activities since 1990, spatial assessment unit used, maps/database to identify geographical locations
• Activity specific information - methodologies used, uncertainty estimates, year of onset of activity
• Other information - key category analysis
• Information related to Article 6 (Joint Implementation)


Reporting LULUCF activities under the Kyoto Protocol


RED: ... beyond Bali
2/CP.13, 1/P.13


Main elements of 2/CP.13
Web Platform – information sharing


Methodological Programme of Work
REDD
workshop on methodological issues after SBSTA28


Annex I
Kyoto Protocol
Comparison
Reporting
Non Annex I
NC
REDD
?
FRA 2010
NFP

Annex 3.6: Reporting on SFM implementation: Existing & potential linkages between UNFF and the FRA Process

Potential steps to enhance linkages

- Selection of indicators from existing parameters
- Proposing indicators for areas not covered yet
- Fine-tuning reporting processes to fit emerging needs

Global Objective on Forests

1. Reverse the loss of forest cover worldwide through SFM, including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation;

Global Objective 1

Possible indicators:

- Reverse the loss of forest cover.
  - area, area change for forest and OWL (T1), primary forest, planted forests (T4)
  - growing stock (T6), biomass (T7) and carbon stock (T8) and change
- Increase efforts to prevent forest degradation
  - characteristics of forest, change of characteristics (T4)
  - area of degraded forests (Special study)

Global Objectives on Forests

2. Enhance forest-based economic, social and environmental benefits, including by improving the livelihoods of forest dependent people;

Global Objective 2

- Economic
  - Area of forest designated for production (T9)
  - Removals and change of removal of wood products (T11)
  - Removal of NWFP (T12)
  - Value and change of value of wood and NWFP removals (T13, T14)
- Social
  - Area of forests designated for social services (T9)
  - Employment in forestry (T15)
- Environmental
  - Area of forest designated for soil and water conservation (T9)
  - Area of forest designated for conservation of biodiversity (T9)

Global Objectives on Forests

3. Increase significantly the area of protected forests worldwide & other areas of sustainably managed forests, as well as the proportion of forest products from sustainably managed forests;

Global Objective 3

Very few globally available indicators for this goal, some possible indicators:

- area of sustainably managed forests (T3)
- area of forests with designated functions (T3)
- Area of protected forests (T3)
- Proportion of products from sustainably managed forests (T7)

Global Objectives on Forests

4. Reverse the decline in ODA for SFM and mobilize significantly increased new and additional financial resources from all sources for the implementation of sustainable forest management.

Global Objective 4

- There are no globally available indicators for this goal
- Indicators needed for
  - Amount of ODA for forestry
  - Amount of new and additional resources for SFM

Possible Strategies

- Consider which of current FRA indicators could be used for Global Objectives
- Consider whether existing indicators used by other processes (ie MCPFE or Montreal Process) might be appropriate to use at global level

Challenges

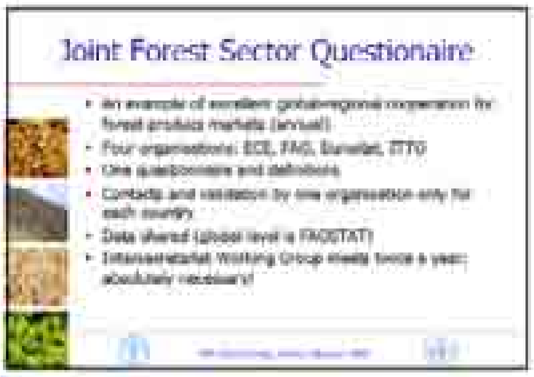
Issue of qualitative assessment: description of "voluntary national measures policies, actions or specific goals" related to the GOFs

- type/legal source (is it a policy, law, act, strategy, Dic)
- time frame (if applicable)
- short description (general description, provisions relevant to GOF1)
- experiences with implementation

Key messages

- No new additional reporting structures/processes/mechanisms
- National correspondents are invited to consider these issues in their work – these challenges are also opportunities
- An opportunity for the forest resources community to build on the political commitment embodied in the GOFs and NLBI – by showcasing progress in these areas

Annex 3.7: UNECE and FRA: half a century of global-regional cooperation


Joint Forest Sector Questionaire
An example of excellent global-regional cooperation for forest products markets (annual)
Four organisations: ECE, FAO, Eurostat, ITTO
One questionnaire and definitions
Contacts and validation by one organisation only for each country
Data shared (global level is FAOSTAT)
Intersecretariat Working Group meets twice a year; absolutely necessary!


