Report of the Expert Consultation on Global Forest Resources Assessment: Towards FRA 2020

Joensuu, Finland, 12–16 June 2017

David Henderson Howat, Markus Lier, Kari T. Korhonen,
Anssi Pekkarinen, Monica Garzuglia and Örjan Jonsson (eds.)

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NATURAL RESOURCES
INSTITUTE FINLAND

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Towards FRA 2020

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With the financial support of

With the technical support of

Contents

Introduction

This report presents the key findings and recommendations of the Expert Consultation on Global Forest Resources Assessment: Towards FRA 2020 organised on 11.-16.6.2017 in Joensuu, Finland.

A total of 67 specialists participated in this Expert Consultation; these specialists came from 28 countries and the following international and regional organizations, in addition to FAO and the United Nations Economic Commission for Europe (UNECE): the secretariats of the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Forum on Forests (UNFF); the International Tropical Timber Organization (ITTO); the UN Environment World Conservation Monitoring Centre (UNEP-WCMC); the World Resources Institute; FOREST EUROPE (the Ministerial Conference on the Protection of Forests in Europe); European Forest Institute (EFI); International Institute for Applied Systems Analysis (IIASA) and the European Commission Joint Research Centre (JRC).

The objective of the Expert Consultation was to provide guidance on the scope and reporting framework for the next Global Forest Resources Assessment (FRA 2020), by identifying key information needs related to forests at both the national and international level and by making recommendations about the content and process for FRA, in order to help ensure consistent and accurate reporting while reducing the reporting burden on countries.

The event was financed by the European Commission, FAO, the Finnish Ministry for Foreign Affairs and the Finnish Ministry of Agriculture and Forestry and organized in collaboration with the Natural Resources Institute Finland (Luke).

I. Objective

1. The objective of the Expert Consultation was to provide guidance on the scope and reporting framework for the next Global Forest Resources Assessment (FRA 2020), by identifying key information needs related to forests at both the national and international level and by making recommendations about the content and process for FRA, in order to help ensure consistent and accurate reporting while reducing the reporting burden on countries.

2. To help achieve this objective, experts were given presentations on progress to date in developing FRA 2020 (see draft agenda at Annex 1) and background papers (see Annex 2). These presentations and background papers formed the basis for in-depth consideration, by Working Groups and at subsequent plenary reporting sessions, of the following topics:

- FRA 2020 reporting content
- FRA 2020 on-line platform
- Remote sensing
- Global Core Set of Forest Related Indicators (GCS)
- Capacity development

II. Background and organisation

3. The Global Forest Resources Assessment programme of the Food and Agriculture Organization of the United Nations (FAO) is a continuously evolving process which seeks to meet changing information needs and produce relevant information for forest related decision making by using the latest available data, methods and technologies. FRA has received technical guidance and support from international specialists through expert consultations at regular intervals over the last 30 years. The first FRA Expert Consultation was held in 1987 and the subsequent consultations took place in 1993, 1996, 2002, 2006 and 2012.

4. This Expert Consultation, the 7th, was held in Joensuu, Finland, from 12–16 June 2017. Its agenda reflected recent significant advances in the international forest policy arena, such as the Paris Agreement, the Sustainable Development Goals (SDGs), and the United Nations Strategic Plan for Forests 2017-2030 (UNSPF), all of which have set new demands for the FRA process, both in terms of scope and reporting periods.

5. A total of 67 specialists participated in this Expert Consultation; these specialists came from 28 countries and the following international and regional organizations, in addition to FAO and the United Nations Economic Commission for Europe (UNECE): the secretariats of the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Forum on Forests (UNFF); the International Tropical Timber Organization (ITTO); the UN Environment World Conservation Monitoring Centre (UNEP-WCMC); the World Resources Institute; FOREST EUROPE (the Ministerial Conference on the Protection of Forests in Europe); European Forest Institute (EFI); International Institute for Applied Systems Analysis (IIASA) and the European Commission Joint Research Centre (JRC). A full list of participants is contained in Annex 3.

6. The event was financed by the European Commission, FAO, the Finnish Ministry for Foreign Affairs and the Finnish Ministry of Agriculture and Forestry, and was organized in collaboration with the Natural Resources Institute Finland (Luke).

7. Mr Greg Reams (USA) was elected chair of the meeting. The drafting committee comprised the Chair, Mr Frederic Achard (JRC), Mr Joberto Veloso de Freitas (Brazil) and the FAO FRA secretariat.

8. Daily summary reports of plenary sessions, including reports from the Working Groups, are contained in Annex 4.

III. Key findings and recommendations

9. The key findings and recommendations from the Expert Consultation are as follows:

A. Overall scope and framework for FRA 2020
- General support for overall scope and framework for FRA 2020, as set out in presentations and Background Papers.

