

PROCEEDINGS OF THE FRA 2010 REGIONAL WORKSHOP FOR NATIONAL CORRESPONDENTS FOR THE ASIAN REGION

KUALA LUMPUR, MALAYSIA, 13-16 OCTOBER 2008



November, 2008





The Global Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions which are important at the global, national and local scales, and they play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Global Forest Resources Assessment Programme. The Global Forest Resources Assessment 2010 (FRA 2010) has been requested by the FAO Committee on Forestry in 2007 and will be based on a comprehensive country reporting process, complemented by a global remote sensing survey. The assessment will cover all seven thematic elements of sustainable forest management, including variables related to the policy, legal and institutional framework. FRA 2010 is also aimed at providing information to facilitate the assessment of progress towards the Global Objectives on Forests of the United Nations Forum on Forests and the 2010 Biodiversity Target of the Convention on Biological Diversity. Results are expected to be published in 2010.

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More information on the Global Forest Resources Assessment programme can be found at:
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Forestry Department
Food and Agriculture Organization of the United Nations

Forest Resources Assessment Working Paper

Proceedings
of the FRA 2010
Regional Workshop for the National
Correspondents for the
Asian region

November, 2008

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1 Preamble

FAO is conducting a series of sub-regional and regional workshops as part of the preparatory work for the country reporting to the Global Forest Resources Assessment 2010 (FRA 2010). The workshops respond to requests made by many National Correspondents (NCs) to increase FAO's support and capacity building at sub-regional and regional levels.

The regional workshop for the Asian region was held in Kuala Lumpur, Malaysia from 13-16 October. The workshop was jointly organized by FAO and the Forestry Department of Malaysia.

Invitations to the workshop were extended to the officially nominated FRA 2010 National Correspondents (NCs) and to the focal points of the FAO Regional Project Strengthening Monitoring, Assessment, and Reporting (MAR) on Sustainable Forest Management in Asia-Pacific. In total 57 participants from 22 countries attended the meeting (see list of participants in Annex 1).

2 Workshop objectives

The workshop had two main objectives:

1. to facilitate harmonization and streamlining of national reporting to international conventions/processes in the Asian region through consultations between countries and international organizations.
2. to provide the FRA National Correspondents with technical assistance and guidance to ensure high-quality reporting which meets the specifications established for FRA 2010, through a detailed review of the draft country reports.

This report will mainly focus on the specific FRA objectives, while the proceedings of the complete workshop will be circulated separately.

3 Content

After the opening ceremony addressed by the hosting government and the introduction of participants, the first morning comprised an introductory presentations on the organization of the workshop, presentation of the FRA 2010 reporting process and reporting methodology, of the MAR project and activities, of the NFMA project and of the ASEAN process.

The following session was dedicated to various presentations on the forest related international reporting processes (CBD, UNFCCC, UNFF, ITTO, UNCCD, CITES, Ramsar) with a final discussion on terms, definitions and classifications of forests.

The second day of the workshop was dedicated to working group discussions. While the third and fourth days (on the FRA side) were dedicated to in depth review of the draft country reports: the reports were reviewed and discussed by the national Correspondents and the FRA focal point during individual sessions in order to:

- ensure the correct application of the processes of data transformation, estimation and forecasting to generate information for FRA categories and reference years;
- ensure consistency among different tables;
- identify problems and data gaps, if any, for each of the 17 tables in each participating country and suggesting ways to address these;
- seek clarifications and additional information from countries on their draft report.

The workshop was concluded by a general plenary discussion on FRA 2010 and MAR outcomes.

4 Working group outputs

Two groups of 10 FRA 2010 National correspondents each were created as follows:

Group A	Group B
Australia	
Bangladesh	Cambodia
China	Indonesia
DPR Korea	Japan
Bhutan	Malaysia
India	Philippines
Iran	Republic of Korea
Maldives	Singapore
Mongolia	Thailand
Nepal	Timor Leste
Sri Lanka	Vietnam

Participants made a short presentation on the status of their FRA 2010 country reporting process (see Annex 3), with the aim of sharing experiences with colleagues of the region and highlighting main issues, problems and difficulties.

Then the working group sessions focused on discussion on the 17 national reporting tables including the process of identification, selection and documentation of national data and data sources.

Many of the issues identified by the countries were clarified during the working groups and the following individual sessions on the third and fourth days of the workshop while the remaining issues were forwarded to the FRA secretariat to be clarified and included in the Frequently Asked Questions on the FRA website.

The main issues that were discussed during the workshop are presented below. These are organized according to the reporting tables, preceded by a section on general comments and questions on the scope, coverage and methodology of FRA 2010. The issues will be

discussed by the FRA secretariat and the key issues of general interest will be posted on the FRA 2010 website under the Frequently Asked Questions (FAQs).

4.1 General comments and questions on FRA 2010

The issue of data availability (missing data or weak data) was raised by the participants who also expressed their concern on the reliability of expert estimates. It was suggested that as long as any assumption is clearly explained and supported by local expertise it is highly preferable to use expert estimates instead of leaving tables blank.

The adoption of linear extrapolation in case of old figures may lead to trends in forest area which are not really realistic and it was suggested that the national experts may decide to revise the trend using their knowledge on the real status of forests in their country, since linear extrapolation is a suggested method to obtain forest area estimates but in certain cases cannot be strictly applied.

Also the issue of new data affecting the previous trend in forest area change was discussed and the need to revise previous estimates in order to reach consistency in the forest cover trend highlighted.

For certain countries there is the need to undertake the process of reclassification prior to the process of estimation and forecasting to facilitate the calculations, and it was clarified that the order of the steps involved could be changed as long as all steps were undertaken.

Finally, participants were urged to clearly document all the steps of the reporting methodology for the sake of traceability and transparency of the country reports.

The technical deliberations in the working groups were very intensive and participative. The following tables summarises the main issues raised during these deliberations.

Reporting Table	Issues and suggested solutions
T1	<p>Issues and concerns</p> <ol style="list-style-type: none"> 1. Definition of forest: the minimum extent of forest differs from the FRA 2010 threshold. 2. Zagrosian forest (Iran), less than 5 m in height <p>Suggested solutions</p> <ol style="list-style-type: none"> 1. The general definition of Forest in FRA is “Land spanning more than 0.5 hectares...” and this should be the basis for country reporting whenever it is possible to obtain this figure from the national data sources. However, sometimes the national data sources do not allow obtaining estimates with exactly this size limit. In such cases the countries should report to whatever size limit that is closest to this threshold and clearly document the size limit used. The same threshold should be used consistently throughout the time series 2. If the woody vegetation has more than 10% canopy cover of tree species with a height or expected height of 5 m or more, it should be classified as “forest”, otherwise it should be classified as “Other wooded land”. In the case of areas composed of tree species (e.g. oak, in this case) where the height in some areas may reach 5 m (but not in all areas) and where existing data does not allow for a separation between these since the country uses a lower threshold, it was recommended to include these areas

	under forest area.
T2	<p>Issues and concerns</p> <ol style="list-style-type: none"> 1. Forest Concession: Ownership of trees - Private or Public? 2. Planted forests by private companies on government land 3. Tree harvesting restriction: Trees planted on private land but permit needed to cut it, so private or public ownership? <p>Suggested solutions</p> <ol style="list-style-type: none"> 1. Public forest 2. Private forest 3. Private forest
T3	<p>Issues and concerns</p> <ol style="list-style-type: none"> 1. Definition of PFE 2. Forest Area designated for the protection of soil & water: access/topography can be used as a criterion <p>Suggested solutions</p> <ol style="list-style-type: none"> 1. What we want to get here is the <u>area of forest where a legal decision has been taken that it should remain under forest i.e. where the land use may not be changed</u> unless special permission is granted 1. Yes, if there is an active decision on for what purpose the forest should be managed.
T4	<p>Issues and concerns</p> <ol style="list-style-type: none"> 1. ITTO definitions of primary forest. <p>Suggested solutions</p> <ol style="list-style-type: none"> 1. ITTO defines primary forest as follows: <i>Forest which has never been subject to human disturbance, or has been so little affected by hunting and gathering that its natural structure, functions and dynamics have not undergone any unnatural change.</i> This category can be considered equivalent to the FRA 2010 definition of primary forest. ITTO defines a degraded primary forest as follows: <i>primary forest in which the initial cover has been adversely affected by the unsustainable harvesting of wood and/or non-wood forest products so that its structure, processes, functions and dynamics are altered beyond the short-term resilience of the ecosystem; that is, the capacity of the forest to fully recover from exploitation in the near to medium term has been compromised).</i> This definition falls within the FRA 2010 definition of other naturally regenerated forests. ITTO defines a managed primary forest as follows: <i>Forest in which sustainable timber and non-wood harvesting (eg through integrated harvesting and silvicultural treatments), wildlife management and other uses have changed forest structure and species composition from the original primary forest. All major goods and services are maintained.</i> Also this definition falls within the FRA 2010 definition of other naturally regenerated forests.
T5	<p>Issues and concerns</p> <ol style="list-style-type: none"> 1. How to define natural expansion of forest <p>Suggested solutions</p> <ol style="list-style-type: none"> 1. If a change in the land use occurred from non-forest to forest through natural regeneration (so excluding afforestation)
T6	Issues and concerns

	<p>1. Conifer versus gymnosperm: Gingko, Agatis, Casuarina</p> <p>Suggested solutions</p> <p>1. All the three species above should be included under conifers</p>
T7	<p>Issues and concerns</p> <p>1. How to estimate below ground biomass</p> <p>Suggested solutions</p> <p>1. Below ground biomass can be estimated using IPCC guidelines, if above ground biomass is known</p>
T8	No raised issues
T9	No raised issues
T10	<p>Issues and concerns</p> <p>1. Nematode: where to include.</p> <p>Suggested solutions</p> <p>1. Nematode should be included under the category “disturbance by other biotic agents”</p>
T11	<p>Issues and concerns</p> <p>1. Republic of Korea raised an issue concerning the FRA 2005 results for fuelwood that were incorrect</p> <p>Suggested solutions</p> <p>1. The problems has been reported to the forest products group</p>
T 12	No raised issues
T13	<p>Issues and concerns</p> <p>1. Drivers? should be included? Transport in forest, if mill is in true forest (Sawmills: log mills in the forest – part of forest’s contribution to economy / employment)</p> <p>2. How to include casual and season labour/employment?</p> <p>Suggested solutions:</p> <p>1. The limit is set at “farm border”i.e. at the log landing places in the forest before they are transported to a sawn mill. Transport within the forest until it reaches permanent road should be included. Employment in permanent sawmills within the forest should not be included, however small scale work with portable sawmills is a borderline case and countries may decide to include such employment.</p> <p>2. Seasonal labour should be recalculated into Full Time Equivalent during the year (see guidelines)</p>
T14	No raised issues
T15	No raised issues
T16	<p>1. Education: Include veterinary sciences (Many are employed in protected areas)</p> <p>Suggested solutions</p> <p>1. No since the primary focus of those studying veterinary sciences is not aimed at work in the forestry sector, they should not be included. If they work in protected areas they are, however included in the employment table.</p>
T17	<p>Issues and concerns</p> <p>1. Penalties: should be included?</p> <p>2. State corporation.</p> <p>Suggested solutions</p>

	<ol style="list-style-type: none"> 1. Yes, penalties and fines should be included 2. The FRA specifications stipulate that figures on revenues and expenditures should exclude revenues and expenditures from publicly owned business entities. If it is possible to separate the revenues and expenditures related to the business operations, these should be left out. If that is not possible, report the figures including the business operations and make a note in appropriate comment field.
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Annex 1: List of Participants

2010 AND OTHER INTERNATIONAL PROCESSES ON FOREST IN ASIA

No	Name	Position	Organization	Address	Country	Email	Workshop to Attend
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Annex 2 Agenda of the workshop

Agenda



Regional Workshop on Strengthening of Harmonization of National Reporting to FRA 2010 and Other International Processes on Forests in Asia

Organized by:

Food and Agriculture Organization of the United Nations (FAO)

under:

Global Forest Resources Assessment (FRA) 2010

**Strengthening Monitoring, Assessment, and Reporting (MAR)
on Sustainable Forest Management (SFM) in Asia (GCP/INT/988/JPN)**

Vistana Hotel, Kuala Lumpur, Malaysia

13 - 16 October 2008

Hosted by:

Forestry Department

Ministry of Natural Resources and Environment, Government of Malaysia

In collaboration with international organizations:

Convention on Biological Diversity (CBD)

International Tropical Timber Organization (ITTO)

Association of the Southeast Asian Nations (ASEAN)



DAY 1 (13 October) (plenary session)

08:00 - 09:00 Registration

Opening session (09:00 - 09:40) (Conference room)

09:00 - 09:10 Welcome address by FAO
09:10 - 09:20 Opening address by the hosting government (Malaysia)
09:20 - 09:40 Introductions of participants

09:40 - 09:50 *Group photo*
09:50 - 10:20 *Refreshments (coffee/tea break)*

Session 1 Introductory session (10:20 - 12:00)

10:20 - 10:30 Introduction to the workshop (FAO)
10:30 - 10:45 The Global Forest Resources Assessment 2010 (FAO)
10:45 - 11:00 Project: Strengthening Monitoring, Assessment and Reporting on Sustainable Forest Management in Asia (FAO)
11:00 - 11:15 National Forest Monitoring and Assessment (FAO)
11:15 - 11:30 Efforts for improvement of regional forest reporting (ASEAN)
11:30 - 12:00 Questions and discussions