Next steps in Europe
Learn from experience with State of Europe's Forests 2007, especially on policies and institutions, and monitoring SFM
Team of specialists meets in Vienna in May
Seek consensus on emerging issues, (e.g. forest types) in good time
Collect and validate data for European countries in FRA 2010
Propose relevant information for bioenergy/climate change policy debate (potential wood supply)
Alex Korotkov retired: successor being chosen


Questions, discussion?
Kit Prins
Chief, ECE/FAO Timber Section
Palais des Nations, Geneva
Tel: +4122 917 2874
http://www.unece.org/trade/timber

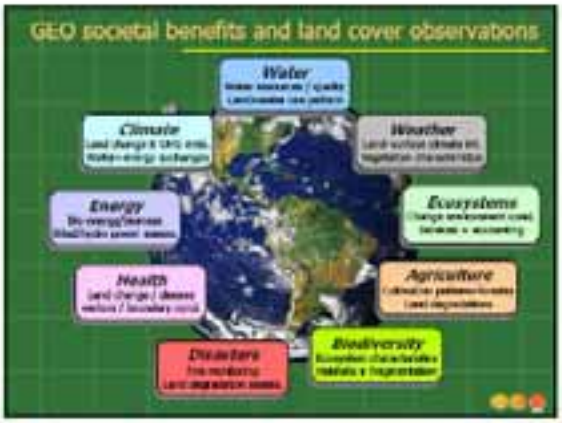
Annex 3.8: Statement from IUCN to launch of FRA 2010

IUCN welcomes this important and ambitious undertaking.
FRA 2010 will provide forest and other land-use practitioners and policy makers at the national and international levels with invaluable information on the distribution and extent of forests and on changes in forest area over time at regional, biome and global levels.
We particularly welcome the extent to which countries have been involved in the design and carrying out of the FRA programme.
The network of national correspondents, which is being brought together in support of this initiative, will if maintained and strengthened carry benefits beyond the FRA programme itself.
IUCN also appreciates the efforts of the FRA programme to take account of and contribute to the harmonization of reporting on forests with other organizations, work on which the FAO has demonstrated leadership within a joint initiative of the Collaborative Partnership on Forests.
Also welcome is the attention being given to making the FRA as relevant and useful as possible to important forest policy arenas such as the CBD and the UNFF.

IUCN looks forward to ongoing collaboration with the FAO and wishes the FAO and its many partners great success with this endeavour.

Stewart Maginnis
Head
Forest Conservation Programme
IUCN

Annex 3.9: FRA 2010 and GEO



Annex 3.10: Overview of the FRA 2010 process

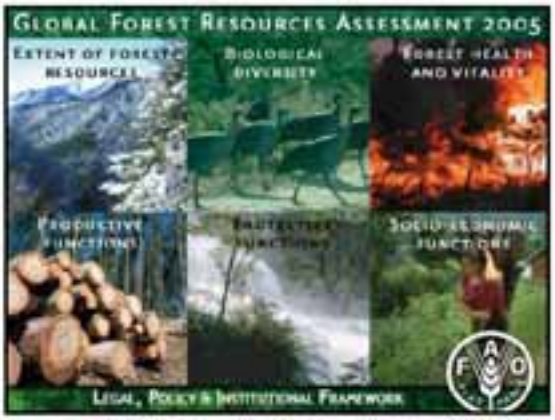
FRA 2010

Guidance from Kotka V:

- Thematic elements of SFM
- Inputs to CBD Target 2010
- Global remote sensing survey
- National correspondents
- Harmonization of reporting

Guidance from COFO:

- Endorsement of Kotka V
- UNFF Global Objectives



Meeting the needs of CBD (1)

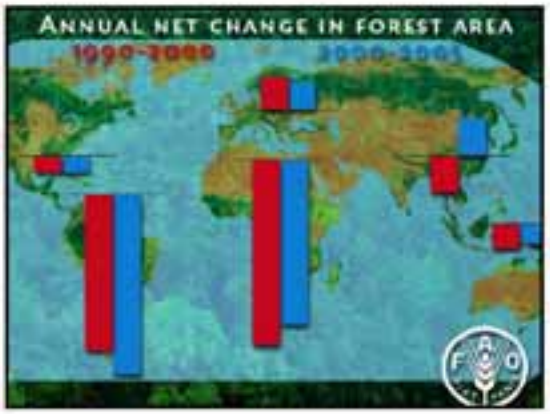
Trends in:

1. The extent of selected biomes, ecosystems and habitats
2. Coverage of protected areas
3. Abundance & distribution of selected species
4. Status of threatened species


PLANTED FORETS OF NATIVE SPECIES


PLANTED FORESTS OF INTRODUCED SPECIES


CHANGE IN FOREST AREA 1990-2005
DEFORESTATION 13 million ha/yr
NET FOREST LOSS
1990-2000 8.9 million ha/yr
2000-2005 7.3 million ha/yr
200 KM PER DAY


ANNUAL NET CHANGE IN FOREST AREA


MANAGEMENT, CONSERVATION AND USE


Meeting the needs of CBD (2)
5. Genetic diversity
6. Invasive alien species
7. Area of forest ecosystems under sustainable management
8. Proportion of (wood) products derived from sustainable sources
9. Connectivity/fragmentation of ecosystems