B. Reporting variables
- In general, the proposed FRA Tables (see list in Annex 5) were well received, subject to the refinements and requests for Explanatory Notes set out below:

General
- Flag data that are extrapolated or calculated

Table 1a
- Change "temporarily unstocked" to "temporarily unstocked and/or recently regenerated or planted"
- Add "permanently unstocked" area
- In Explanatory Notes explain that:
  o "Forest" should include land that meets the definition of forest even where it is not with-in a legally defined forest area
  o there can be flexibility in the height threshold for other land "of which" categories such as orchards

Table 1b
- In Explanatory Notes explain the differences between:
  o FRA and UNFCCC definitions of "Deforestation" (the FRA definition includes all areas of permanent forest area loss whereas the UNFCCC definition includes only areas of direct human-induced permanent forest land area loss)
  o FRA and UNFCCC reporting regarding afforestation/reforestation

Table 2a
- Change the term "naturally regenerated forest" to "naturally regenerating forest"
- Improve forest characteristics decision tree to show "of which" categories more clearly
- In Explanatory Notes:
  o Further clarify what is considered as "primary forest" in the context of FRA reporting (explaining, for example, that primary forests may be forests of any seral stage, including early seral stage forests that are recovering from natural disturbance that meet the definition of primary forest)
  o Explain that failed plantations should be reported as "temporarily unstocked"

Table 2b
- Change "bamboo" to "bamboos"
- Drop "rubber plantations" as a specific forest category
- In the Explanatory Notes include criteria for bamboos (i.e. dominant growing stock)

Table 3a
- Use FRA 2015 definition (minimum diameter of 10 cm) – the focus for this Table is production
- Allow reporting only on the total when no information is available for different forest types
- In Explanatory Notes provide further guidance and examples to illustrate options for reporting on forest growing stock - using either m^3/ha (with total m^3 automatically calculated), or total m^3 (with m^3/ha automatically calculated)

Table 3b
- Allow countries to reduce the number of introduced species to three; and allow for up to ten native species

Table 3c
- Do not drop the reporting of biomass on other wooded land, or in dead wood

Table 3d
- Drop proposed break-down between carbon in mineral and in organic soils
- Do not drop reporting of carbon on other wooded land

Table 4
- In Explanatory Notes clarify definition regarding reporting year and make it clear that the Table refers to removals

Table 5a
- Drop "primary" from heading
- Consider adding "of which primarily for" for "Production", "Protection of soil and water", "Conservation of biodiversity" and "Social Services"; and using the sum of these figures plus "Multiple use", "other" and "no/unknown" to calculate "Total forest area" – as illustrated in paragraph 15 of Annex 4

- In the Explanatory Notes:
  - Explain that Protection forests may also serve such functions as protection of infrastructure against avalanche
  - Avoid confusion between such terms as "designated function", "management objective" and "use"
  - Clarify the appropriate level for "management objective" (e.g. management unit)

Table 5b
- In Explanatory Notes, explain that (e.g.) a five-year plan that is continuously updated may be acceptable as a long-term management plan

Table 6a
- In Explanatory Note definitions change "private religious and educational" to "religious and private educational"

Table 6b
- Change "Communities" to "local, tribal and indigenous communities"

Table 7a
- FRA secretariat to consider possible improvements to Table proposed by experts, who were invited to submit suggestions by 31 August 2017

Table 7b
- Where countries are provided with remote sensing (RS) based products and information, give details on sources and methodology; and allow validation at country level

Table 7c
- Invite countries to report national definitions of degraded forest

Table 8
- Display external data on employment in 'wood manufacturing', 'paper manufacturing' and the wood products industries on the on-line platform and report the total employment along with 'forestry and logging' in the FRA

Table 9
- Request annual information on the number of graduates
- In Explanatory Notes:
  o Clarify what is meant by "forest-related" education

Table 10a
- Invite countries to include:
  o References and weblinks to relevant policies, legislation and platforms
  o Further information on traceability systems and % of wood products covered

Table 10b
- Invite countries to provide remarks on their definition of PFE

External data
- Invite FSC and PEFC to collaborate on how to avoid double counting.

C. FRA 2020 country reporting platform/on-line platform

- The work undertaken to date on the FRA on-line platform is greatly appreciated

- Countries are encouraged to contact the FRA secretariat if they wish to pilot the platform and participate in its development

- Develop and update FAQs.

D. Remote sensing

- Support to countries is fundamental, and the tools demonstrated during the meeting were well received

- FAO should continue to produce statistics at global, regional and biome levels and refrain from publishing statistics at country level based on independent RS analysis. What FAO publishes is seen by the general public as official / endorsed information. However, FAO can facilitate the provision of supporting information in the country reporting process.

- Sampling-based RS survey is a key activity that should continue. A sampling-based component is required for generating statistics. Experts stressed the importance of validation and interaction with countries.

- Regarding global forest mapping, the minimum ambition is to develop a visual product. Beyond that, the aim should be to integrate forest land use and human interaction. FRA should use RS to look further into issues like primary forest, different drivers of deforestation (such as agricultural expansion, mining and urban development), forest degradation, disturbances etc. A process is needed to discuss detail and piloting.

- The Global Ecological Zones map should be updated to support the IPCC Good Practice Guidance refinement

- The RS survey should also make use of freely available very high-resolution images to improve land use assessments and identify land use changes.

E. Global Core Set of Forest-related Indicators (GCS)

- As requested, experts discussed proposals for a GCS. The report of these discussions, as contained in Annex 4, should be transmitted to the CPF Task Force.

F. Strengthening of FRA 2020: Capacity development for FRA reporting

- The proposals for a global workshop, regional and sub-regional workshops, capacity building on use of RS for FRA reporting, and the strengthening of national networks were well received.

- Have regional focal points in the FRA secretariat

- Invite countries who can demonstrate good practice in the coordination of their reporting to FRA (e.g. coordination with the SDGs, Rio Convention secretariats and other forest-related reporting processes) to present this experience at the global workshop

- Encourage coordination with those engaged in SDG reporting at different levels

- Maintain the FAQ document and include new questions when they arise.