12:00 - 13:30 *Lunch*

Session 2 Current international reporting processes on forests (13:30 - 17:00)

13:30 - 13:45 CBD

13:45 - 14:00 UNFCCC

14:00 - 14:15 UNFF

14:15 - 14:30 ITTO

14:30 - 14:45 Other reporting processes (UNCCD, CITES, Ramsar)

14:45 - 15:15 Questions and discussion

15:15 - 15:30 *Refreshments*

15:30 - 17:00 Discussion on terms, definitions and classifications of forests (Plenary session)

19:00 - Welcome dinner

DAY 2 (14 October) (Plenary session)

A. FRA 2010 group

Session 3 Review of national reporting to FRA 2010 (08:30 - 17:00) (2 groups)

Group A (12 countries: Bangladesh, China, DPR Korea, Bhutan, India, Iran, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Sri Lanka)

Group B (11 countries: Brunei Darussalam, Cambodia, Indonesia, Japan, Malaysia, Philippines, Republic of Korea, Singapore, Thailand, Timor Leste, Vietnam)

Session 3a. Status of country reporting

08:30 - 10:30 Country presentations on the status of the country reporting

10:30 - 10:45 *Refreshments*

10:45 - 12:00 Country presentations on the status of their country reporting (continued)

12:00 - 13:00 *Lunch*

Session 3b. Review of FRA 2010 Country Reports

13:00 - 15:00 Tables 1 - 9

15:00 - 15:15 *Refreshments*

15:15 - 17:00 Tables 10 - 17

B. Reporting harmonization group

Session 3 Status of countries' reporting to other international processes (08:30 - 17:00)

08:30 - 08:45 Bangladesh

08:45 - 09:00 Brunei Darussalam

09:00 - 09:15 Cambodia

09:15 - 09:30 China

09:30 - 09:45	DPR Korea
09:45 - 10:15	Discussions
10:15 - 10:30	<i>Refreshments</i>
10:30 - 10:45	Indonesia
10:45 - 11:00	Lao PDR
11:00 - 11:15	Malaysia
11:15 - 11:30	Myanmar
11:30 - 11:45	Nepal
11:45 - 12:15	Discussions
12:15 - 13:30	<i>Lunch</i>
13:30 - 13:45	Pakistan
13:45 - 14:00	Philippines
14:00 - 14:15	Thailand
14:15 - 14:30	Timor Leste
14:30 - 14:45	Vietnam
14:45 - 15:15	Discussions
15:15 - 15:45	<i>Refreshments</i>
15:45 - 17:00	Discussions among participants: synthesis <ul style="list-style-type: none"> • Review of achievements and challenges • Comparison of reporting processes among countries • Collaboration among countries

DAY 3 (15 October) (group sessions)

Individual consultations with FAO staff on FRA reporting (30 minutes each) (for FRA group)

(Participants of the FRA workshop can participate in the following session except during the above consultations with FAO staff.)

Session 4 Discussions on thematic issues on harmonization of international reporting (08:30 - 17:00) (Group discussions):

Group 4A	Topics to be covered: Extent and condition of forests; Forest health and vitality; Forest biological diversity and its conservation; Soil and water protection/protective functions of forests
Group 4B	Topics to be covered: Growing stock, biomass, and carbon (forests and climate change); Forest production/productive functions of forests; Social, economic, and cultural benefits of forests; Legal, policy, and institutional aspects of forest management
08:30 - 09:00	Introduction to group discussions and group organization
09:00 - 10:30	Group discussions (Groups 4A and 4B)
10:30 - 11:00	<i>Refreshments</i>
11:00 - 13:00	Group discussions continued

13:00 - 14:00 *Lunch*

14:00 - 18:00 Excursion
Putra Jaya government complex and surrounding areas (supermarket)

19:45 - Welcome dinner

DAY 4 (16 October) (group/plenary sessions)

Session 4 Discussion on thematic issues on harmonization of international reporting (08:30 - 12:00)

08:30 - 11:00 Group discussions continued (with *refreshments*)

11:00 - 11:30 Presentation on group discussions (*plenary session*)
 11:00 – 11:15 Group 4A
 11:15 – 11:30 Group 4B

11:30 – 12:00 Discussions

12:00 – 13:00 *Lunch*

Session 5 Discussions on harmonization of international reporting systems and formats in the Asian region (13:00 - 15:00)

13:00 - 14:00 Presentations
 13:00 - 13:10 CPF Task Force on Streamlining Forest-related Reporting
 13:10 - 13:20 UNEP-WCMC
 13:20 - 13:30 CBD
 13:30 - 13:40 FAO
 13:40 - 13:50 ASEAN C&I format
 13:50 - 14:00 Malaysia C&I

14:00 - 15:00 Discussion on harmonization of international reporting on forests in Asian countries

- Possibilities for development of harmonized reporting systems
- Suggestions for how to further harmonize reporting formats
- Countries' roles in harmonization of reporting

15:00 - 15:15 *Refreshments*

Session 6 Discussions on next steps for harmonization of international reporting processes (15:15 - 16:45)

15:15 - 16:15 Discussions on next steps of activities

- Suggested activities
- Collaboration among countries and with international organizations
- Capacity building

16:15 - 16:45 Conclusions/recommendations

Closing session (16:45 - 17:00)

16:45 - 17:00 Closing remarks

- FAO
- Forestry Department of Malaysia
- Representative of the participants

17:00 - 18:00 Consultations on FRA2010 (for FRA group, optional)

Annex 3 Country presentations

Australia

Australian Government
Bureau of Rural Sciences

Land and Forest Sciences Program
Bureau of Rural Sciences
Geoffrey Dunn
geoffrey.dunn@staff.gov.au

Science for decision makers



DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY

Australian Government
Bureau of Rural Sciences



AUSTRALIA
Area: 769 million ha
= 7.7 million km²

3,700 km North – South
(8 – 44 degrees South latitude), outside the Tropic of Capricorn (at 23.5 degrees South)
4,000 km East – West

www.brs.gov.au


Australian Government
Bureau of Rural Sciences



AUSTRALIA
5% of the Earth's land surface, 6th largest country
50% larger than all of Europe (west of Russia)

www.brs.gov.au

Australian Government
Bureau of Rural Sciences



Australia

- Driest inhabited continent
- 1% share of the Earth's fresh water resource
- Average rainfall 420 mm/yr
- About 1/3 < 300 mm rain/yr
- About 1/3 < 200 mm rain/yr
- Evapotranspiration 87% of rainfall

www.brs.gov.au

Australian Government
Bureau of Rural Sciences



Australian Forest Reporting

Australia uses the Montreal Process for forest reporting

- 7 Criteria, 44 indicators
- 5-yearly State of the Forests Report
- Forms the basis for FRA reporting

www.brs.gov.au

Australian Government
Bureau of Rural Sciences

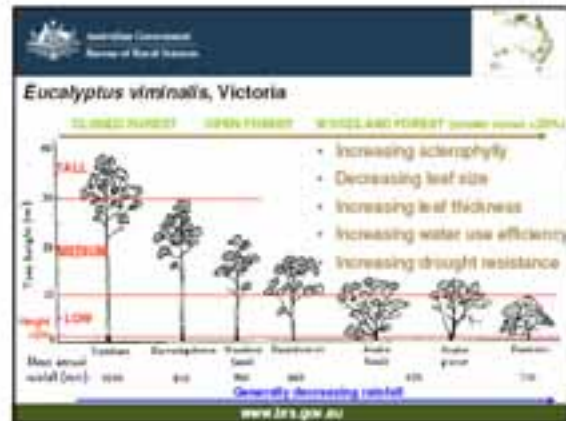
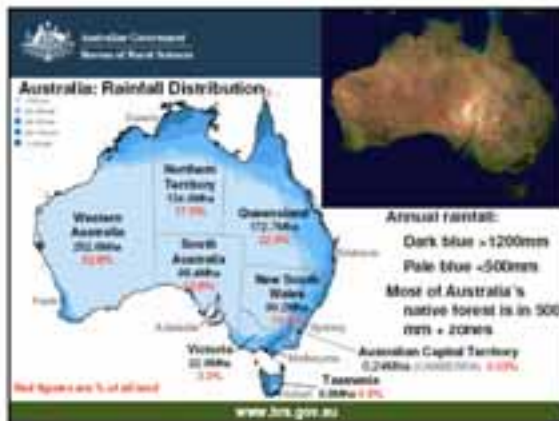


Australia's definition of forest

- "An area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding two metres and with existing or potential crown cover of overstorey strata equal to or greater than 20%."

National Forest Policy Statement 1992

www.brs.gov.au



4.2 Bangladesh

Regional Workshop on Strengthening Harmonization
of National Reporting to FRA 2010 and Other
International Processes on Forests in Asia

**Status of Bangladesh Country
Reporting to FRA 2010**

A K M Shamsuddin
Chief Conservator of Forests, Bangladesh

Vietara Hotel, Kuala Lumpur, Malaysia
13-16 October 2008

Bangladesh

Location: South Asia
Area: 14,757 million ha
Population: 140 million
(growth rate 1.42)
GDP growth rate: 6.63
Per capita income: US \$ 476
Per capita forests: 0.02 ha



Bangladesh : Forestry

Major Forest Land uses of Bangladesh

- ❑ Hill Forests
- ❑ Natural Mangrove Forests
- ❑ Mangrove Plantations
- ❑ Sal Forests and
- ❑ Village Forests

Global Forest Resources Assessment 2010

- ❑ Under the auspices of GFRA Bangladesh Forest Department implemented NFA 2005-2007 with technical and financial assistance from FAO of the UN.
- ❑ FRA2010 of Bangladesh is developed based primarily on the National Forest Assessment 2005-2007.
- ❑ It is supplemented with national data generated by the Forest Department.
- ❑ Bangladesh submitted FRA2010 to FAO, Rome on August 26, 2008.

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Table 1: Extent of Forests and Other Wooded Land

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010*
Forest	802	884	871	1442
Other wooded land	44	53	56	263
Other land	12 001	12 080	12 088	10 005
...of which with tree cover	343	343	343	3764
Inland water bodies	1 383	1 383	1 383	2022
Total for country	14 400	14 400	14 400	14757

*Source: National Forest and Tree Resources Assessment 2010-2011, Forest Department, Bangladesh

Comments on Table 1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest	Land generating more than 0.5 hectares with trees higher than 5 metres and a canopy cover of 10% or more, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.	This 2005 report was based on different assumptions, since the time and collection accordingly. Private data is based on National Forest and Tree Resources Inventory of 2010-2011, which is supported by census covering forests.
Other wooded land	Land not classified as "Forest", spanning more than 0.5 hectares, with trees higher than 5 metres and a canopy cover of 10% percent, or more able to reach these thresholds in situ or with a equivalent cover of shrubs, bushes and trees above 1% percent. It does not include land that is predominantly under agricultural or urban land use.	-
Other land	Land that is not classified as "Forest" or "Other wooded land".	Has been decreased.
Other land with low cover	Land classified as "Other land", spanning more than 0.5 hectares with a canopy cover of shrubs, bushes or trees able to reach a height of 5 metres or more.	Designated and Other land through studies this year. Agricultural practices extended and increased low cover wooded and forests.
Forest water bodies	Water bodies generally include major rivers, lakes and water courses etc.	Is based through census covering water.

Table 2a - Forest ownership

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Public ownership				808
Private ownership				321
...of which owned by individuals				177
...of which owned by private business entities and institutions				0
...of which owned by local communities				0
...of which owned by indigenous / tribal communities				344
Other types of ownership				33
TOTAL	862	884	871	1442

Table 2b-Holder of management rights of public forests

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Public Administration				808
Individuals				
Private corporations and institutions				
Communities				
Other				
TOTAL				808

Comments on Table 2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership	FAO Definitions commensurate with National Definitions	Data reflected in the table T2 has been generated for the first time under the NFA 2005-2007.
Private ownership	-	-
Other types of ownership	-	-
Management rights	-	-

Table 3a - Primary designated function

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production	280	285	276	712.48
Protection of soil and water	87	73	68	100.84
Conservation of biodiversity	182	182	182	266.54
Social services	10	10	10	14.30
Multiple use	323	334	333	338.93
Other (please specify in comments below the table)	0	0	0	-
Not / unknown	0	0	0	-
TOTAL	862	884	871	1,442.21

Table 3b - Special designation and management categories

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate				1229.27
Forest area within protected areas				246.54
Forest area under sustainable forest management				978.41
Forest area with management plan				871.89

Comments on Table 3

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Production	Hill and Plate land forests less area designated under Conservation, Social services and Protection of Soil and water	FRA 2010 categories were different from the categories designated for the previous years
Protection of soil and water	Rathbong, Kausong and Sangs Matasohri reserves in Chitragong Hill Tracts	Newly included areas of Sangs Matasohri forest reserves
Conservation of biodiversity	Protected Areas (PAs)	New PAs included
Social services	As in under ecological and safety parks included	New areas included
Multiple use	Forest land provides multiple usages to the society e.g. wood, fuel, environmental and production services	Advertisement in the forest area included
Other		

Comments on Table 3

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Site / sub-area designation		
Area of permanent forest estate (PFE)	All reserved forests declared under Forest Act 1927	Forest area under the PFE
Forest area within protected areas	All designated Protected Areas (PAs) namely Wildlife sanctuaries, national parks and game reserves	Data available for the first time
Forest area under sustainable forest management	The forest which is managed to produce regular and continuous supply of desired forest products	
Forest area with management plan	Areas under approved Management Plans for 10/20 years aiming to achieve defined management goals	

Table 4a Forest Characteristics

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest				430
Other naturally regenerated forest				760
...of which of introduced species				-
Planted forest				237
...of which of introduced species				40
TOTAL	882	884	873	1442

Table 4b. Special Category

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)				8
Mangroves (Forest and OWL)				304
Bamboo (Forest and OWL)				430

Comments on Table 4

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Primary forest	The forests under naturally regenerated forest with native species and the ecological process are not significantly disturbed but some degree of human interventions are visible.	Reported for the first time
Other naturally regenerating forest	All natural forests, except primary forests, includes hill forests, sal forests and bamboo or mixed broadleaved forest forests	-/-
Planted forest	All plantations including long rotation, short rotation, mangrove plantations and rubber plantation areas	-/-
Rubber plantations	All rubber plantation areas	-/-
Mangroves	All natural and plantation Mangroves and Swamp with shrubs	-/-
Bamboo	All bamboo or mixed broadleaved forest forests and Shrub lands	-/-

Table T5: Forest establishment and regeneration

FRA 2010 Categories	Annual forest establishment (hectares/year)				...of which of introduced species ¹ (hectares/year)			
	1990	2000	2005	2010	1990	2000	2005	2010
Afforestation				5000	-	-	-	-
Reforestation				1000				8000
...of which on areas previously planted				3000				4000
Natural expansion of forest			-	427				-

Note: ¹ The figures for the reporting years refer to the averages for the 5-year periods: 1989-1992, 1999-2002 and 2003-2007 respectively.