UNFF Global Objectives (1)

1. Reverse the **loss of forest cover** through sustainable forest management, protection, restoration, **afforestation** and **reforestation** and increase efforts to prevent **forest degradation**

2. Enhance **forest-based economic, social and environmental benefits**

UNFF Global Objectives (2)

3. Increase the **area of protected forests** and **other areas of sustainably managed forests**, as well as the **proportion of forest products from sustainably managed forests**

4. Reverse the decline in **official development assistance** and mobilize **new and additional financial resources**

FRA 2010

- Country reports
- Remote sensing survey
- Special studies
- External data providers

Country Reports

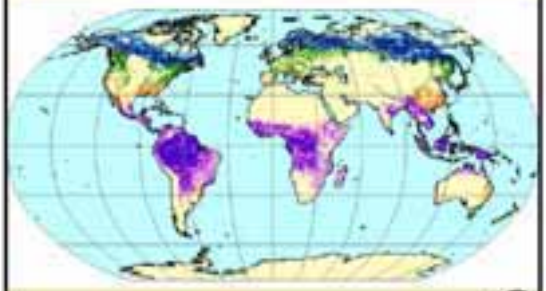
T 1	Extent of forest and other wooded land
T 2	Forest ownership and management rights
T 3	Forest designation and management
T 4	Forest characteristics
T 5	Forest establishment and regeneration
T 6	Growing stock
T 7	Biomass stock
T 8	Carbon stock
T 9	Forest fires

T 10	Other disturbances affecting forest health and vitality
T 11	Wood removal and value of removal
T 12	NWFP removal and value of removal
T 13	Employment
T 14	Policy and legal framework
T 15	Institutional framework
T 16	Education and research
T 17	Public revenue collection and expenditure

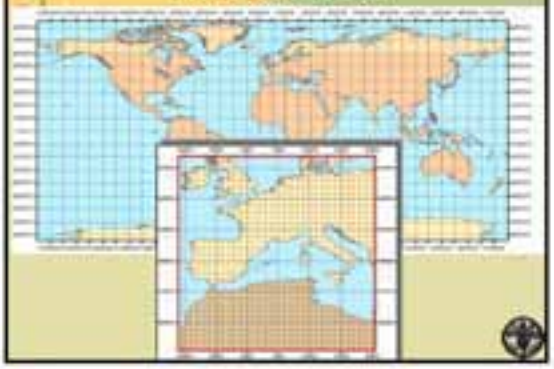
Remote sensing survey

- Distribution of forests
- Trend statistics
- Regional, biome & global level

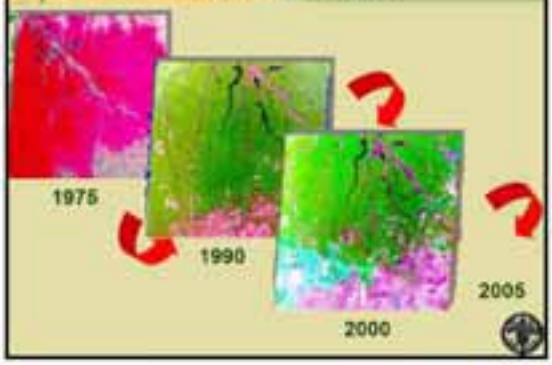
Distribution of forests



Trend statistics



Trend statistics



Special studies

- Forest fragmentation and degradation
- Forest genetic resources
- Trees outside forests
- Forest policies and institutions
- Non-wood forest products
- Forest employment and livelihoods

Partners

235 countries and territories

175 National Correspondents

Regular contacts

Regional networks

Partners

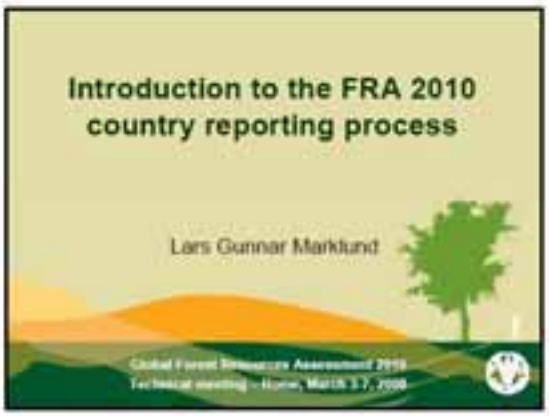
Next steps

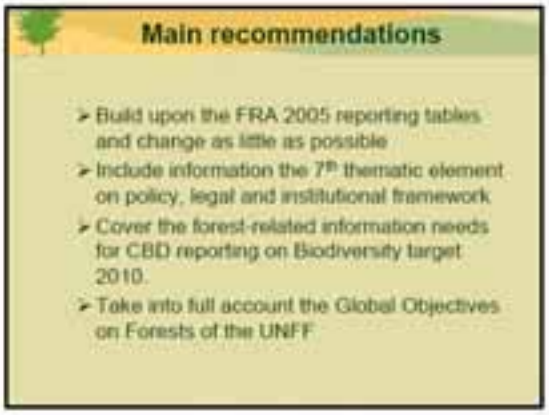
- 2008: Launch FRA 2010 (3-7 March)
- 2008-2009: Regional workshops (country reports and remote sensing) and bulk of work for countries
- 2010: Release of Key Findings; Report preparation & dissemination
- 2011: Final report from global remote sensing survey