IV. Annexes

10. This Report contains the following Annexes:

ANNEX 1.   AGENDA
ANNEX 2.   LIST OF BACKGROUND DOCUMENTS
ANNEX 3.   LIST OF PARTICIPANTS
ANNEX 4.   DAILY SUMMARY REPORTS
ANNEX 5   LIST OF FRA 2020 TABLES
ANNEX 6   PICTURES FROM THE EXPERT CONSULTATION

Annex 1 Agenda

MONDAY 12 JUNE 2017	

Plenary room 09:30	**1. Opening session**
	   o Welcoming remarks (*Ms Johanna Laiho-Kauranne,Director of Statistics Luke*)
	   o Opening speech (*Mr Doug Muchoney Chief Policy and Resources Division FAO*)

Plenary room 10:00	**2. First plenary session: organization of work**
	   o Election of chair and drafting committee (*Mr Anssi Pekkarinen FAO)*
	   o Review of the objectives of the meeting and adoption of the agenda (*Chairperson*)
	3. FRA 2020: setting the scene
	   o Overall scope and framework (*Mr Anssi Pekkarinen FAO*)
	   o FRA and the Sustainable Development Goals (SDGs) (*Mr Lars Marklund FAO*)
	   o FRA 2020 reporting content (*Mr Örjan Jonsson FAO*)
	Questions and answers

	10:30-10:45 Coffee break
Plenary room 10:45	o Logistics (*Luke*) Working groups: introduction (*Ms Monica Garzuglia FAO*)
Meeting rooms 11:00	**4. Working groups-** rotating working groups on: Topic 1: Forest extent, characteristics and changes Topic 2: Growing stock, biomass, carbon and NWFPs Topic 3: Primary management objective and ownership Topic 4: Forest disturbances, socioeconomic variables and external data
	12:10-12:20 Group photo
	12:20-13:25 Lunch-Media interviews
13:25	4. *Working groups continuation*
	15:45-16:00 Coffee break
16:00	4. *Working groups continuation*
	17:00 Meeting adjourned
	19:00 Reception offered by FAO (Villa Vainoniemi)

TUESDAY 13 JUNE 2017	
Plenary room 09:00	**5.Presentation of group reports and discussions** *Questions and answers*
	10:45-11:00 Coffee break

Plenary room 11:00	**6. FRA 2020 specific components**
	   o FRA country reporting platform (*Mr Örjan Jonsson FAO- Mr Toni Stran-dell*
	 Reaktor Innovations ltd)
	        UNFCCC automatic data extraction (*Mr Aleksi Lehtonen Luke*)
	   o Remote sensing (*Mr Lars Marklund FAO*)
	 7. FRA and linkages with sustainability indicators
	   o Global Core Set of Forest Related Indicators (*Mr Kit Prins*)
	 Questions and answers

Plenary room 11:35	Working groups: introduction (*Ms Monica Garzuglia FAO*)
Meeting rooms 11:45	**8. Working groups**-rotating working groups on: Topic 1: Remote sensing Topic 2: FRA on-line platform Topic 3: Global Core Set of Forest Related Indicators
	12:45-13:45 Lunch break
Meeting rooms 13:45	*8. Working groups continuation*
	15:15-15:30 Coffee break
Meeting rooms 15:45	*8. Working groups continuation*
	17:00 Meeting adjourned
	17:15-18:45 Visit to the Metla-House and refreshment

WEDNESDAY 14 JUNE 2017

Plenary room 09:00	**9.Presentation of group reports and discussions** *Questions and answers*
	11:00-11:15 Coffee break
Plenary room 11:15	**10. Strengthening of FRA 2020** o Capacity development (*Ms Leticia Piña FAO*) *Questions and answers*
Plenary room 11:35	Working groups: introduction (*Ms Monica Garzuglia FAO*)
Meeting rooms 11:45	**11. Working groups**-rotating working groups on: Topic 1: FRA on-line platform Topic 2: Capacity development Parallel remote sensing discussion
	12:45-13:45 Lunch
Meeting rooms 13:45	*11. Working groups continuation* *Parallel remote sensing discussion continuation*
Plenary room 14:50	**12. Presentation of group reports and discussions**
	15:30-15:45 Coffee break
Plenary room 15:45	12. Presentation of group reports and discussions continues *Questions and answers*
16:45	Field trip introduction and logistics (*Luke*)
	17:00 Meeting adjourned
	19:30-21:00 Dinner offered by the City of Joensuu, Town Hall

THURSDAY 15 JUNE 2017

FIELD TRIP (8:00-17:00)

FRIDAY 16 JUNE 2017

Plenary room 09:00	**13. Wrap up of discussions/ adoption of the report** (*Chairperson*)
	10:30-10:45 Coffee break
Plenary room 10:45	**14. FRA 2020 Next steps** o Timeline for FRA 2020 (*Mr Anssi Pekkarinen FAO*)
Plenary room 12:00	**15. Closing session** o Any other business (*Chairperson*) o Closing remarks (*Mr Anssi Pekkarinen FAO, Mr Kari Korhonen Luke*)
	12:30 Lunch and Departure of participants

Annex 2 List of background documents

The following background documents were prepared as input to the Expert Consultation:

For consideration on Monday 12 June
•   FRA 2020 Draft Specification
•   FRA 2020 Terms and Definitions
•   FRA 2020 What has changed and why?
•   FRA 2020 Reporting content: Questions to be discussed at the Expert Consultation

For consideration on Tuesday 13 June
•   New FRA Platform for reporting, review and analysis
•   FRA 2020 Remote Sensing Component
•   Global Core Set of Forest-related Indicators Background paper

For consideration on Wednesday 14 June
•   Capacity Development Plan to support the Global Forest Resources Assessment (FRA 2020) reporting process

Annex 3 List of participants

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Annex 4 Daily summary reports

Monday 12 June
Agenda item 1. Opening session
1. In her welcoming remarks, Ms Johanna Laiho Kauranne, Director of Statistics, Natural Resources Institute, Finland (Luke) gave a brief overview of the forest sector in Finland. Noting that the first systematic forest inventory in Finland had been carried out in 1921-24, she stressed the importance to the forest sector of having a sound evidence base for decision making. She also said that 2017 marked the centenary of Finland's independence, adding that forests had played a key role in the country's development and would continue to do so as an important element of the Finnish Bioeconomy Strategy.