Comments on Table 5

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Afforestation	Definition adopted from FAO guidelines	Report generated for the first time
Reforestation	Second rotation plantation and plantation in the degraded forest area	
Natural expansion of forest	Natural succession in newly cleared land	

Table 6a – Growing stock

FRA 2010 category	Volume (million cubic meters over bark)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Total growing stock	34.5	31.2	30.0	70.0				n/a
... of which continuous				0				n/a
... of which broadleaved				70.0				n/a
Growing stock of commercial species				70.0				n/a

Table 6b – Growing stock of the 10 most common species

FRA 2010 category / Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	<i>Roystonea regia</i>	Standee				8,298
2 nd	<i>Dyneropogon latifolius</i>	Gujon				4,995
3 rd	<i>Geoloma arborea</i>	Gumari				2,432
4 th	<i>Albizia procera</i>	Kara				2,074
5 th	<i>Lumnitzera commersoniana</i>	Ripa				2,047
6 th	<i>Coccoloba maculata</i>	Coconut				1,961
7 th	<i>Bombax caribae</i>	Shamal				1,751
8 th	<i>Tournefortia grandis</i>	Touk				1,671
9 th	<i>Artocarpus chaplasha</i>	Chaplasha				1,657
10 th	<i>Swietenia sp.</i>	Malagasy				1,331

Table 6c – Specification of threshold values

Item	Value	Complementary information
Minimum diameter (cm) at breast height ¹ of trees included in growing stock (X)	5 cm	In NFA 2005-2007, 10 cm diameter at breast height was adopted
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	10 cm	For grace volume total height was taken whereas for commercial height upto 10 cm or upto the branching was taken
Minimum diameter (cm) of branches included in growing stock (W)	20 cm	10 cm
Volume refers to "above ground" (AG) or "above stand" (AS)	AS	Above ground volume is calculated

¹ Diameter at breast height (DBH) refers to diameter over bark measured at a height of 1.30 m above ground level or 30 cm above buttresses if these are higher than 1 m.

Comments on Table 6

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total growing stock	Volume over bark of all living trees more than 10 cm in diameter at breast height	Growing stock is decreasing. The NFA 2005-07 represents the entire country while the previous data covered forest different management territories
Growing stock of broadleaved / continuous	Grass volume estimated in NFA 2005-07 represents broadleaved forests only	- do -
Growing stock of commercial species	growing stock for commercial species is similar to total growing stock	- do -
Growing stock composition	n/a	n/a

Table 7 – Biomass stock

FRA 2010 category	Biomass (million metric tonnes oven-dry weight)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Above-ground biomass				278 (0)				n/a
Below-ground biomass				n/a				n/a
Dead wood				n/a				n/a
TOTAL				278 (0)				n/a

Comments on Table 7

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Above-ground biomass	In NFA 2005-2007, Above-ground biomass is calculated using Brown and Lugo 1982 formula	Data generated for the first time
Below-ground biomass	n/a	
Dead wood	n/a	

Table 8 – Carbon stock

FRA 2010 Category	Carbon (Million metric tonnes)						
	Forest			OML			
	1990	2000	2005	1990	2000	2005	2010
Carbon in above-ground biomass			139				n/a
Carbon in below-ground biomass			n/a				n/a
Sub-total: Living biomass			139				n/a
Carbon in dead wood			n/a				n/a
Carbon in litter			n/a				n/a
Sub-total: Dead wood and litter			n/a				n/a
Soil carbon			n/a				n/a
TOTAL			139				n/a

Comments on Table 8

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Carbon in above-ground biomass	Carbon in all living biomass above the soil, including stem, stump, branches, bark, and foliage	Data generated for the first time
Carbon in below-ground biomass	not available	not applicable
Carbon in dead wood	not available	not applicable
Carbon in litter	not available	not applicable
Soil carbon	not available	not applicable

Table 9a- Forest Fire

FRA 2010 Category	Percentage of forest area							
	Forest		OML		Total		Total	
	1990	2000	1990	2000	1990	2000	1990	2000
Total land area affected by fire						56		1
... of which on forest						56		1
... of which on other wooded land					n/a	n/a		
... of which on other land					n/a	n/a		

Table 9b Forest fires

FRA 2010 category	Proportion of forest area affected by fire (%)			
	1990	2000	2005	2010
Wildfire				100%
Planned fire				n/a

Comments on Table 9

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Area affected by fire	Fire incidence in the forest area during dry season.	Data generated for the first time.
Number of fires	Once in a year	n/a
Wildfire / planned fire	Only wild fire	n/a

Table 10a – Other disturbances affecting forest health and vitality

FRA 2000 category	Affected forest area (1000 hectares)			
	1990	2000	2005	2010
Disturbance by insects	n.a.	11073	n.a.	237.98
Disturbance by diseases	n.a.	0.006	n.a.	-
Disturbance by other biotic agents	n.a.	n.a.	n.a.	540.83
Disturbance caused by abiotic factors	n.a.	n.a.	n.a.	1342.96
Total area affected by disturbances				1928.80

Table 10b – 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 hectares)	II cycle, approx. cycle (years)
Top-killing of beech	<i>Mytilina fovea</i>	1990	72.74	n/a
Larvicide	<i>Cuscuta arvensis</i>	1995	5.00	n/a

Comments on Table 10

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Disturbance by insects	Disturbance caused by insect pests and fungi	Disturbance caused by insects increased
Disturbance by diseases	Data on disturbance by disease are not available	n/a
Disturbance by other biotic agents	Disturbance caused by biotic agents other than insects or diseases, such as wildlife browsing, grazing, physical damage by animals, etc.	n/a
Disturbance caused by abiotic factors	Disturbances caused by abiotic factors, such as flooding, loss of soil fertility, burning, bushfires, windthrow, over-exploitation, overgrazing, drought, etc.	n/a
Major outbreaks	Top-killing of beech Infestation of <i>Larvicide</i> on (young) arbores	
Invasive species	Data not available	

Table T11 - Wood removals and value of removals

FRA 2000 Category	Industrial roundwood removals				Woodfuel removals			
	1990	2000	2005	2010	1990	2000	2005	2010
Total volume (1000 m ³ s.b.)				155.24				118.15
... of which from forest				15.57				10.47
Unit value (local currency / m ³ s.b.)				15,11.2				11,760
Total value (1000 local currency)				688,735				24,815

Comments on Table 11

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total volume of industrial roundwood removals	Amount of round wood removal from all over the country	Data presents for the first time
Total volume of woodfuel removals	Amount of woodfuel removal from all over the country	n/a
Unit value	Average auction price of roundwood and wood fuel	n/a
Total value	Total value of roundwood and woodfuel	n/a

Table T12 – Non-wood forest products removals and value of removals

Code	Name of product	Bot. species	Unit	2005 removals (t)		2005 Category
				Quantity	Value	
01	Tea	<i>Camellia sinensis</i>	kg	959	n/a	Processed
02	Crude rubber	<i>Hevea brasiliensis</i>	kg	105	n/a	Raw material for products: Rubber, Rubber products
03	Tea	<i>Camellia sinensis</i>	kg	100	n/a	Tea
04	Wood of oak	<i>Quercus</i>	kg	10	n/a	Wood for fuel
05	Wood of oak	<i>Quercus</i>	kg	10	n/a	Wood for fuel
06	Tea	<i>Camellia sinensis</i>	kg	100	n/a	Tea
07	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
08	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
09	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
10	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
11	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
12	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
13	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
14	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
15	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
16	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
17	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
18	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
19	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea
20	Tea	<i>Camellia sinensis</i>	kg	10	n/a	Tea

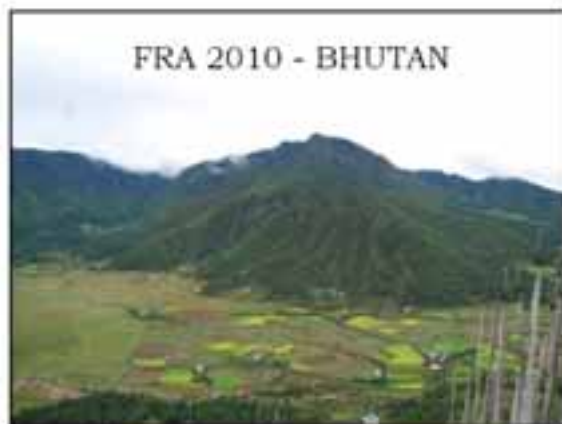
Comments on Table 12

Variable / category	Comments related to data, definitions, etc.
10 most important products	Based on the NFA 2005-2007 data.
Other plant products	n/a
Other animal products	n/a
Value by product	n/a
Total value	n/a

Table T13 – Employment

FRA 2014 Category	Employment (1000 years FTE)			
	1990	2000	2005	2010
Employment in primary production of goods				300
...of which paid employment	71.7	71.5		225
...of which self-employment				75
Employment in management of protected areas				10

Bhutan





China

FRA2010

Review on National Reporting for FRA2010 (China)

14 October, 2008

Outline

- ▶ Organization of China reporting for FRA2010
- ▶ Progress of China reporting for FRA2010
- ▶ Questions and problems
- ▶ Next plan of China reporting

Organization of China reporting for FRA2010

- ▶ China government attaches great importance to participate in FRA2010. The Administrator of the State Forestry Administration (SFA) (Mr. Jia Zhiqiang) as the head of cross-departments leading group presided the specific meeting about implementation of FRA2010 in China. He requires task force in China must be all in for completion of national reporting and provision of reliable and comprehensive national figures to meet the information needs of FAO.
- ▶ 13 top forestry experts in China are invited to join in the expert consultation team to guide and consult technically, find out the methods for important technical issues and control the quality of national report.

Organization of China reporting for FRA2010

- ▶ Almost of all forestry departments in SFA join in national reporting for FRA2010, and identify the coordinators and assessment group to shoulder thematic reporting.
- ▶ The force at nationwide provincial and local forestry agencies are organized to perform the thematic investigation and information collection.

The total of experts and technicians joined in FRA2010 in China will add up to 2000!

Progress of China reporting for FRA2010

- ▶ Establishment of harmonized working structure.

```

graph TD
    A[Cross-departments leading group (SFA)] --> B[Secretariat (department of forest resources management)]
    A --> C[Expert Consultation team]
    B --> D[Coordinator (Forestry department)]
    C --> D
    B --> E[Task force in China]
    C --> E
    D --> F[Assessment group]
    E --> F
  
```

Progress of China reporting for FRA2010


- ▶ The specific meeting about FRA2010 in China presided by the Administrator was launched by SFA on June 24 to identify the responsibility of China for FRA2010, and duty of each forestry department in SFA.
- ▶ The agency-coordinators meeting on strengthening of harmonization of China reporting for FRA2010 was launched by SFA on September 26 to make clear the progress of the thematic reporting and existing problem, and find out reasonable ways for promotion of national reporting.

Progress of China reporting for FRA2010

- The work scheme of national reporting was prepared by SPA to set down assessment content, undertaken agencies, work plan, agency-coordination, and work requirement.

National report is further divided into forest resources analysis and other 13 themes. Each forestry department of SPA completes thematic data collection, process, estimate/forecasting, reclassification and compilation of agency function-related thematic report.

Task force will compile the national report based on the thematic reports.