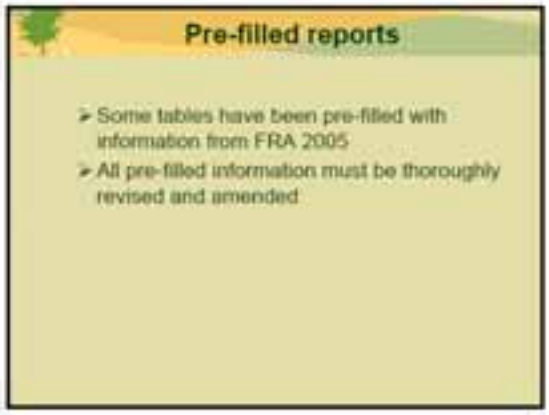

Conclusions
1. Long tradition
2. Strong mandate
3. Global network of dedicated experts
4. 2010 and 2011: Important dates
5. Many challenges = many opportunities


THANK YOU!
www.fao.org/forestry/fra2010

Annex 3.11: Introduction to the FRA 2010 Reporting Process







National Correspondents

- Coordinate elaboration of the country report and responsible for ensuring a timely delivery of the report
- Focal point for communications with FAO on FRA related matters
- Participate in workshops related to FRA
- Disseminate information within your country

FRA focal points

Africa	Laura Russo
Asia	Monica Garzuglia
Latin America and the Caribbean	Lars Gunnar Marklund
Europe	UNECE / Örjan Jonsson
the Pacific	Örjan Jonsson
Russian-speaking countries	Arvydas Lebedys

Review process

Getting started...

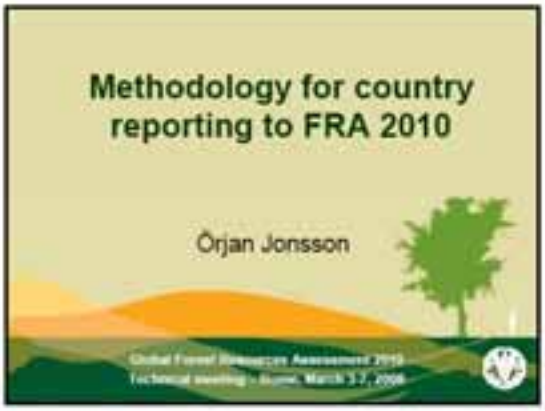
- Start early
- Organize the team
- Identify and locate focal points for other reporting processes
- Start with the key tables (T1, T3a, T4a, T6) and send in a draft report with these tables as soon as possible
- Consult with FRA focal point if in doubt or if you need advice

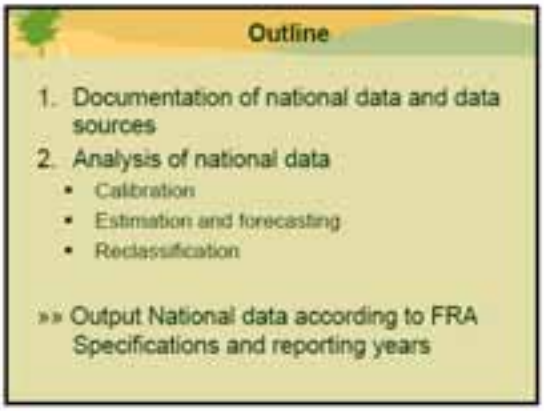
Time schedule for country reporting

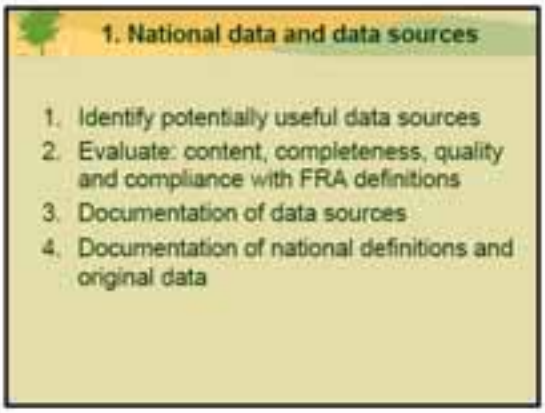
- Launch – beginning of march 2008
- Regional workshops – remainder of 2008
- Deadline for submission of country reports – end of March 2009
- Validation request – mid 2009
- 2010 – country reports published on the Web