2. Mr Doug Muchoney, Chief Policy and Resources Division, FAO, then gave an opening speech, welcoming experts and thanking the organisers and hosts, including the Finnish Ministry for Foreign Affairs, the Finnish Ministry of Agriculture and Forestry, the Natural Resources Institute Finland (Luke) and the European Commission, as well as the FAO team. He underlined the increasing importance of accurate, consistent and up to date information on forests, especially in the context of the SDGs, the Paris Agreement on Climate Change and the United Nations Strategic Plan on Forests (2017-30) (UN-SPF). Recalling that FAO had conducted its first forest resource assessment in 1946, he highlighted the vital role of national correspondents who in many ways "are the FRA". He also stressed the need for continuous improvement in FRA processes, including through increased use of modern technologies such as remote sensing and efforts to reduce the reporting burden on countries. Accordingly, the aim should be to make FRA 2020 "the best FRA ever".

Agenda item 2. First plenary session: organization of work
3. Mr Greg Reams (USA) was elected Chair of the meeting.

4. The Chairperson outlined the objectives of the meeting and introduced the draft agenda, which was subsequently adopted. He explained that, as with previous FRA Expert Consultations, the objective was to provide guidance for the next global assessment (FRA 2020), by identifying key information needs related to forests at both the national and international level and by making recommendations about the content and process for FRA, to help ensure consistent and accurate reporting. He also noted that the Working Groups would consider these matters in detail and report back to plenary sessions; the rotational arrangement would allow each Working Group to discuss every topic, with designated topic facilitators and rapporteurs.

Agenda item 3. FRA 2020: setting the scene
5. Mr Anssi Pekkarinen (FAO) set the scene by describing the overall scope and framework for FRA 2020. He reminded experts that the assessment is based on two sources of data, namely (i) country reports, which are the primary data source and are prepared by the National Correspondents (NC) officially nominated by the countries, and (ii) remote sensing, which is conducted together with national focal points and international partners, such as the Joint Research Centre of the European Commission (JRC). FRA 2020 should seek to improve transparency; reduce the reporting burden; add value, with the data being more widely used and disseminated; improve communication, for example between NCs and reviewers; and offer flexibility so that it also meets the needs of other partners. The Collaborative Forest Resources Questionnaire (CFRQ) would continue to operate as a partnership between FAO Forestry (FRA), the UN Economic Commission for Europe (UNECE), the International Tropical Timber Organization (ITTO), the Central African Forests Commission (COMIFAC/OFAC), FOREST EUROPE and the Montréal Process. FAO tools that can support reporting include forthcoming e-learning courses on SDGs; the Open Foris Initiative that provides free and open source tools for environmental monitoring; and the System for Earth Observation Data Access, Processing and Analysis

for Land Monitoring (SEPAL). He described on-going progress in development of the FRA 2020 on-line platform, which would be refined in the light of the outcome of this Expert Consultation. In addition, he noted that FRA 2020 needs to meet information needs of a range of key partners, including the Rio Conventions, COMIFAC, FAOSTAT, FOREST EUROPE, ITTO and UNECE, as well as SDG reporting and the proposed Global Core Set of Forest-related Indicators (GCS).

6. Mr Lars Marklund (FAO) then gave a presentation on FRA and the SDGs, explaining that, while forests contribute to many of the SDGs, information provided by countries to the FRA process will contribute directly to measuring progress on forest-related indicators under SDG 15 ("protect, re-store and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss"). As "Custodian Agency" for 25 SDG indicators, FAO is responsible for methodological development and documenta-tion; collecting data from national sources and reporting at global level; contributing to statistical capacity development; and coordinating with relevant stakeholders. Three of the SDG indicators for which FAO is Custodian Agency are forest-related, namely:

- Indicator 15.1.1 (forest area as a proportion of total land area): this is a Tier 1 indicator, with good data coverage from FRA. Analysis of regional and global aggregates has already been reported in the 2016 SDG progress report and country data published on the website of the Inter-Agency and Expert Group on SDG indicators (IAEG-SDG). Improvements in data collec-tion and possibilities for more frequent, yearly, reporting are under discussion as part of the FRA process.

- Indicator 15.2.1 (progress towards SFM): this comprises five sub-indicators, namely forest ar-ea annual net change rate; above-ground biomass stock in forest; proportion of forest area located within legally established protected areas; proportion of forest area under a long-term forest management plan; and forest area under an independently verified forest man-agement certification scheme. Data analysis is based on thresholds/traffic lights. However, because of continuing concerns about, for example coverage and data aggregation, it is un-likely to be upgraded to Tier 1 status before the next SDG revision in 2020.