The thematic reports and corresponding forestry departments

序号	主题	负责部门
1	森林资源现状	国家林业局
2	森林资源变化	国家林业局
3	森林资源质量	国家林业局
4	森林资源保护	国家林业局
5	森林资源利用	国家林业局
6	森林资源管理	国家林业局
7	森林资源监测	国家林业局
8	森林资源规划	国家林业局
9	森林资源政策	国家林业局
10	森林资源法律	国家林业局
11	森林资源经济	国家林业局
12	森林资源社会	国家林业局
13	森林资源文化	国家林业局

Progress of China reporting for FRA2010

- Since the printing and issuing the work scheme of FRA2010 in China, assessment group and task force have deeply reviewed FRA2010 contents and C&I. The coordination of assessed indicators classification / definition between FAO and China are being carried out, especially the changed and new indicators to FRA2005. Data collection, processing and analysis are being done according to the requirement from FAO.
- The preparation at provincial and local levels for the thematic investigation and information collection has been started. The thematic investigation are carried into execution in some provinces.

Progress of China reporting for FRA2010

- Partial tables including T10a, 10b, 10c and 9a are preliminary compiled, besides the figures on forest resources in 1990 and 2000 in FRA2005 country report. Other tables are still under completion.

Title: Area of forest affected by woody invasive species

序号	入侵物种名称	影响面积 (公顷)
1	Eupatorium adenophorum Spreng.	100
2	Eupatorium adenophorum Link.	100
3	Eupatorium adenophorum Link.	100
4	Mikania cordata	100
5	Mikania cordata	100
6	Mikania cordata	100

Questions and problems of China reporting

- Difficult Coordination of assessment indicators and criteria.**
Huge gaps of definition and criteria happen among major assessment indicators between FRA2010 and China, including more than 30 indicators covering 8 themes, existing national survey results and statistics can't be directly harmonized with country reporting. The only way is that a lot of experts are invited to perform thematic study, technical coordination and reclassification using expert knowledge. This work will take a long time.

Forest and other wooded land, public and private forest, function, PFE, introduced and native species, industrial wood and woodfuels, employment in primary production of goods (PTE), and public forest agencies, etc.

Questions and problems of China reporting

- The Clash between 7th NFI and FRA2010**
National forest inventory is the primary data source of FRA, which was started in 1970s at an interval of 5 years. Now, six NFIs have been carried out till 2003.

The field survey of 7th NFI (2004-2008) will be finished this year, and national statistics and dissemination are planned to be completed before September in 2009 that will be used for estimate of the figures in the tables T1-T8 in 2005 and forecast these in 2010.

The clash cause to compile above 8 tables difficulty, according to the work plan of FAO.

Questions and problems of China reporting

- ▶ Lack of national data sources for some indicators

The required national information covering 10 aspects issued in country report aren't integrated. It is necessary to perform specific investigation to collect relevant information. The force at provincial and local levels will participate in the investigation that will continue several months, and face a huge workload and heavy pressure of financial input.

Area of private types, public management, forest certification, forest management in natural reserve and forest park, species composition of plantation, planned fire, price for wood and non-wood products, employment, and forestry public revenue and expenditure, etc.

Questions and problems of China reporting

- ▶ Available methods for forest biomass and carbon stock survey

National survey of forest biomass and carbon stock is currently undergone. The experts in terms of forest carbon sink and global climate change are being invited to identify the reasonable methods based on the developed models by China experts and IPCC, so as to harmonize the national reports for FAO and UNFCCC. However, the results are unknown.

Next plan of national reporting

- ▶ Thematic assessment and reporting will be completed at the end of this year in the whole way, according to setup of FRA assessment issues and the real situation of data collection and information analysis in China.
- ▶ National report will be compiled and submitted to FAO, based on the time requirement from FAO and the progress of national statistics of 7th NFI.
- ▶ Harmonization among the forestry agencies will be further strengthened. IFIA will do well national assessment and submit national report as early as possible, according to the work plan of FRA2010.



DPR Korea

Current Status on Reporting Process to FRA 2010; Democratic People's Republic of Korea

The Forest Resources Assessment Programme, specifically the FRA-2010, is being carried out by FAO of United Nations in order to assess the global forest resources status and support the decision making for policies and programmes in combating deforestation and forest degradation and managing the forest resources in sustainable manner at all levels in the countries. The programme requested the countries to submit country reports to FAO, following a standardized reporting format and methodology.

The Democratic People's Republic of Korea has over 70% of mountain and forest areas of its total terrestrial cover, implying the significance functions and precious assets of forest resources in national economy development and livelihood improvements in the country. The assessment of forest resources is fundamental for understanding the forest status and trends, identifying main problems and establishing proper strategy and programme for sustainable forest management in harmony with the global efforts to combat deforestation and forest degradation.

- Current status on national reporting progress to FRA-2010

Contrary to other member countries, the national reporting to FRA-FAO is an initial process for DPR Korea.

In addition, the guidelines and specification manual for FRA-2010 are just available in August, two months ago, in connection with this workshop, so the national reporting process has gone to date only with the translation, review of the reference documents and collection of data.

In DPR Korea, the forest inventory surveys have been carried out since 1950s in periodic intervals of ten years and their statistics will be the basic information inputs to the national reporting. However, the economic difficulties coupled with the natural disasters in last decades from second half of 1990s created shortages in financial and human resources in forest sector, resulting in missing the forest inventory activities for 1990-2000 in the country. Therefore, the lack of information in this period provides main obstacle for the preparation of the national report to FRA-2010.

Although there are constraints and obstacles like above, we are doing our all efforts to proceed the preparation of the report on national forest resources assessment as far as possible, and in harmony with the requirements and specifications of FRA-2010.

The draft Table 1 and 2 of national reporting, namely extent and ownership of country's forests, that are preliminarily prepared and subject to validation, are attached here as a work results of reporting process.

- Issues and constraints in preparation of national report to FRA-2010

➤ Lack of latest statistic information related to national forest resources assessment

The existing statistics and information related to forests in the country are outdated, available only until early 1990s. The missing of forest inventory survey and assessment activity for 2000 hindered the updating of data and information, making difficult to view and understand current status and trends of national forest resources.

Given to this condition, we cannot help but to use the old information sources like National Report on Status of Environment (National SoE Report-2003, UNEP) as a basis for national reporting preparation.

The Ministry of Land and Environment Protection is planning to undertake national forest inventory survey and assessment in coming next year (2009). This will improve and update the information related to national forest resources. To create the synergy effects, we are

trying to synthesize the both national and international undertakings in forest resources assessment.

- Difficulty in harmonization of national information available with the definitions and criteria set by FAO-FRA reporting guidelines.

In several parts of FRA-2010, the criteria and indicators are inconsistent with those of national forest-sector information and statistics. For example, the categories and definitions set in Table 1- "Extent of forest and other wooded land" are far different from national ones. The harmonization with international standardized format requires time consuming and efforts for discussion and agreement on re-definition and re-classification of terms as well as for collection of related data.

In addition, there needs incorporation of missing criteria and indicators into national statistics system to improve the data collection and analysis related forest resources in the country.

India

Reporting Process to FRA 2010 India

Regional workshop on Strengthening of Harmonization of National Reporting to FRA 2010 and Other International Processes on Forests in Asia 13-16 October 2008 Kuala Lumpur, Malaysia

Dr Devendra Pandey
Director General
Forest Survey of India, Dehra Dun
(Ministry of Environment and Forests)



Forest Survey of India (FSI) under the Federal Government (Ministry of Environment and Forests) is an organization fully dedicated to monitor the forest resource of the entire country regularly since 1981

Setup of Forest Survey of India (FSI)

Headquarters
DEHRADUN

Zonal Offices

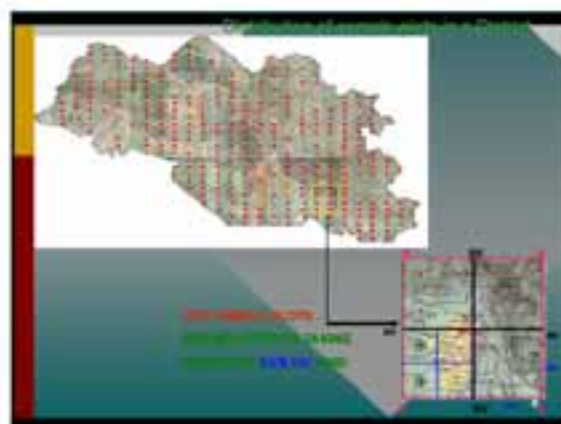
North Zone Dehra	East Zone Kolkata	Central Zone Raipur	South Zone Bangalore

Remote sensing and GIS in forest Cover assessment in India in last two decades

Cycle	Year of Assessment	Satellite & Sensor	Resolution	Scale
1	1987	LANDSAT MSS	30m x 30m	1:50,000
2	1990	LANDSAT TM	30m x 30m	1:50,000
3	1995	SPOT VGT	10m x 10m	1:100,000
4	1997	SPOT VGT	10m x 10m	1:100,000
5	1998	SPOT VGT	10m x 10m	1:100,000
6	1999	SPOT VGT	10m x 10m	1:100,000
7	2000	SPOT VGT	10m x 10m	1:100,000
8	2001	SPOT VGT	10m x 10m	1:100,000
9	2002	SPOT VGT	10m x 10m	1:100,000
10	2003	SPOT VGT	10m x 10m	1:100,000
11	2004	SPOT VGT	10m x 10m	1:100,000
12	2005	SPOT VGT	10m x 10m	1:100,000

Status of Forest Cover in India during last 20 Years

Assessment	Year	Date Period	Forest Cover (sq km)	% of total Geo. Area
First	1987	1981-83	640,819	19.49
Second	1989	1985-87	638,904	19.43
Third	1991	1987-89	639,364	19.45
Fourth	1993	1989-91	639,366	19.45
Fifth	1995	1991-93	638,679	19.43
Sixth	1997	1993-95	633,307	19.27
Seventh	1999	1995-98	637,293	19.39
Eighth	2001	2000-01	633,688	19.38
Ninth	2003	2002-03	6,77,816	20.62
Tenth(Latest)	2005	2004-05	6,77,088	20.60



Reporting Process to - FRA 2010-India

- Table 1 - Extent of forest and other wooded land
 - The latest estimates of forest and tree cover of India pertains to SFR 2005- released in February, 2006.
 - For projecting the forest & other wooded land to 2010, the estimates of 2000 and 2005 will be used as methodology has been standardized since year 2000.

Reporting Process to - FRA 2010-India

Table T1

FRA 2010	Totals (000, Hectares)			
	1990	2000	2005	2008
Forest	63 939	67 554	67 709	67964
Other wooded and land	5 894	4 732	3546	3129
Other land	227 486	205 033	204845	225294
Land which with tree cover	815	815	917	1332
Land water bodies	31 407	31 407	31 407	31047
Total for country	328 726	328 726	328 726	328 726

Reporting Process to - FRA 2010-India

- Table 2 Forest ownership and management rights
 - Table 2a - Forest ownership- It is being estimated in two broad classes as Public and Private on the basis of National Forest Inventory (NFI) only done upto the year 2005.
 - Table 2b - Holder of management rights of public forest (new Table);
 - Public forest in the country is primarily managed by the Govt.
 - Some areas are jointly managed by Government and communities under JFM programme.
 - The total area under JFM is available with MoEF

Reporting Process to FRA 2010 -India

- Table 3 Forest designation and management
 - Table 3a - Primary designated function; estimated on the basis past study based on national consultation no reliable information is available.
 - Table 3b - Special designation and management categories
 - Forest area under management plan will be collected from MoEF.
 - Forest under Protected area could not be assessed due to non-availability of boundaries of national parks sanctuaries etc.
 - The concept of SFM has been initiated in India on pilot scale only.

Reporting Process to - FRA 2010-India

- **Table 4 – Forest characteristics**
 - Table 4a: Characteristics:
 - no reliable data source exist, However the break up will be given on the basis of expert judgment
 - Table 4b: Special Categories (New Table)
 - Rubber- reliable data available from Rubber Board of India
 - Mangrove- reliable data available as assessed by FSI
 - Bamboo- reliable data available as estimated from NFI data of FSI

Reporting Process to - FRA 2010-India

- **Table 5 – Forest establishment and reforestation (New Table)**
 - Total area of reforestation & afforestation done annually is available
 - Breakup on the basis of expert judgment
- **Table 6 – Growing stock (Modified)**
 - Table 6a – Growing stock : FSI through its NFI has already estimated at national level in 2005.
 - Table 6b – Growing stock of the 10 most common species: available from NFI data base
 - Table 6c – Specification of threshold values: Available from NFI

Reporting Process to - FRA 2010-India

- **Table 7 – Biomass stock**
 - Above ground woody biomass reliably estimated from GS.
 - to estimate the biomass of leaves, twigs, dead wood herbs/shrubs and of trees below threshold value of NFI-New study initiated by FSI.
- **Table 8 – Carbon stock**
 - Growing stock data will be used for above ground estimation
 - Below ground will be estimated using default values of IPCC.

Reporting Process to - FRA 2010-India

- **Table 9 Forest fires (New Table)**
 - Table 9a: Area and no. of fires:
 - annual number of fires in forests are available since 2005
 - The area burnt annually has not been estimated.
 - Table 9b: Proportion of planned fires and wild fires in forest
 - No such classification exists & information not available
- **Table 10 – Other disturbances affecting forest health and vitality (Modified)**
 - Table 10a – Disturbances: Only limited information is documented by forests, growing and natural resources in accordance with NFI data base.