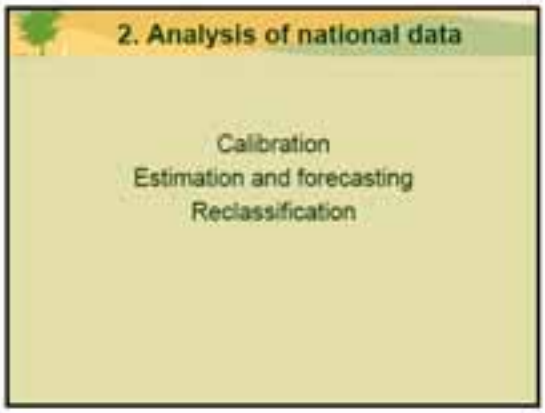
Thank you!

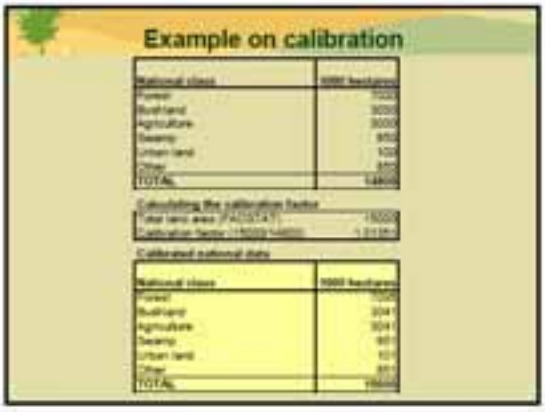
Annex 3.12: Methodology for country reporting

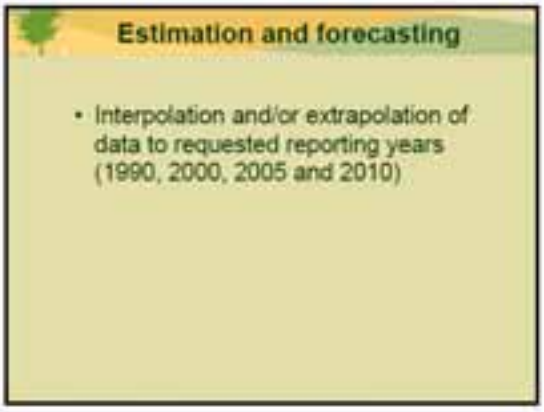












Example estimation and forecasting

	National data		Estimated / forecasted data			
National class	1987	1999	1990	2000	2005	2010
Forest	7500	[illegible]	7040	[illegible]	[illegible]	[illegible]
Bushland	3041	3100	3060	3105	3130	3154
Agriculture	3041	3150	3068	3159	3205	3250
Swamp	851	850	850	849	845	840
Urban land	101	150	113	154	175	[illegible]
Other	851	850	855	848	845	840
TOTAL	15500	15500	15500	15500	15500	15500

In this example:
linear interpolation for 1990 and linear extrapolation for 2000, 2005 and 2010

Reclassification

- Transform data according to national classes to correspond to FRA 2010 categories
- Reclassification matrix

Example on reclassification

	FRA 2010 Categories			
National class	Forest	OWL	Other land	Total
Forest	100%			100%
Bushland	20%	80%		100%
Agriculture			100%	100%
Swamp			100%	100%
Urban land			100%	100%
Other			100%	100%