- Indicator 15.4.2 (mountain green cover index): this is based on remote sensing of changes to plots assessed as cropland, grassland or forest land. A first report and storyline were provid-ed in February 2017 and a process to upgrade to Tier 1 will be conducted through online val-idation of data.

The next steps include country capacity building for 15.1.1. and 15.2.1, in coordination with FRA; development of online courses; and preparation for a review of SDG 15 indicators that will take place in 2018, building on results from FRA and work on the GCS.

7. Mr Örjan Jonsson (FAO) explained that the proposed FRA 2020 reporting content included 60 vari-ables, compared with 120 in 2015, 90 in 2010 and 45 in 2005. This reduced reporting burden had been achieved through detailed analysis examining: how previously collected data had been used; the reasons for collecting data; questions to be answered; and data availability from external sources. The analysis had been based on surveys of NCs and FRA users; a review of the FRA 2015 reporting process and scope; an internal evaluation by the FRA team; discussions with FAO Forestry Department teams, selected NCs and other experts; and views from the FRA Advisory Group. Follow-ing this Expert Consultation there would be further discussion with CFRQ partners, FAO Forestry De-partment Teams and the FAO Chief Statistician.

8. During subsequent discussion, it was noted that there would be an opportunity during Working Group sessions for experts to discuss variables that had been proposed for deletion.

Agenda item 4. Working groups
9. The topics discussed by the first round of working groups were: Topic 1: Forest extent, characteristics and changes; Topic 2: Growing stock, biomass, carbon and non-wood forest products (NWFPs); Topic 3: Primary management objective and ownership; and Topic 4: Forest disturbances, socioeconomic variables and external data. Background Documents are listed in Annex 2.

Tuesday 13 June
Agenda item 5. Presentation of group reports and discussion
10. The presentation of group reports and subsequent discussion was moderated by the Chairperson.

Topic 1: Forest extent, characteristics and changes.

11. During the Working Group discussion, the following suggestions and points were made:
Terminology
- Change "Forest" to "Forest land"
- Should it be "Bamboos" instead of "bamboo"?
- Change "plantation forest" to "plantations"
- Do not use "compulsory" as that makes everything else "voluntary"
- Should it be "Naturally regenerating forest" or "Natural forest" instead of "Naturally regenerated forest"?
- The heading of Table 2a is not clear
- Should it be "other forest with planting" instead of "other planted forest"?
- Should it be "Primary" or "Undisturbed" forest?

Table 1a Extent of forest, other wooded land and other land
- Change "temporarily unstocked" to "temporarily unstocked and/or seedlings" or "temporarily unstocked and/or recently regenerated"
- Add "permanently unstocked" area
- Add "other land - of which other tree cover" to cover forest land outside legally defined forest areas
- The height threshold should not apply for other land "of which" categories such as orchards
- The height threshold for "temporarily unstocked" should be increased to 5 metres
- Focus FRA on "forest land" and drop "other land with tree cover"
- The documentation should explain that the other land "of which" categories are mutually exclusive.
- The documentation should explain that inland water is NOT included in the total area estimates.

Table 1b Annual forest area loss, gain and net change
- Where can natural tree cover loss be reported?
- There are differences between FRA and UNFCCC reporting regarding afforestation/reforestation.
- There are also differences in the definition of "deforestation". Under UNFCCC it is "direct human induced"; under FRA it is a "permanent reduction of the tree canopy cover below the minimum 10 percent threshold". Introducing "of which human induced" to FRA should help comparison of the figures. The same name remains a problem; maybe UNFCCC should use "Human induced deforestation"
- The documentation should explain that "agroforestry" includes shifting cultivation.
- The reports should highlight data that is extrapolated, and does not represent actual measurements

- Deforestation should be separated into different drivers (e.g. agricultural expansion, urban development, etc); remote sensing and existing global products can contribute to this.

Table 2a Forest Characteristics
- Primary forest does not need to be old; this should be made clear in the definition.
- There were concerns about the consistency of data on Primary forest in FRA 2015.
- Drop "primary forest" and replace it with a term that can be measurable, consistent and relate to ecological value.
- The term "primary forest" can be confusing if secondary forest is missing.
- It would be helpful to use measurable characteristics such as years since stand disturbance.

- Add "unknown" as third category in addition to naturally regenerated and planted.
- It can be difficult to distinguish between "naturally regenerated" and planted in older forests.
- Should failed plantations be reported as "unknown" or "temporarily unstocked"?
- The forest characteristics decision tree should be improved to show "of which" categories more clearly.
- How should forest degradation be reported?

Table 2b Specific forest categories
- Drop "rubber plantations".
- Include criteria for bamboo (dominant growing stock) in the explanatory notes.
- Consider adding additional forest types that are found in temperate and arid zones.

12. During the Plenary discussion on Topic 1, experts further commented that:
- The term "Forest" should be retained in FRA because it is a well-established term.
- As "Primary forests" are subject to many natural disturbances, it would be inaccurate to refer to then as "undisturbed".
- The height threshold for "temporarily unstocked" should remain at 1.3 metres as Remote Surveys are becoming increasingly sophisticated at picking up small height differences, and if the definition is changed now it may need to be changed again for FRA 2025.
- The "temporarily unstocked" should be changed to "temporary unstocked or seedling stand"
- FRA should not ignore trees outside forests and should improve the reporting on this variable.
- One possibility is to avoid the term "deforestation" by using alternatives such as "gain/loss" of forest or "expansion/contraction".
- It might also be possible to ask about "expected" forest loss, where for example an area of forest has been designated for conversion to another land use.
- The term "deforestation" should not be changed because it should be consistent with UNFCC definition. It is not practical to expect UNFCCC to change its (negotiated) definition of "deforestation".
- The table on natural disturbances might provide a way of identifying deforestation that is not "human induced".
- Forest degradation is a difficult topic. It is obviously important, but current reliance on national definitions by other processes is not entirely appropriate for global assessments such as FRA. One possibility is to focus on positive actions being taken by countries to restore degraded forests.