Reporting Process to - FRA 2010-India

- Table 10b – Major outbreaks of insects and diseases will be collected from FRI and IIFD
- Table 10c – Area of forest affected by woody invasive species
 - Not available
- **Table 11 – Wood removals and value of removals**
 - Production of round wood available from ICFRE-FS
 - Fuel wood consumption from National Sample Survey Organization (NSSO) estimated in 2006 will be used.
 - Value estimated by Central Statistical Organization (CSO) for GDP in 2006 will be used.

Reporting Process to - FRA 2010-India

- **Table 12 Non-wood forest products removals and value of removals (Modified)**
 - Value of NWFP- from CSO estimates of GDP of 2006
 - Volume of NWFP- from ICFRE-Forest Statistics 2005
- **Table 13 – Employments**
 - Will be generated through questionnaire from Forest departments of provinces in India
- **Table 14 – Policy and legal framework (New Table)**
 - Information is available.

Process to - FRA 2010-India Reporting

- Table 15 Institutional framework (New Table)
 - Table 15a – Institutions : Available
 - Table 15b – Human resources
 - Only number is available
 - Break up according to educational qualification and gender is not readily available
- Table 16 Education and Research (New Table)
 - Available from ICFRE-FS
- Table 17 Public revenue collection and expenditure
 - To be compiled from MoEF & ICFRE-FS

Reporting Process to FRA 2010-India

- First draft report for FRA 2010 to be prepared until mid Dec 2008 and to be discussed among experts at Dehradun
- Submission to FAO by the end of Dec 2008



Indonesia

FRA 2010

Indonesia

draft

Reporting requirements, FRA 2005 and 2010

Code	2005	2010
T1	Forest of Indonesia	Forest of Indonesia
T2	Forest of Indonesia	Forest of Indonesia
T3	Forest of Indonesia	Forest of Indonesia
T4	Forest of Indonesia	Forest of Indonesia
T5	Forest of Indonesia	Forest of Indonesia
T6	Forest of Indonesia	Forest of Indonesia
T7	Forest of Indonesia	Forest of Indonesia
T8	Forest of Indonesia	Forest of Indonesia
T9	Forest of Indonesia	Forest of Indonesia
T10	Forest of Indonesia	Forest of Indonesia
T11	Forest of Indonesia	Forest of Indonesia
T12	Forest of Indonesia	Forest of Indonesia
T13	Forest of Indonesia	Forest of Indonesia
T14	Forest of Indonesia	Forest of Indonesia
T15	Forest of Indonesia	Forest of Indonesia
T16	Forest of Indonesia	Forest of Indonesia
T17	Forest of Indonesia	Forest of Indonesia

Steps

- Interpretation of the definitions and categories set out for FRA 2005 and 2010
- Identify data/information requirements (T1 – T17) and selection the sources/documents
- Collecting national data/documents (library, internet, and direct sources; part of datasets have not been published)
- Filling in the tables based on the requirement and available national data following the instruction written in the guidelines (av. for 5 year period; reclassifications, assess the quality of the source for all dataset)
- Analysis of national data (e.g. calibration, estimation-forecasting)
- Clarification/verification/validation/improvement through several meetings (could be 3 or 4 times, at least for draft and final report)
- Review and finalize the report

Progress

- All datasets have been filled in, but some rows still blank (e.g. T2, T5, T8, T9, T10, T13):
 - No data available
 - Incomplete data
 - Require data/new sources from other DG
- Improvement to complete the data will be carried out through 2 weekly meetings, started in November 2008
- The meeting will involve stakeholders as the main source of the data/document
- The final meeting (end of December 2009) is to validate the whole datasets set out by FRA 2010

Sources of data

- Mainly from statistical data, Ministry of Forestry, Indonesia.
- Statistics from Units under MoF:
 - DG of Forest Protection and Nature Conservation
 - DG of Forest Production Development
 - DG of Land Rehabilitation and Social Forestry
 - Forestry Planning Agency
 - Secretariat General
- Forest Land Cover Recalculation, Forestry Planning Agency
- State Enterprise (Perhutani)

Target to finalize the draft (2008)

Index	2010	2008				2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	10
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Problem/difficulties

- Takes time to understand and trace back the previous report (FRA 2005) and to continue to fill it up for FRA 2010, and sometimes involved other unit to fill the tables
- Categories and classifications of National data doesn't match with the requirements set out for FRA (e.g. other wooded land vs shrub and bush, mangrove vs forest)
- The published year for the data (1998/1999, 1999, 2000) and inconsistency of classification
- Multi sectors data (e.g. Forest revenue - BPS, Rubber plantation – Agriculture)
- Some datasets don't have the trend, for example forest fire, difficult to predict for 2010

Precision, accuracy or truth

- Deforestation rate (2006): 1.2 million ha/year (Landsat ETM 7, 30 m resolution) vs. 0.8 million ha (MODIS data, 250m resolution)

Iran

Towards to FRA 2010

Forests, Rangelands and Watershed Management Organization (FRWO)

Islamic Republic of IRAN

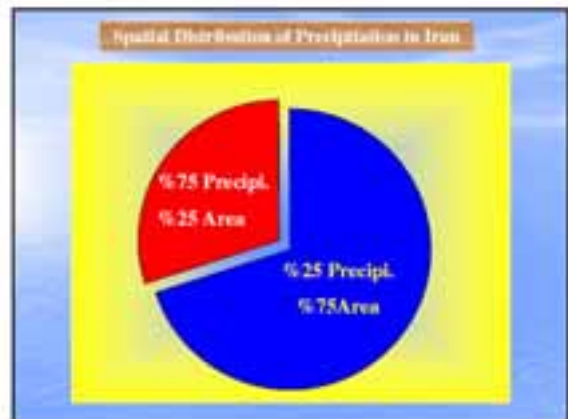
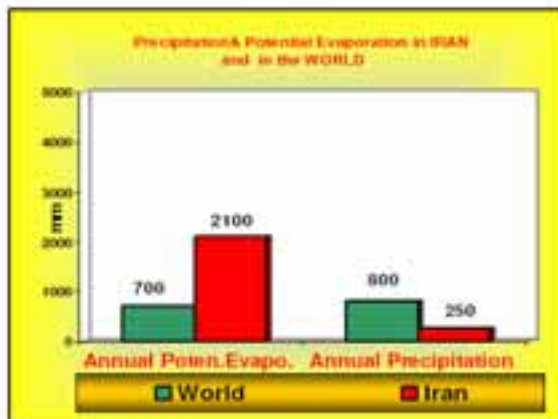
By: R. Sotoudeh
National Correspondent

Kuala Lumpur-Malaysia
13-16 October 2008

1-Introduction:

1-1-Geography of IRAN

Iran is located in Middle East and has mostly arid and semi arid climate.

1-2-Forest resources of IRAN

There are five major ecological zones that forests are located in those areas as following:



Hyrcanian Forests:

These forests are in the northern part of Iran that is temperate and production forests.

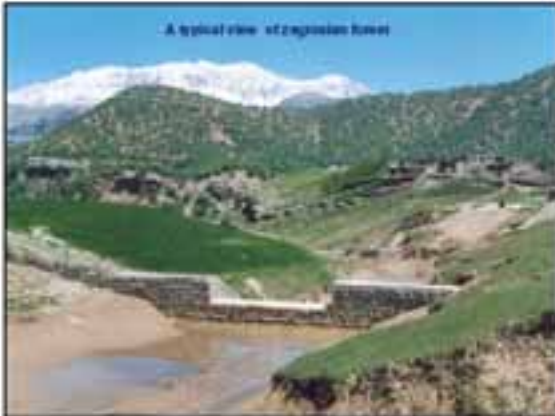


Zagrosian Forests:

These forests are located mainly in the western part of Iran with oak, beech and cypress structures. soil and water conservation are the main role of these forests.



A typical view of Zagrosian forest



Irano-Turanian Forests:

These forests have mainly dry and cold climate that are located in the central parts of Iran. Protection and conservation function of these forests are very important.



Arachanian Forests:

These forests are located mainly in the southern part of Iran that is designated as for biodiversity conservation.



Khuzestan Mangrove Forests:

These forests are in the south of Iran, with mangrove structure. Mangroves of Iran are located in Khuzestan province.



2-Private, Nonprofit, and Voluntary Management Organizations (PNOs) of
 USA and FFA 2019

FFA 2019 of law has been divided in the following four resource components:

-FFA 1990

-FFA 2000

-FFA 2010

-FFA 2019

In FFA 2019, working information and data collection used with some changes
 to allow each of following changes:

3-Objectives of Cooperation for FFA 2019

- to monitor activities for food management in 2019
- to change information 2019 papers and 2019 management organizations and other
 examples
- Cooperation with Committee on Biological Diversity and 2019 and 2019
- to carry out the international cooperation



4-FFA 2019 process

4.1-Organizing working committee and working groups in 2019:

to provide facilities and equipment for private sector

to support the international activities and financing

participation of both foreign groups in 2019 process

4.2-Cooperation with private sector

FFA 2019 and related activities cooperation with private

www.ffa.org

4.3-Planning and implementation of FFA 2019

Private sector has organized three expert groups to provide FFA 2019
 implementation:

- group work for Table 1 (100 expert group) to 2019 to develop "Focus on
 focus and other needed data"
- group work for Table 2 (100 expert group) to develop working group, model
 to work on biological sector and 2019 to develop T.C
- group work for other activities table (2019 to develop T.C)

5-Implementing FFA 2019 Program

5.1-FFA framework and program

In this regard three steps have been taken:

-direct responsible person and staff (committee in 2019) have
 been determined

-other persons (Department of Government, Ministry of Agriculture
 and Food, school activities center, 2019 have been invited to
 participate

-all the information has been provided for data collection in working group
 No 100 and 101 to provide 2019 2019 implementation

5.2-Methods of Data and Information collection

This stage of process is very important task for FFA 2019 as
 follows:

-collection of working data and information from internal and
 external persons and reviewed by group work 2

-collection, processing and forwarding of more data needed
 information

-measurement and evaluation of activities such as growing
 stock and support information to 2019 by both group
 experts

-evaluation of information to provide report

4-Follow up the table of FRA 2010

Providing the requested information for FRA 2010 is done (ongoing) because they are very comprehensive and diverse in comparison with the former assessments.

6-1-Table 5:

Information of this table **approved forest and other wooded land** is provided for FRA05. Therefore the requested information is provided for wetland forests and land cover forest with codes 100000 and 100001. Land cover data has been provided by satellite images. In the data bank some large forest wetlands have been identified by site categorization according the definition of FRA05.

6-3-Table 2:

Information for **"Forest ownership and management rights"** table is available and therefore, there is no any problem in this regard.

6-5-Tables **Forest management and management, forest characteristics:**

Information for these tables are provided through existing data and expert estimation.

6-6-Table **Forest sustainability and interventions:** data are available and the task would be fulfilled.

6-5-Tables **Logging, bark, Charcoal stock, Biocharstock:**

In this regard information of table 6 is done for two others. In some parts of Iran we have done partial inventory, for this reason field group work will carry out sampling inventory in some ecological zones except Caspian forests. Other tables (7, 8) will be filled by consequently by **Appendix 4**.

6-6-Table **Forest fire:** Information for this table is available now.



6-7-Table 10:

Information for this table **other forest/forest affecting forest health and vitality** is available in the data bank of Forest Protection Bureau like table 9.

6-8-Tables 11, 12:

These tables **forest-related and other all-ecosystem and forest-related products, and value on resources** will be provided by expert group in cooperation of FRA05.



6-9-Tables **13 (employment), 14 (policy and legal framework), 15 (institutional framework) and 16 (Education and Training):** Data for these tables are collected.

6-10-Table 17:

Compiling information for this table **public opinion and expenditure** is a time consuming task and we should use documents, existing data and expert estimation.

7-Follow up the FRA process

For this process these actions will be taken:

7-1-Assessment of the result :

- By attending the regional workshops,
- Organizing these national workshops for assessment,
- Review the recommendations of participants.

T-2-Documentation of information:

- Filling in the tables with information.
- Describing the methods and comments on tables
- Documentation of data sources.