Analysis of national data

Suggested order of application

1. Calibration
2. Estimation and forecasting
3. Reclassification

»Ensures documentation of trends according to the national classes

Missing or incomplete data

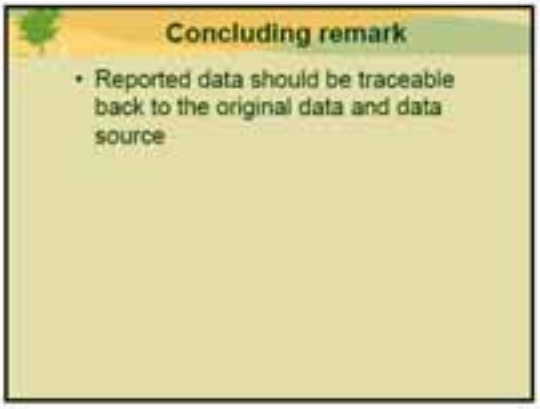
No field must be left blank

Expert estimates

Use "n.a." not available

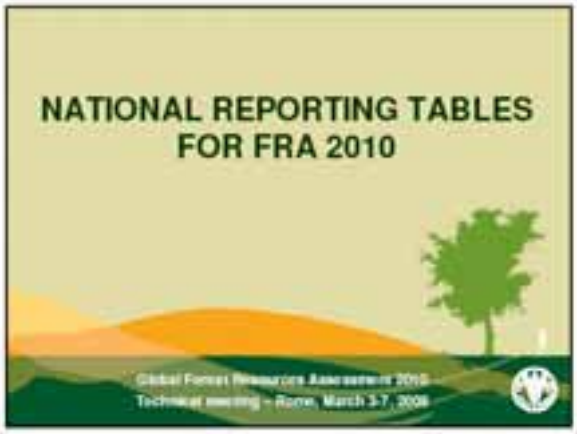
Comment fields

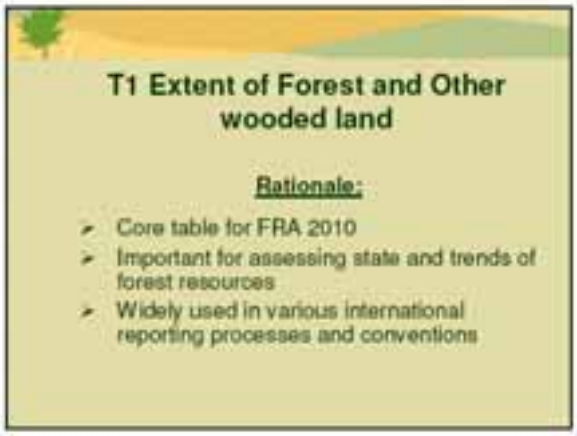
1. Comments related to data and definitions
2. Comments on reported trend
3. Other general comments

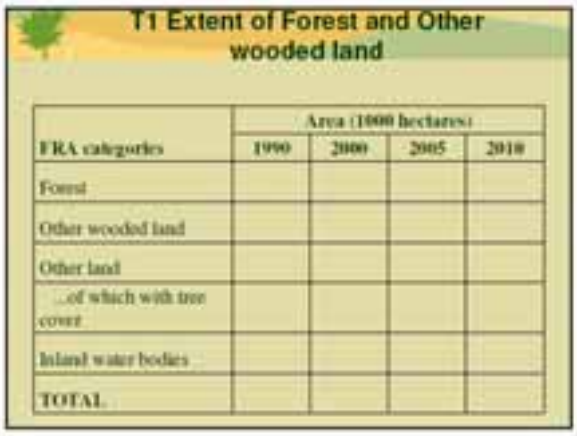

Concluding remark
• Reported data should be traceable back to the original data and data source


Thank you!

Annex 3.13: National Reporting Tables for FRA 2010







Reporting

- Changes in relation to FRA 2005
  - Ownership now refers to the forest resource (the trees) and **not** the land
  - Private ownership has been futher sub-divided into several sub-categories
  - Information on management rights of public forests has been added
- Two parts
  - ownership
  - management rights

T2a Forest ownership

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public ownership			
Private ownership			
...of which owned by individuals			
...of which owned by private business entities and institutions			
...of which owned by local communities			
...of which owned by indigenous / tribal communities			
Other types of ownership			
TOTAL			

T2b Holder of management rights of public forests

FRA Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public Administration			
Individuals			
Private corporations and institutions			
Communities			
Other			
TOTAL			

T3 Forest designation and management

Rationale:

- Information on how the forests are intended to be managed
- Relates to reporting to other organizations and arrangements (CBD, UNFF, MCPFE, ITTO, etc.)
- Essential for planning and monitoring of impacts of policy measures

Reporting

- Changes in relation to FRA 2005
  - Only covers forest area
  - "Total area with function" has been removed
  - A table on "special categories of designation and management" has been added (T3b)
- T3a – Primary Designated Function is prefilled for 1990, 2000 and 2005

T3a Primary designated function

FRA categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production				
Protection of soil and water				
Conservation of biodiversity				
Social services				
Multiple use				
Other (specify)				
No / Unknown				
TOTAL				

T3b Designation and management

FRA categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate				
Forest area within protected areas				
Forest area under sustainable forest management				
Forest area with management plan				

T4 Forest characteristics

Rationale:

- Degree of human impact
- Monitor forest ecosystems

Reporting

- Changes in relation to FRA 2005
  - Planted forest instead of Plantations
  - Modified natural and Semi-natural merged into Other naturally regenerated forest
  - A table with specific categories of forest types added (T4b)
- T4a – Characteristics – area of primary forest is prefilled for 1990, 2000 and 2005

T4a Characteristics

FRA categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest				
Other naturally regenerated forest				
...of which of introduced species				
Planted forest				
...of which of introduced species				
TOTAL				

T4b Special categories

FRA categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)				
Mangroves (Forest and OWL)				
Bamboo (Forest and OWL)				

T5 Forest establishment and reforestation

Rationale:

- Monitor progress towards SFM
- Global objectives on forests (UNFF)