Topic 2: Growing stock, biomass, carbon and non-wood forest products (NWFPs)

13. During the Working Group discussion, the following suggestions and points were made:

Table 3a Growing stock

- General support for the proposal to offer countries the possibility of reporting on forest growing stock either using the m^3/ha (with total m^3 automatically calculated by the system), or in total m^3 (with m^3/ha calculated by the system). However, it would be helpful to provide guidance and examples, and to allow reporting only on the total when no information is available for different forest types. It should be made clear which are the reported figures and which are the calculated figures.

- The appropriate definition of growing stock depends upon whether the information is used for production purposes or calculation of biomass/carbon.

- Concern about data reliability for trees of diameter between 0 and 10 cm. In some countries, relevant equations are not available: Many European countries want to keep the 0 cm threshold to avoid the need for recalculations, but other countries would prefer a 10 cm or 5 cm threshold as data is rarely available down to 0 cm.

- The documentation should explain whether or not growing stock data include stumps.

- Concern that countries do not have "hard data" for annual reporting on growing stock, and so will either repeat data from previous years or rely on modelling. On the other hand, countries are aware of the need for annual data for SDG reporting, and this may encourage them to provide it.

Table 3b Growing stock composition

- General support for including introduced species in the growing stock composition table, perhaps reducing the number to 3. The number of native species could perhaps be increased to 10. There are differences between boreal countries and tropical countries.

Table 3c Forest biomass stock

- Concern about dropping the reporting on biomass on other wooded land: FRA is the only process that collects information on this land; the information may become more relevant in the future; and it has been reported on before, so continuity should not be lost.

- Concern about dropping the reporting on biomass in deadwood: this is required to estimate carbon; and dead wood can represent a significant proportion of biomass in boreal forest. The documentation should make it clear that "above-" and "below-ground biomass" refer only to living biomass.

- General support for the proposed automated calculations using IPCC default values: this can help those countries that do not have biomass and carbon estimates.

Table 3d Forest carbon stock

- Concern about breaking down the reporting on carbon in mineral and organic soils: this sub-division was felt to be unrealistic; most peatlands are not forest.

- Concern about dropping carbon stock on other wooded land.

- Unclear what is meant by "compulsory" reporting on certain identified variables: countries that do not have data would require help from the FRA team; the system must be able to flag estimates in a way that distinguishes them from actual data.

Table 4 Non-wood forest products

- This Table is important but data are often lacking or incomplete. General support for including quantity and value of NWFPs. The definition should be clarified regarding cultivated products and reporting year; it should be made clear that the Table refers to removals.

14. During the Plenary discussion on Topic 2, experts further commented that:
- There would be on-going developments regarding assessment of growing stock, for example through the IPCC process.
- Biomass and carbon stock on other wooded land should not be dropped.

Topic 3: Primary management objective and ownership

15. During the Working Group discussion, the following suggestions and points were made:

Table 5a Primary management objective
- Concerns and mixed views about this Table. Some countries can, but many cannot, report both the "multiple use" and disaggregated categories if "primary management objective" is required.
- The purpose and expected use of the information collected through this Table should be better explained.

An alternative is add "of which primary management objective" for: "Production", "Protection of soil and water", "Conservation of biodiversity" and "Social Services"; and use the sum of these figures plus "Multiple use", "other" and "no/unknown" to calculate "Total forest area" – as illustrated below:

Table 5a Designated management objective						
		Area (1000 ha)				
FRA 2020 categories		1990	2000	2010	2015	2020
Production						
...of which primary management objective (a)						
Protection of soil and water						
...of which primary management objective (b)						
Conservation of biodiversity						
...of which primary management objective (c)						
Social Services						
...of which primary management objective (d)						
Multiple use (e)						
Other (f)						
No/unknown (g)						
Total forest area (a+b+c+d+e+f+g)						

- Protection forests may also serve such purposes as protection of infrastructure against avalanche.
- The documentation should be clarified to avoid confusion between the terms "designation", "management objective" and "use", which have different meanings.
- If the term "management objective" is used, decide at which level it is set (e.g. national, landscape, management unit, site, owner).

Table 5b Forest area within protected areas and forest area with long-term management plans
- Also include IUCN category VI in the definition of protected areas.
- Report IUCN categories separately.
- Reconsider criteria for long-term management plan: for example, a five-year plan that is continuously updated should also be acceptable.

Table 6a Forest ownership
- General support for the proposed table, but some would prefer to retain the FRA 2015 subcategories of public forests.

- Provide more guidance on how to differentiate between ownership of, and management rights to, trees in publicly owned forests.
- Under private ownership, separate profit and non-profit business/institutions owners.
- In the definitions, remove "private" from "private religious".
- Include "…of which owned by local, tribal and indigenous communities" under both public and private forests.

16. During the Plenary discussion on Topic 3, experts further commented that:
- In some countries, there is a strong interest in (e.g.) the area of forest where production is a management objective, and this information is lost if it is reported as "multiple use". However, a "multiple use" objective is central to the management of many forests in (e.g.) many EU countries.
- Explicitly include management by indigenous communities in Table 6b.
- It is not clear why some Tables require reporting to 2015 and others require reporting to 2020.