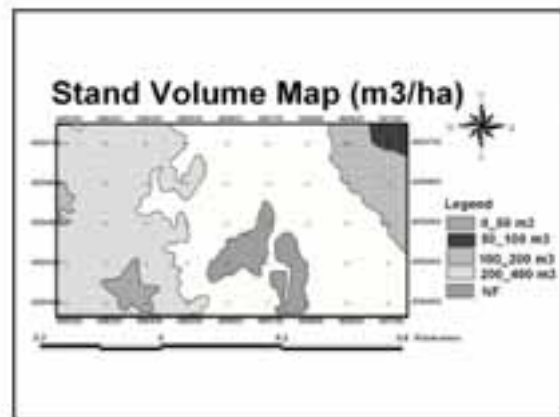
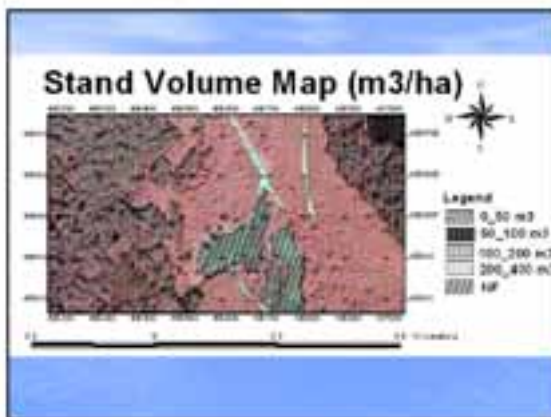
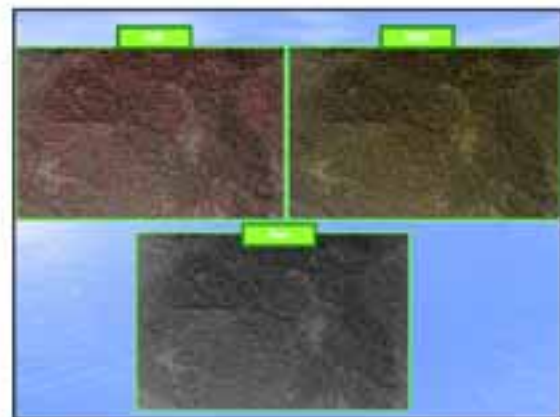


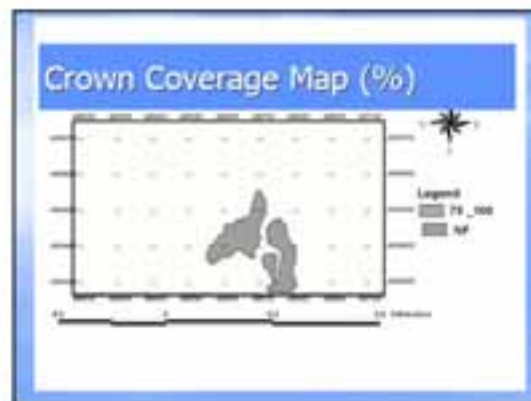
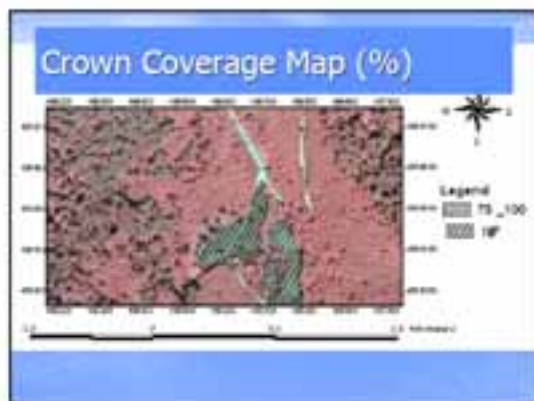
T-3-Report preparation

- Preparing the draft report.
- Submitting the draft report to FAO.
- Revising the collective recommendations and comments from FAO.
- Submitting the final report to FAO.

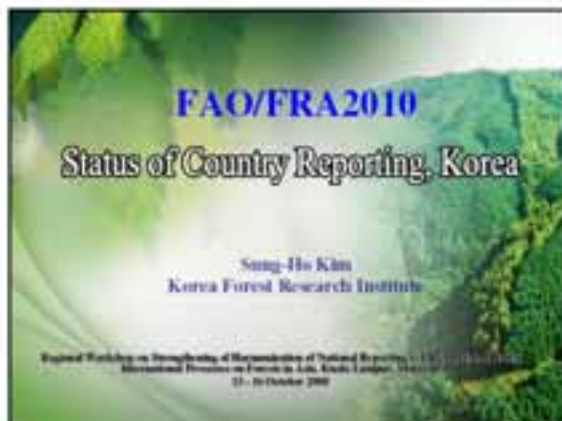


- Pilot project using ultra cam for estimation crown coverage and stand volume





Korea



National Data Source

- ❖ Statistical Yearbook of Forestry,
 published by Korea Forest Service



- ⌘ Minimize expert estimation to keep
 consistent with other international
 reporting.

Difficulties in reporting

- ❖ Definitions and terms
 - Always small difference between FRA and
 national definition.
- ❖ Categories and classifications
 - Too detailed and complicated
 - The more detailed, the less information

Complicated terms

- ❖ T3 : Forest designation and management
 - Permanent forest estate(PFE)
- ❖ T4 : Forest characteristics
 - Primary forest (native and introduced species)
- ❖ T13 : Employment
 - FTE, paid and self-employment
- ❖ T16 : Education and research
 - PhD, MSc, BSc, etc.
- ❖ T17 : Public revenue collection and expenditure
 - Operational expenditure and transfer payments

Question 1 : Data Analysis

FRA 2010 categories	Area (1000 hectares)				
	1990	2000	2005	2010	2015
Forest	6,270	6,200	6,210	6,210	6,214
Other land	3,730	3,800	3,790	3,790	3,790
Unland water bodies	0	0	0	0	0
Total	9,926	9,926	9,926	9,926	9,926

FRA Procedure

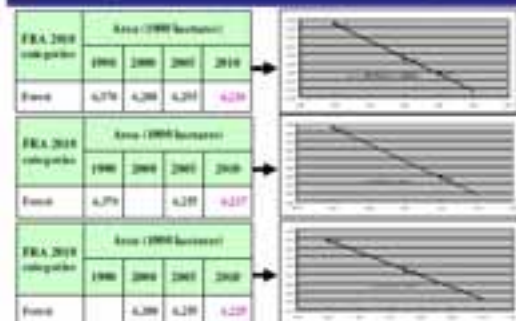
Original data
 Calibration
 Estimation
 & Forecasting
 Reconciliation

Proposed Procedure

Original data
 Estimation
 & Forecasting
 Calibration
 Reconciliation

Calibration

Question 2 : Forecasting



Question 3 : Wrong data

❖ FAOSTAT based on JFSQ

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Woodfuel for heating	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Woodfuel for cooking	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	

- No data source
- Not reported in JFSQ by KES
- Same as FRA2005, but not corrected.

☒ Woodfuel is not used for heating, but maybe for charcoal production for cooking.

Status

Total : 26 tables

Table	Source	Year	Status
Table 1	FAOSTAT	2000-2020	Done
Table 2	FAOSTAT	2000-2020	Done
Table 3	FAOSTAT	2000-2020	Done
Table 4	FAOSTAT	2000-2020	Done
Table 5	FAOSTAT	2000-2020	Done
Table 6	FAOSTAT	2000-2020	Done
Table 7	FAOSTAT	2000-2020	Done
Table 8	FAOSTAT	2000-2020	Done
Table 9	FAOSTAT	2000-2020	Done
Table 10	FAOSTAT	2000-2020	Done
Table 11	FAOSTAT	2000-2020	Done
Table 12	FAOSTAT	2000-2020	Done
Table 13	FAOSTAT	2000-2020	Done
Table 14	FAOSTAT	2000-2020	Done
Table 15	FAOSTAT	2000-2020	Done
Table 16	FAOSTAT	2000-2020	Done
Table 17	FAOSTAT	2000-2020	Done
Table 18	FAOSTAT	2000-2020	Done
Table 19	FAOSTAT	2000-2020	Done
Table 20	FAOSTAT	2000-2020	Done
Table 21	FAOSTAT	2000-2020	Done
Table 22	FAOSTAT	2000-2020	Done
Table 23	FAOSTAT	2000-2020	Done
Table 24	FAOSTAT	2000-2020	Done
Table 25	FAOSTAT	2000-2020	Done
Table 26	FAOSTAT	2000-2020	Done

Overall possibility : about 90-95%



Malaysia



Reporting Process

- The National Task Force was established July 2008
 - Chaired by Undersecretary of Forestry Development Division, Ministry of Natural Resources and Environment
 - Secretariat: Forestry Department Peninsular Malaysia
- Agencies:
 - Forestry Department, Peninsular Malaysia, Sabah and Sarawak
 - Forest Research Institute of Malaysia (FRIM)
 - Department of Wildlife and National Parks (PEPERHILITAN)
 - Faculty of Forestry, Universiti Putra Malaysia
 - Malaysian Timber Industry Board (MTIB)
- 4 meetings were held at Forestry Department Headquarters in Kuala Lumpur, Ministry of Natural Resources Environment (NRE) and Sabah Forestry Department, Kota Kinabalu, Sabah.



Progress

- Information furnished by all relevant agencies in the task force according to their functions
- Information for most of the tables collected
- Data on State land forests difficult to compile
- Hard to distinguish forest designation as most the forests are managed for multi-purpose under SFM:
 - Only gazetted protection of soil and water; and conservation of biodiversity areas were considered
 - State land forest considered as multiple purpose

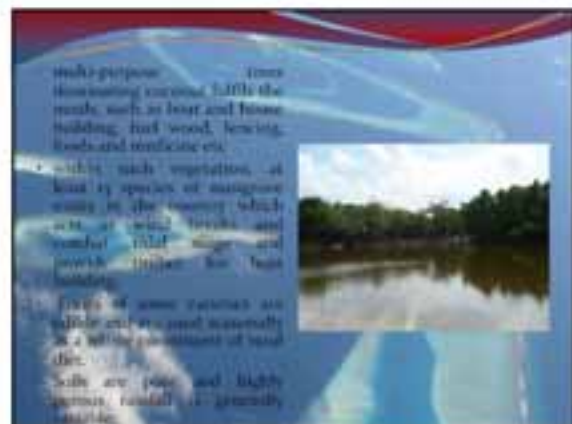
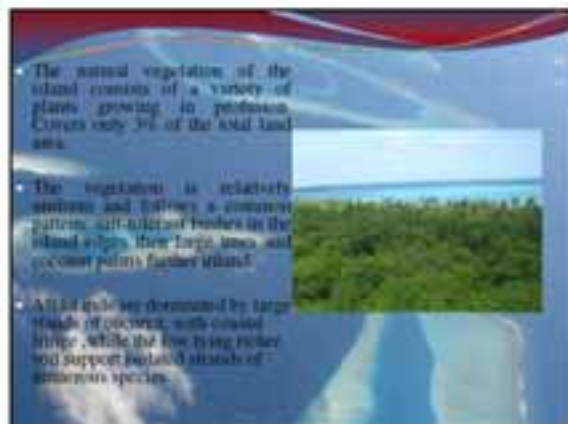


- No afforestation establishment in Malaysia
- Growing stock and biomass was calculated using the Fourth National Forest Inventory (2002 – 2004) information
- Latest biomass and carbon stock not yet finalised
 - Carbon stock for 2005 only as it was published in the National IPCC reports
 - Above-ground biomass not yet calculated
- No major outbreaks of insects and disease affecting forest health and vitality
- No forest areas affected by woody invasive species. *Acacia mangium* not considered as invasive species
- The unit used in animal product/trace material in Malaysia is not as detailed as required by FRA. No of animal products were compiled by using the number licenses and revenue collected



Thank you

Maldives



CURRENT STATUS OF FOREST SECTOR AT POLICY LEVEL (table 14)

«The seventh National Plan outlines the Republic of Maldives defines its policy areas to be developed and implemented in the plan. Policy 1 reads "To implement a forestry and natural resource management framework to promote sustainable agriculture development".

«According to the national request, the FMO supported Programme for Early Rehabilitation in Asia Tsunami Affected Countries included a forest policy and planning consultancy less the greater scope of the Maldivian programme.

MAIN CONSTRAINTS OF FOREST SECTOR

"Forest resources and the respective benefits are diminishing with detrimental effect to economic development"

- 1. Current forest land management is not conducive for sustainable production of forest-related goods and services
- 2. Current conservation set up is not effective enough for ecosystem conservation and management
- 3. Value addition of the benefits derived from processing and marketing of the forest related products and services is too low
- 4. Institutions and organizations responsible for optimal management of forest related resources lack capacity to fulfill their functions and their cooperation needs improvement

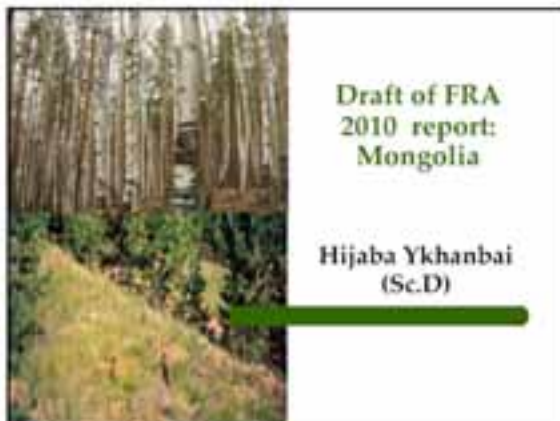
WHY WE NEED TO DEVELOP OUR FORESTRY SECTOR

1. Diversification of the Maldivian economy
2. Boat building
3. Environment protection & biodiversity functions



Thank you

Mongolia



Purpose of report

- Strengthening Monitoring Assessment and Reporting on present situation of Sustainable Forest Management in Mongolia
- About national data and data sources for FRA 2010
- Issues on the reporting of FRA by recommended Tables

Foreword

- The forest sector is the most important natural resource for ecological safety and environmental sustainability.
- Mongolia's territory is divided into four different natural regions: 1) the Talca forest region, 2) mountain forest steppe region, 3) plateau region, and 4) the desert region.
- Forest monitoring by existing traditional methods are difficult, expensive and most time consuming work for the case of Mongolia.

Present monitoring system on Forest

- Forest inventory
- Forest management
- Forest research analyses
- Forest status report
- Law of Forest

Needs for FRA

- To create a standard for forestry reporting and assessment in Mongolia, the same as worldwide.
- The present forestry related terms and definitions should be changed into global level.