T5 Forest establishment and reforestation

FRA categories	Annual forest establishment (ha/year)			...of which of introduced species (ha/year)		
	1990	2000	2005	1990	2000	2005
Afforestation						
Reforestation						
...of which on areas previously planted						
Natural expansion of forest						

T6 Growing stock
T7 Biomass stock
T8 Carbon stock

- Strongly interrelated
- Consistence between tables
- Consistence between reporting to FRA and to UNFCCC and the Kyoto Protocol

T6 Growing stock

Rationale:

- Productive capacity of the forests
- Planning and monitoring sustainable use
- Basis for biomass and carbon estimates

Reporting

- Commercial Growing stock replaced with Growing stock of commercial species
- Three parts
  - Total growing stock and growing stock of commercial species
  - Composition of growing stock
  - Specification of thresholds
- Trends – need for better information on growing stock per hectare

T6a Growing stock

FRA categories	Volume (million cubic meters over bark)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Total growing stock								
...of which coniferous								
...of which broadleaved								
Growing stock of commercial species								

T6b Growing stock of the 10 most common species

FRA category/Species name			Growing stock in forest (million m^3 over bark)		
Rank	Scientific name	Common name	1990	2000	2005
1st					
2nd					
3rd					
...					
10th					
Remaining					
TOTAL					

T6c Specification of threshold values

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (D)		
Minimum diameter (cm) at the top end of trees for calculation of growing stock (Y)		
Minimum diameter (cm) of branches included in growing stock (W)		
Volume refers to "above ground" (AG) or "above stump" (AS)		

T7 Biomass stock

Rationale:

- Basis for estimating carbon and emissions
- Wood energy

Reporting

- Same categories and definitions as IPCC
- Default conversion factors from 2006 IPCC Guidelines – improved since FRA 2005
- General methodological aspects
  - Biomass conversion and expansion factors
  - No default values for dead wood

T7 Biomass stock

FRA categories	Biomass (million metric tonnes oven-dry weight)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Above-ground biomass								
Below-ground biomass								
Dead wood								
TOTAL								

T8 Carbon stock

Rationale:

- Monitor greenhouse gase emissions
- REDD

Reporting

- National data, when available
- Apply default carbon fraction from 2006 IPCC Guidelines (0.47)

T8 Carbon stock

FRA Categories	Carbon (billion metric tonnes)				
	Forest				OWL
	1990	2000	2005	2010	...
Carbon in above-ground biomass					
Carbon in below-ground biomass					
Sub-total: Living biomass					
Carbon in dead wood					
Carbon in litter					
Sub-total: Dead wood and litter					
Soil carbon					
TOTAL					

T9 (Forest) fires

Rationale:

- Planning & monitoring of fire management measures
- Climate change & carbon emission calculations

Reporting

- New table
- Two parts
  - area and number of fires
  - proportion wildfire / planned fire
- Thematic study "Fire management – global assessment 2006"
- Five-year average for reporting

T9a Area and number of fires

FRA category	Annual average for 5-year period					
	1990		2000		2005	
	1000 ha	# of fires	1000 ha	# of fires	1000 ha	# of fires
Total area affected by fire						
... of which on forest						
... of which on other wooded land						
... of which on other land						

T9b Proportion of planned fires and wildfires in forest

FRA category	Proportion of forest area affected by fire (%)		
	1990	2000	2005
Wildfire			
Planned fire			

T10 Other disturbances affecting forest health and vitality

Rationale:

- Forest health and vitality
- Control and mitigate impact

Reporting

- Three parts
  - Disturbances
  - Mayor outbreaks of insects and diseases
  - Woody invasive species

T10a Disturbances

FRA categories	Affected forest area (1000 hectares)		
	1990	2000	2005
Disturbance by insects			
Disturbance by diseases			
Disturbance by other biotic agents			
Disturbance caused by abiotic factors			
Total area affected by disturbances			

T10b Major outbreaks of insects and diseases affecting forest health and vitality

Description / name	Tree species or genera affected (scientific name)	Year(s) of latest outbreak	Area affected (1000 ha)	If cyclic, approx. cycle (years)
Disturbance 1				
Disturbance 2				
Disturbance 3				
...				
Disturbance 10				

T10c Area of forest affected by woody invasive species

Scientific name of woody invasive species	Forest area affected 2005 (1000 hectares)
Sp.1	
Sp. 2	
Sp. 3	
Sp. 4	
Sp. 5	
Total forest area affected by woody invasive species	

T11 Wood removals and value of removals

Rationale:

- Contribution of forest sector to the national economy

Reporting

- Removals ≠ felling
- Joint Forest Sector Questionnaire (**JFSQ**)
  (EUROSTAT / FAO / ITTO / UNECE)
- Volume over bark (o.b.)
- Five-year average

T11 Wood removals

FRA category	Industrial roundwood removals			Woodfuel removals		
	1990	2000	2005f	1990	2000	2005f
Total volume (1000 m³ o.b.)						
... of which from forest						
Unit value (local currency / m³ o.b.)						
Total value (1000 local currency)						