Topic 4: Forest disturbances, socioeconomic variables and external data.

17.   During the Working Group discussion, the following suggestions and points were made:

Table 7a Disturbances
- There was general consensus about the relevance of the data and also about the difficulty of collecting data and reporting on it. It is unclear how this information will be brought together in global reporting.

- Further consideration should be given to how the information can be used, for example in risk assessments.

- A new table was proposed to facilitate reporting and aggregation of the data at global level. Double-counting will occur when the same area is affected by different types of disturbance. To avoid double counting in State of Europe's Forest, FOREST EUROPE had requested countries to specify both the total area of damaged forest, regardless of the damaging agents, along with areas subject to individual damaging agents.

- The definitions should be made more precise. Remarks and examples would be helpful to show when disturbances are serious enough to be reported. The "year of outbreak" may also be difficult to establish or define, e.g. with repeated insect attacks.

- Unclear which other types of disturbance should be reported: does this include, for example, earthquakes, shifting cultivation, coastal degradation or grazing from wildlife?

- It can sometimes be difficult to get information about the area damaged.

Table 7b Area affected by fire
- Should grass fires be reported here?

- Mixed views about dropping the number of fires; arguments against are that information about the number of fires is more reliable than area, and it helps explain the area.

- Support for providing countries with RS data; details should be provided on sources and methodology and validation at country level should be allowed. Need to define "forest area" used for RS.

Table 8 Employment
- Include the external data on employment in the wood products, and pulp and paper industries. (What is the source of the UNIDO data?)

- Can the Table be pre-filled from FAOSTAT?

- Include request for data on employment related to forest recreation.

- How is informal employment reported?

- What about seasonal employment?

- It may be difficult to report on the proposed sub-categories.

Table 9 Graduation of students in forest-related education
- General support for this Table.

- What should be reported: the number of graduates in a single year, the cumulative number or a five-year average?

- What about graduates from other countries?

- What about those who do not work in forestry after graduation.

- Need to clarify what is meant by "forest-related" education, perhaps through examples and remarks. What about (e.g.) biology and agronomy forest related education?

- Perhaps expand the Table to measure capacity for forest management.

Table 10a Policies, Legislation and national platform for stakeholder participation in forest policy
- Mixed views on this Table. Suggested that comments/qualitative data are added about the specific measures implemented at country level because answer "yes" or "not" does not reveal whether these policies and legislations are effectively implemented, or at what level. The yes/no answer reveals nothing about quality of policies, legislation or stakeholder participation.

- Is this aligned with FAOLEX?

- Inclusion of traceability was well received but to answer yes or no would not give much information. The indicator should be refined to allow comments and additional data.

Table 10b Area of permanent forest estate
- Agreed that this is "Not applicable" in some countries.

- Countries should provide remarks on their definitions.

External data

- Support for use of this external data.

- Invite FSC and PEFC to collaborate on how to avoid double counting.

18. During the Plenary discussion on Topic 4, experts further commented that:

- Table 7a requires further thought. The FRA 2015 Report said nothing about disturbances. However, it is an important topic and "resilience" features in the GFG targets. Sound conceptual architecture is required for reporting on disturbances in a way that provides a useful global assessment. The title of the table should be "Natural Disturbances" as human activities such as logging are not included.

- The number of fires in Table 7b is problematic where (e.g.) three fires merge into one mega-fire. Some countries do not report when they consider that the information requested is not meaningful.

- Countries may face difficulties in reporting on the sub-categories in Table 8. Although the ISIC categories provide a structure, all employees within a company may be allocated to the ISIC category that fits the main activity of that company instead of being split according to sub-category.

Agenda item 6. FRA 2020 specific components

19. Mr Toni Strandell (Reaktor Innovations Ltd) gave a presentation on progress to date in developing the FRA country reporting platform, explaining that experts would be able to try out a prototype during Working Group sessions. The process had included an insight and design phase (with insight building, a validation workshop with NCs, and co-creation design and review workshops) and a development phase leading to the prototype for consideration at this meeting. This would be followed by wider testing during summer 2017 and production use in early 2018.

20. Mr Lars Marklund (FAO) outlined developments in the use of Remote Sensing for FRA. He explained that RS had first been used in FRA 1980 and extended in FRA 1990 and FRA 2000, with the production of a Global forest map 2000 and a map of global ecological zones. FRA 2010 made a global RS survey with about 13,500 sample tiles to estimate forest area and forest area changes and updated the Global forest map. FRA 2015 included an update of the map of global ecological zones. More recently, the Global Forest Survey used the Collect Earth tool and visual interpretation of very high-resolution satellite imagery, to collect data on tree cover, shrub cover, IPCC land use classes, FRA categories, and historical changes on about 476,000 sample points. In 2016, COFO requested FAO to reinforce the use of RS in the FRA process; to support countries in strengthening the collection, analysis and dissemination of forest data; and to explore innovative techniques for supporting countries in data collection and reporting. Recent technological developments have improved access to satellite imagery, pre-processed products (e.g. Google Earth Engine) and cloud computing platforms for fast data processing. The objective of the FRA 2020 RS component is to generate and disseminate RS products at global, regional and biome level to support and complement the FRA programme; it will also support countries by facilitating access to RS products, tools and methods. There would be a Global RS Survey to generate statistics on forest area and forest area change at global, regional and biome level; global maps; a section in the FRA platform for countries to access/download data and generate statistics from existing geospatial data sets; and capacity building.