National data sources

- Since 1960 Mongolia has been using terms and definitions originated from Russian.
- The first forestry terms and definition's standard has confirmed in 1984 (UST 9797-84 / which was only for the reforestation). In 1991 standard has updated and used it for all forestry. "Terms and definition for forest" / UST 4113-91 /

UST 4118-91 has 304 terms and definitions in English, Russian and Mongolian. It has 7 main sections:

1. Forestry, Forest utilization (98)
2. Forestry seed culture (95)
3. Forestry Nursery (19)
4. Forest planting (9)
5. Seedlings and Saplings (10)
6. Afforestation (40)
7. Forest Inventory, Forest management (33)

Issues on the reporting by FRA 2010 Tables for Mongolia

Forest resource information

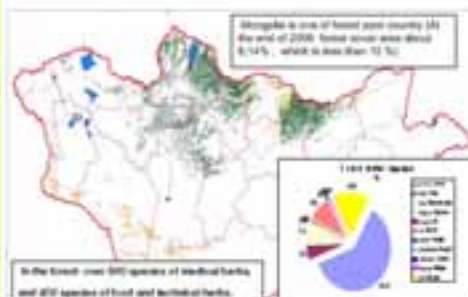
- Satellite images and aerial photographs
- Ground research truth data
- Academic reports
- GIS
- Database infrastructure
- Database development and update

Table 1b-13 - Forest types and their resources

Category	Definition
Forest (Other types are included)	Land spanning over 0.7 hectares with trees higher than 7 meters in acceptable.
Natural Forest Subcategory is	All forest stands with an Relative Stock Density above 0.7 are registered as natural forests.
Open Forest (Other types are included)	All forest stands with an Relative Stock Density less than 0.7 are registered as natural forests.
Non Forest Area (Data are included)	All forest land which does not support Natural forests and Open forests.

Current situation

Forest resources



Forest resources (in 2007 data)



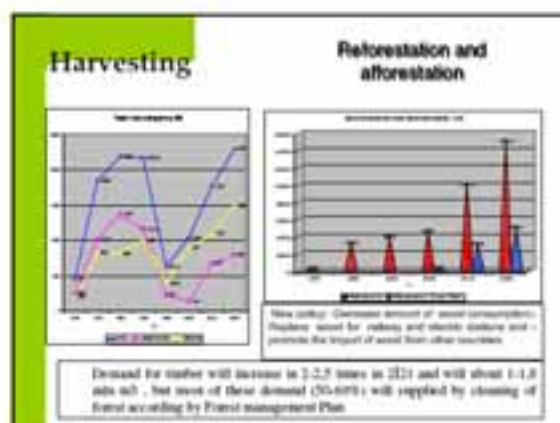
Table 12 – Forest ownership and management rights.

Category	Definition
Public ownership - <i>Propiedad estatal</i> (st)	Consider all forest resources owned to the public.
Private ownership - <i>Propiedad privada</i> (pr)	
Public Administration, Day companies, Public institutions, etc.	International definitions can be directly used. Management rights transferred to the citizens, communities, private companies and institutions.
Individuals/communities - <i>Comunidades campesinas</i> (cc)	
Private institutions - <i>Entidades privadas</i> (pr)	
Communities - <i>Comunidades campesinas</i> (cc)	

Table 13 – Forest designations and management FRA 2010 Categories and definitions

Other private ownership - *Propiedad privada* (PR) 2010 Categories And Definitions

Series	Definition
Primary designated function (Tropical, temperate, etc.)	Forest for commercial use in Utilization Zone Forests and others are linked with the definitions: Protected Zone Forests, Special Protected Area Forests, Green Zone Forests, Protected Viable Forests and Other Protected Zone Forests.











- Present status and difficulties**
- Do not publish a report of Sustainable forest resource management
 - Do not have a information system infrastructure on forest related organizations

- Recommendations on FRA**
- To finalize the FRA 2010 by the Tables and descriptions
 - To create a monitoring technology on SFM, and to update information system new technology
 - To strengthen informing and reporting to Forest recourse
 - To make wider Forest database



Myanmar

 MAR ON SFM 	<p>Status of FRA 2010 in Myanmar</p> <p>Forest Department October 2008</p>	 MAR ON SFM 	<p>T1 Extent of Forest and Other wooded land</p> <p>Data availability</p> <ul style="list-style-type: none">• Mostly Landsat 7 images 2005• Some updated with year 2005 and 2008• A few still available only in year 2000 supplied by UNEP <p>Land cover classification</p> <ul style="list-style-type: none">• Classification legends varied according to individual projects• But can be compared (adjusted) to FRA 2010 categories <p>Time frame</p> <ul style="list-style-type: none">• minimum 1 1/2 months to finish compilation and updating.
 MAR ON SFM 	<p>T2 Forest ownership</p> <ul style="list-style-type: none">• This is Cadastral mapping• so much changes between 2005 and 2010• Time Frame - one month	 MAR ON SFM 	<p>T3 Primary designated function</p> <ul style="list-style-type: none">• Same as Table 2• Time Frame - one month



T4 Characteristics

- Only after Table 1 has been finished
- one month

6



T5 Forest establishment/ reforestation

- Data available in Planning Section
- One month

8



T6 Growing Stock

- Inventory updated to 2008 by region wise
- Need Table 1 data for effective area calculation and NFI data generation
- One month

7



T7 Biomass stock

- After Table 6
- One month

8



T8 Carbon stock

- After Table 7
- Current volume formula for only commercial volume
- Future research needed
- Links with MARs

9



T9 Forest Fires

- Data not available and compiled officially
- Need Remote Sensing data, trend and analysis
- Request Case Study & Funds
- One month

10



T10 Other disturbances affecting forest health and vitality

- Data n.a.i
- Need further research & funds

11



T11 Wood removals & value of removals

- Data available only on legal extraction
- Fuelwood removals only assumption
- Values adjusted @ illegal exchange rates

12



T12 Non-wood forest products removals and value of removals

- Same as T 11

13



T13 Employment

- Data from
 - (a) Forest Department official operation reports
 - (b) Back calculation from MTE data using standard for extracted ton etc.

14



T14 Policy and legal framework

- Data available
- Only scanned pdf format
- One month

15



T15 Institutional framework

- Data available in Ministry Of Forestry administration,
 - Forest Department +
 - Dry Zone Greening Department +
 - Myanmar Timber Enterprise+
 - Ministry Of Forestry +
 - National Comission Environmental Affairs
- One month

16



T16 Education and research

- Data available
- One month
- T15 - T16- Questionnaire formation etc needed

17



T17 Public revenue collection and expenditure

- Data available
- Need adjustment & local exchange rates and consumer price index values (CSO-official)

18



Others

- Need time to recruit crew, questionnaire formation, case studies, etc.
- MARS linked activities

19



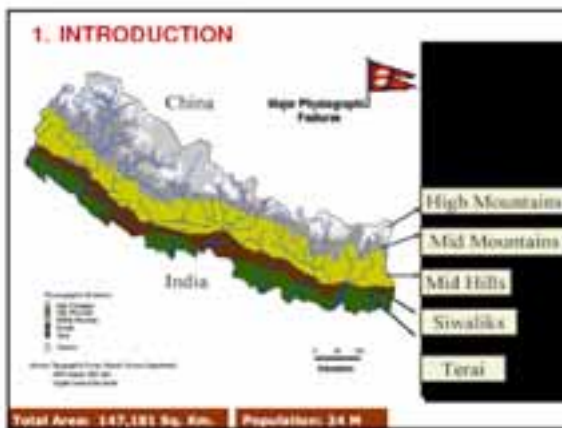
Thank you!

20

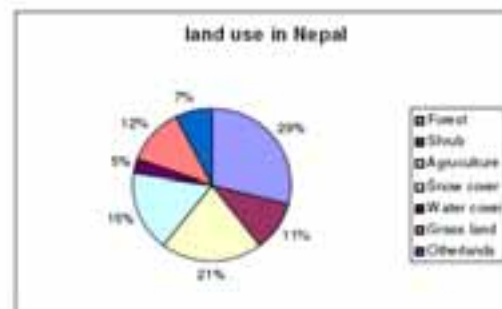
Nepal



1. Introduction
2. Objectives of FRA2010
3. National initiatives/methods adopted
4. Glimpse of the progress
5. Issues related with FRA2010 report preparation
6. Measures to be taken for tackling the issues
7. Conclusion



1.1 Land use system in Nepal



1.2 Forests and Forestry

- Nepal is dominated by agrarian society;
- Forestry, the integral part of the; agriculture and rural livelihood;
- Fuel-wood, principal source of rural energy;



1.3 Ownership

1. National Forest (NF)
 - Many management systems and ownerships within the NF;
 - CF, the most prominent system where local communities play the role of manager;
 - Protected Areas (PAs) cover 20% of the country's total area.
2. Private Forest
 - Sufficient data not available;



2. Key Objectives

1. To update and generate forest and forestry statistics/database to fill up in the FAO-format, and
2. To contribute for preparing GFRA2010 report.

3. National Initiatives/Methods

- Designating National Correspondent;
- Forming Drafting Team and Advisory Committee;
- Presentation about FRA2010 process at national level;
- Organizing meetings;
- Proposal writing;
- Reviewing existing documents; and
- Initial Draft Report.

4. Highlights of the Progress

Altogether, 17 Reporting Tables (provided by the FAO) on the process of getting filled up based on available data:

- 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 reforestation;

4. Highlights of the Progress

- 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 removals and value of removals;

4. Highlights of the Progress

- T 12. Non-wood forest products removals and value of removals;
- T 13. Employment;
- T 14. Policy and legal framework;
- T 15. Institutional framework;
- T 16. Education and research; and
- T 17. Public revenue collection and expenditure.

5 Key issues:

• Very outdated data, how to calibrate, estimate and forecast them?

Table: Last full and basic forest inventory

Categories	Land Cover in 000 ha			
	LRMP 1976/79	NRSC 1984	MPPS 1985/86	NFI 1994
Forest	5193	5284*	5934	4268 (29%)
Shrub	652	-	706	1366 (10.6%)
Total	6245		6210	5634 (9.6%)

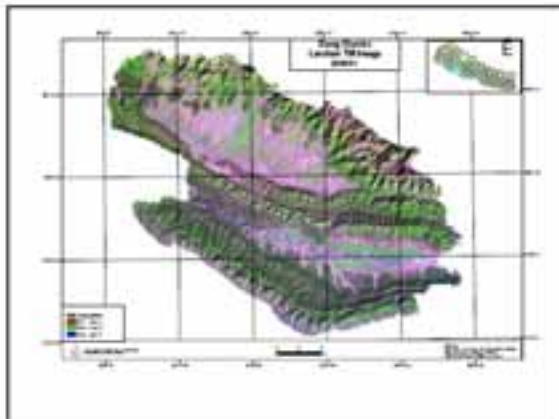
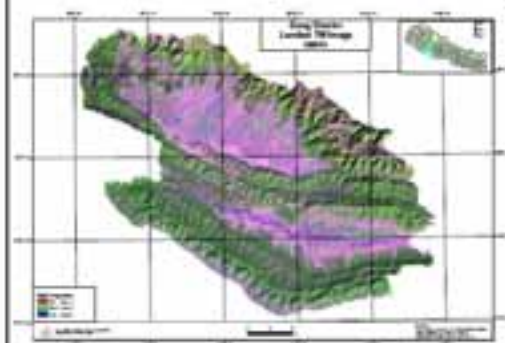
*Deforestation rate 1.7% per annum - based on the last inventory

However, Contexts changed due to Community Forestry intervention;

- Denuded landscapes restored while forest condition improved; and
- Rate of deforestation decreased from 1.3% per annum in 1990s to 0.08% in 2001 per annum in Southern Terai;



Case study: Landsat Image to see the cover change



Naturally rejuvenated CF in the study area



Issues

- Is it worthwhile to estimate and forecast on the basis of outdated data?
- How to validate the data?
- Is it possible to use data for national level reporting generated from districts and regional level inventories?

6. Way-out : short and long terms

SN	Activities	Accomplishment data	Input needed
1	Reviewing the existing forestry data and determining the data gaps	September, 2005	To be accomplished by the Team
2	Holding technical meetings (five times)	Continue till February, 2005	
3	Designing and Conducting case studies	December 2005	
4	National stakeholder workshop / consultation	January, 2006	
5	Report writing and producing	February, 2006	To be accomplished by the Team

6.2 Long-term

- National Forest Resource Assessment (NFRA);
- Project document formulation for NFRA underway;
- NFRA expected to be accomplished by 2013;
- FRA 2015 updated, reliable and accurate.

7. Conclusion

- FRA 2010 process formally initiated in Nepal;
- Available data utilized to fill up the Tables;
- Basic data (forest area, growing stock, biomass) too old;
- Contexts changing dramatically inside and outside the forest;
- Extrapolation of the early nineties data for FRA 2010 unjustifiable;

Conclusion

- Resolving the issues need to discussed;
- Proposal to be formulated for strategies and support needed to achieve the stipulated objectives;
- Preparing National FRA 2010 report: our responsibility.