Name of local currency: 1990, 2000 & 2005

Estimation of value

T12 Non-wood forest products removals and value of removals

Rationale:

- Show the importance of NWFPs, both for economy and livelihood of rural people

Reporting

- FRA 2005 table redesigned (Quantity and value of 10 most important NWFPs)
- Data availability an issue
- Focus on commercial products
- Only removals from forest

T12 Non-wood forest products removals and value of removals

Rank	Name of product / Key species	Unit	NWFP removals 2005		NWFP category
			Quantity	Value (1000 loc.cur.)	
1st					
2nd					
...					
10th					
All other plant products					
All other animal products					
TOTAL					

T13 Employment

Rationale:

- Socio-economic importance
- Government policies
- Industry development
- etc.

Reporting

- Changes in relation to FRA 2005
  - Self-employment included in primary production of goods
  - "Management of protected areas" has replaced "Provision of services"
- Compatible with national labour statistics

T13 Employment

FRA categories	Employment (1000 year: FTE)		
	1990	2000	2005
Employment in primary production of goods			
..of which paid employment			
.. of which self-employment			
Employment in management of protected areas			

T14 Policy and legal framework

Rationale:

- Fundamental basis for SFM
- Integration of forest sector into society

Reporting

- New table in FRA 2010
- Yes/No questions with some complementary information
- nfp-updates
- FAOLEX (http://faolex.fao.org)

T14a Policies and Laws (2008)

Forest policy statement with national scope	Yes/No
If Yes above, provide: Year of endorsement and Reference to document	
National forest programme (nfp)	Yes/No
If Yes above, provide: Name of nfp, Current status, and Reference to document	
Law (act or code) on forest with national scope	Yes/No
If Yes above, provide: Year of enactment, Year of latest amendment and Reference to document	
Sub-national forest policy statement	Yes/No
If Yes above, indicate: number of region/state/provinces with forest policy statements	
Sub-national laws (acts or codes) on forest	Yes/No
If Yes above, indicate: number of region/state/provinces with laws on forests	

T15 Institutional framework

Rationale:

- Institutions responsible for
  - Policy formulation and implementation
  - Law enforcement
- Technical capacities of institutions

T15a Institutions

FRA categories	2000
Ministry responsible for forest policy formulation	
Level of subordination of Head of Forestry with in the Ministry	Subordination to Ministry 1st level 2nd level 3rd or lower level
Other public forest agencies at national level	
Institution(s) responsible for forest law enforcement	

T15b Human resources

FRA categories	Human resources within public forest institutions					
	2000		2005		2008	
	#	% Female	#	% Female	#	% Female
Total staff						
...of which with university degree or equivalent						

T16 Education and research

Rationale:

- Capacity for education and research
- Capacity to implement SFM

T16 Education and research

FRA categories	Graduation of students in forest related education					
	2000		2005		2008	
	#	% Female	#	% Female	#	% Female
Master's degree (MSc) or equivalent						
Bachelor's degree (BSc) or equivalent						
Technician certificate / diploma						
FRA categories	Professionals working in publicly funded forest research centres					
	2000		2005		2008	
	#	% Female	#	% Female	#	% Female
Doctor's degree (PhD)						
Master's degree (MSc) or equivalent						
Bachelor's degree (BSc) or equivalent						

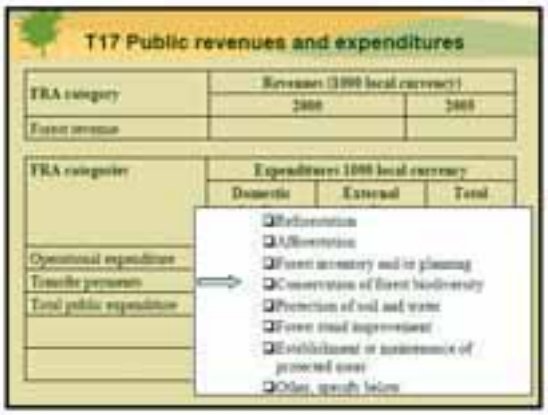
T17 Public revenue collection and expenditure

Rationale:

- Forest sector contribution to government finances
- Government support to the forest sector

Reporting

- New table in FRA 2010
- Two parts
  - government revenues
  - government expenditures


T17 Public revenues and expenditures
FRA category
Revenues (1000 local currency)
2000
2005
Forest revenue
FRA categories
Expenditures 1000 local currency
Domestic
External
Total
Operational expenditure
Transfer payments
Total public expenditure
Reforestation
Afforestation
Forest inventory and/or planning
Conservation of forest biodiversity
Protection of soil and water
Forest road improvement
Establishment or maintenance of protected areas
Other, specify below


Thank you for your attention!