Thanks

Philippines

Global Forest Resource Assessment 2010 Philippines

Outline

- Background Information
- Planning Activities
- Preparation of Country Report

Background Information

Philippines

- composed of more than 7,100 islands
- has an area of 30 M hectares (land area: 29, 817, 000 ha; inland water bodies: 183,000 ha)
- 3 major islands are Luzon, Visayas & Mindanao (Lesser Mindanao)
- made up of 16 administrative regions, including Autonomous Region in Muslim Mindanao (ARMM)



Background Information

- Department of Environment and Natural Resources (**DENR**)
 - national agency responsible for the management of the country's environment and natural resources
 - 16 DENR Regional Environment and Natural Resources Offices (**RENRO**)
 - 76 Provincial Environment and Natural Resources Offices (**PENRO**)
 - 175 Community Environment and Natural Resources Offices (**CENRO**)

Background Information

- Implementation of **NFA Project**
 - financially and technically supported by **FAO**
 - implemented from 2002-2005
 - spearheaded by the Forest Management Bureau (**FMB**) in collaboration with National Mapping and Resource Information Authority (**NAMRIA**) and DENR field offices
 - Created the FRA National Coordinating Office (**FRA-NCO**) at **FMB**
 - has overall responsibility of the project including field survey supervision, data processing and analysis, and report preparation
 - each **RENRO** has a **FRA Regional Field Inventory Team (RFTT)**
 - responsible for field data collection
 - **NAMRIA** provided spatial information on land forest cover based on satellite imagery interpretation

Planning Activities

- Identify data needs and sources of information
- Prepare and distribute respective reporting tables to institutions concerned
- Extend assistance to DENR field offices
- Coordinate with concerned institutions
- Collate available information at DENR-FMB Central Office
- Draft country report

ACTIONS TAKEN

- April 2008
 - prepared reporting tables and distributed to DENR regional offices including APOPO and other concerned institutions
 - coordinated with the Commission on Higher Education (CHED) regarding graduation of students in forest-related education
- July – September 2008
 - visited 4 DENR regional offices (DENR Region 1, 2, 3 & CAR) and guided FRA focal points on how to generate requested data, including calibration, reclassification and estimation/forecast of available inventory data
- September 2008
 - prepared key reporting tables based on available data

Preparation of Country Report (Key Reporting Tables)

Table 1: Extent of forest and other wooded land

FRA 2010 Categories	Area (1 000 hectares)			
	1990	2000	2005	2010
Forest	6 570	7 117	7 391	7 665
Other wooded land	3 236	6 072	8 400	10 128
Other land	20 011	16 027	14 026	12 024
...of which with low cover	n.a.	n.a.	n.a.	n.a.
Inland water bodies	183	183	183	183
Total Area (Philippines)	30 000	30 000	30 000	30 000

Table 2: Forest ownership

FRA 2010 Categories	Forest area (1 000 hectares)		
	1990	2005	2010
Public ownership	6 388	6 570	6 661
Private ownership	182	547	736
...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 if forest	6 570	7 117	7 391

Table 3: Primary designated function

FRA 2010 Categories	Forest area (1 000 hectares)			
	1990	2000	2005	2010
Production	4 178	5 390	5 607	5 861
Protection of soil and water	506	368	391	401
Conservation of biodiversity	1 306	1 320	1 372	1 392
Social services				
Multiple use				
Other (please specify in comment below the table)				
Not indicated	89	100	0	0
Total	6 570	7 117	7 391	7 665

Table 3b: Special designation and management categories

FRA 2010 Categories	Forest area (1 000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate	n.a.	n.a.	n.a.	n.a.
Forest area within protected area	3 355	3 689	3 794	3 823
Forest area under sustainable forest management				
Forest area with management plan				

Table 4: Forest characteristics

FRA 2010 Categories	Forest area (1 000 hectares)			
	1990	2000	2005	2010
Primary forest	861	861	861	861
Other naturally regenerated forest	7 467	7 029	6 190	6 401
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
Planted forest	362	527	740	551
...of which of introduced species	297	320	336	347
Total	6 570	7 117	7 391	7 665

Table 4b: Special categories

FRA 2010 Categories	Area (1 000 hectares)			
	1990	2000	2005	2010
Buffer plantations (Forest)				
Management (Forest and OHL)				
Barriers (Forest and OHL)				

Sri Lanka

FRA - 2010

Sri Lanka

Table T1 – Extent of Forest and Other wooded land

- Remote sensing survey is in progress
- Permanent Forestry estate
- Boundary demarcation process

Table T2 – Forest ownership and management rights

- No issues

Table T3 – Forest designation and management

- No issues

Table T4 – Forest characteristics

- No issues

Table T5 – Forest establishment and reforestation

- No issues

Table T6 – Growing stock

- No updated information available

Table T7 – Biomass stock

- Research data will be provided

Table T8 – Carbon Stock

- Research data will be provided

Table T9 – Forest fires

- No issues

Table T10 – Other disturbances affecting forest fire and vitality

- No issues

Table T11 – Wood removals and value of removals

- Lack of sufficient reliable data

Table T12 – Non-wood forest produce removals and value of removals

- Lack of sufficient data

Table T13 – Employment

- No issues

Table T14 – Policy and legal framework

Table T15 – Non-wood forest produce removals and value of removals

- Lack of sufficient data

Table T16 – Education and Research

- No issues

Table 17 – Public revenue collection and expenditure

- **Forest revenue**

- Royalty, Permits, Registration & renewal, Income from sales, and Parks etc.
- Penalties ?

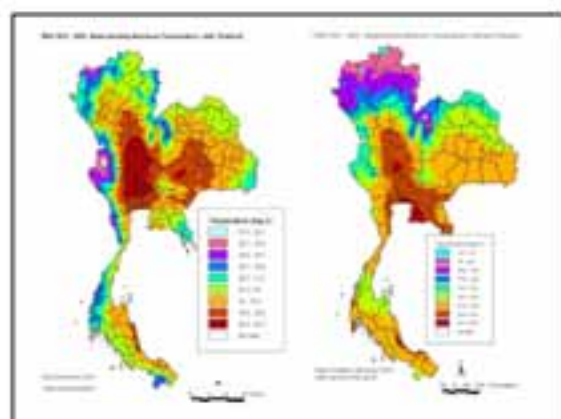
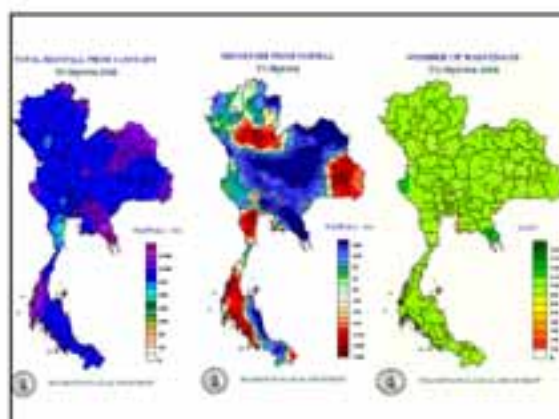
- **Operational Expenditure**

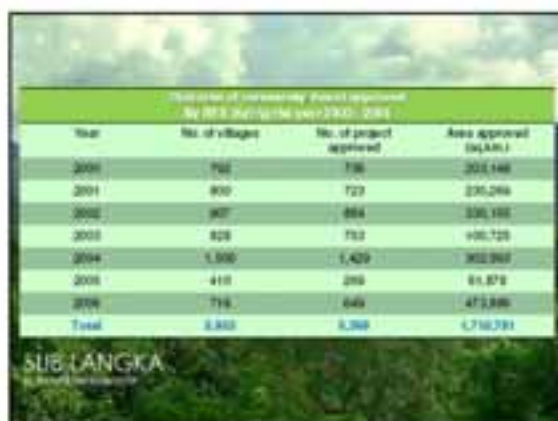
- Administrative costs ?

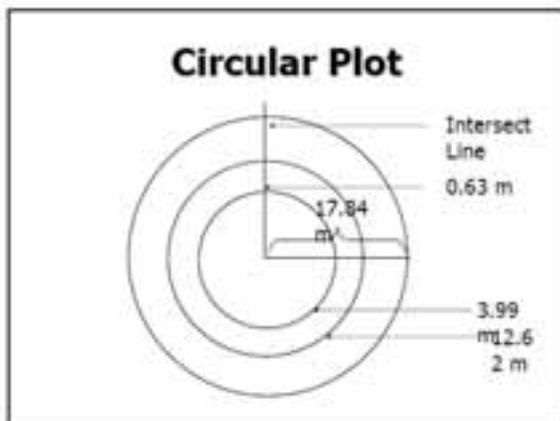
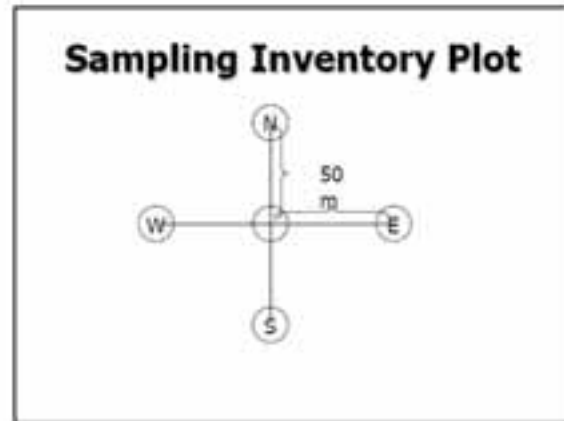
- **Transfer Payments**

- Budget allocations to the State Timber Corporation ?

Thailand







Timor Leste



Introduction

- Land area 14,874km²
- Topography characterized by steep, central east-west mountain range with short catchments and narrow coastal plains)
- Geologically young, an uplifted fragment of Australian tectonic plate
- Strongly seasonal dry tropical monsoonal climate with significant variations in different parts of the country.
- Tropical flora with associations to the northern Australian and Malaysian floras and a moderate level of endemism.

Introduction

- Originally forests and woodlands were the predominant vegetation with areas of savannah.
- Long history of conversion to agriculture and an accelerated rate of logging exploitation under foreign administrations has left legacy of almost total degradation of forests

Institutional Framework

- The major Government institutions responsible for agriculture and forest data collection are the Agriculture and Land-use Geographic Information System (ALGIS) Unit and the National Directorate of Forestry (NDF) within the State Secretary for Agriculture and Arborescence of the Ministry of Agriculture and Fisheries.
- Timor-Leste Forestry Sector Policy, Goal, Objectives and Strategies was approved in 2007 and;
- Decree Law on Forest Management is waiting for finalization.

Methodology

- Building on the basis of the previous FRA report 2005
- Data collection primarily via interview of managers, project managers and field staff of both central and District staff including Directors, Project Managers, District Forest Officers, District Forest Guards
- Desk-top Study
- Consultation with other relevant Ministries

Result/Progress

- The 17 tables were completed by the National Directorate of Forestry, except T6, T7 and T8 on growing stock, biomass stock and carbon stock.
- Progress re, biomass stock: NDF has commenced a cooperation with experts from France to measure biomass in forest areas.
- This joint study will also be used to increase capacity of NDF staff to do the biomass stock measurement.

Result/Progress

- The new tables: T14, T15, and T16 on Policies and Legal Framework, Institutional Framework and Education and Research were completed.
- National Forest Programme (NFP) information currently not available.
- The NDF has commenced cooperation with the Portuguese Mission to commence Timor-Leste's first **forest inventory** (Independence Day May, 20, 2008). Includes capacity building of NDF staff in forest inventory methodology.

Issues encountered and difficulties

- To date, there are no consistent and agreed land and vegetation classification systems in Timor-Leste.
- Terminologies in use are inconsistent and often borrowed from multiple other sources.
- Previous forest resource data (from previous foreign administration) considered inaccurate & unusable.
- Since 1999 (end of foreign occupation) has been no comprehensive data collection, no resource inventory and only uncoordinated stand-alone donor projects collecting discrete, data for project-specific purposes.

Issues encountered and difficulties

- Various forest data have been collected by various groups since 2000 but the overall value of this data is limited due to the *ad hoc* nature of its collection (e.g. lack of coordination and collaboration).
- Limited technical and financial capacity and limited human resources.
- No database of any kind of natural resource data other than some general physical geospatial layers in ALGIS.

THANK YOU



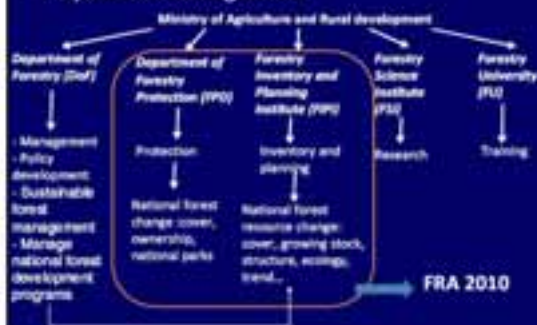
Vietnamese presentation on FRA 2010

Kuala Lumpur, 13 October 2008

Content

1. General situations of Vietnam for FRA 2010
2. Difficulties of Vietnam for preparing national report of FRA 2010

1. Situations of Vietnam forest MAR (1) • System of management



1. Situations of Vietnam forest MAR (1)

Network to prepare national report for FRA 2010



2. Difficulties for preparing national report

- Can not distinguish area of re-plantation and plantation
- Rubber is considered as forest if it is located on forestry land, if it is located on agricultural land it is not forest
- Bamboo is not mentioned in table of growing stock but it is mentioned in table of biomass stock and carbon stock.

2. Difficulties for preparing national report

- It is difficult to estimate the labors for forestry because half of forest and forestry land are allocated to households for development.

2. Difficulties for preparing national report

- When rubber is considered as forest so that the rubber resin must be considered as non-wood forest product. In this case the value of NTFP is very high.
- It is not easy to estimate the value of forestry products because there are a lot of type of product and value which comes from illegal logging.

The time to complete the national report is the end of March 2009

Thank you very much.