Agenda item 7. FRA and linkages with sustainability indicators

21. Mr Kit Prins referred to the Background Paper and explained that the role of the proposed Global Core Set of Forest-related Indicators (GCS) is to monitor progress towards internationally agreed forest policy goals, as articulated in the SDGs, the Global Forest Goals (GFGs) and targets contained within the UNSPF, and forest-related targets agreed by the Rio Conventions (CBD, UNCCD and UN-FCCC). Recognising the dangers of possible overlap, duplication and inconsistency in such monitoring, the Collaborative Partnership on Forests (CPF) had initiated the development of a stream-lined GCS, building on existing work, including FRA and the regional criteria and indicator (C&I) for SFM processes. Following a side-event at the 2015 World Forest Congress, there had been workshops, an Organisation Led Initiative (held in Rome in November 2016), subsequent discussion by a CPF task force, and on-line consultation. The UNFF had now invited the CPF to present its GCS proposal for consideration by the Forum at its thirteenth session, in May 2018. Mr Prins concluded by inviting experts to provide their views on GCS proposals during working group sessions and plenary so that these could be taken into account by the CPF.

Agenda item 8. Working groups

22. The topics discussed by the second round of working groups were: the FRA on-line platform; remote sensing; and the Global Core Set of Forest Related Indicators (GCS).

Wednesday 14 June

Agenda item 9. Presentation of group reports and discussion

FRA on line-platform.

23. The report from the Working Group discussion noted that:

- The approach to national data was positively received and the transparency in the graphs was appreciated. There were questions about how many data points to insert where a lot are available, about how to support regional data and about support for "partial" data points.

- Regarding interpolation and extrapolation, it was recognised that many extrapolation functions are needed. There was discussion about adjustability of the extrapolation; the importance of being able to edit values manually using extrapolation functions; and allowing the possibility for countries not to use extrapolation functions. The NCs need to be in control of the extrapolation.

- The flexibility of the national approach to data entry (use, not use, or use and modify) received positive feedback. The copy and paste facility for Excel data was perceived as a key feature. Validation and consistency checks are required. Ways of describing the origin of data, data sources and other background information requires clarification. There is a desire to use data from external / other reports in reporting; to link to external files; and to support uploading studies in national data points. "Not applicable" needs to be distinguished from "not available" and zero values. There was also discussion about access rights of the collaborators, and whether these should be the same as NC rights; and about supported languages.

- There was a lot of interest in using the data in various ways, including access to other countries' reports; exporting the data during editing; grouping data (e.g. for regional studies); and using the data for visualisations.

- Some design features were absent in the prototype. These included showing units (e.g. ha or 1000 ha), non-linear extrapolation functions, handling manually edited data differently from generated data, labels on graphs, and validation of selected years when saving a national da-

ta point. It was noted that the prototype appears to work on iPad / phones, but the prototype does not currently support Internet Explorer.

24. During the Plenary discussion, appreciation was shown for the work that had been undertaken on the FRA on-line platform. None of those experts present indicated a need for the platform to support Internet Explorer. Further suggestions were that:

- Countries should contact the FRA team if they wish to pilot the platform, and it would be valuable if there could be a communications network through which these countries could share experiences.

- In due course a set of FAQs would be needed.

Remote sensing

25. The report from the Working Group discussion noted that:

- Among the four lines of action outlined in the proposal in the background paper, there was a general support for all, and specifically the importance of the sampling-based RS survey and country support was stressed.

- FAO should continue to produce statistics at global, regional and biome levels and refrain from publishing statistics at country level based on independent remote sensing analysis. What FAO publishes is seen by the general public as official / endorsed information.

- However, FAO can facilitate such statistics to countries as supporting information in the country reporting process.

- In order to generate statistics, a sampling-based component is required. Maps together with a sample can improve statistics.

- Important to distinguish between tree cover and forest land use. Traditional RS products look at tree cover. With new very high-resolution images it is possible to better assess land use – opportunity for FAO.

- Mixed views on making the Global Forest Survey dataset public. Some countries were concerned that anyone could then make country-level estimates, and as data come from FAO, they are considered "official". Some countries would like to get access to data and validate before publishing. Other countries preferred to not be involved at all in validation as that may be seen that they then have endorsed the data. Other participants stressed the importance to make the dataset public as soon as possible.

- The issue on how to handle and make available data from RS samples should be solved before a new RS survey is undertaken.

- RS could be used by FRA to further look into issues like primary forest, forest degradation, disturbances, etc.

- There was a general agreement that support to countries is fundamental and contribute to the FRA process. The tools demonstrated were well received.

26. During the Plenary discussion, the following points were made:

- RS is a new and rapidly developing technology. It is important to think creatively about its benefits beyond the context of the current framework for data collection and presentation.

- The potential for developing the use of RS to track disturbances, and what happens to land after deforestation/degradation should be further explored.

- FAO should make use of existing country experience in RS.

- As the global RS survey is a resource intensive project that will take time, there is a need for urgency so that results are available for FRA 2020. It is important to validate sample points.

- The use of historic systematic samples is not sensitive to changes in land use etc.

- The Global Forest Survey belongs to other partners as well as FAO, and so data cannot be released only under an FAO banner.

- Constraints on publishing RS results at national level means that there is a danger of not making full use of information from RS.

- FAO does not have a monopoly on RS. It is increasingly easy for others to produce attractive and well-presented maps that are based on poor quality data. To address this, there is an important role for FAO as a leader in publishing high quality material presenting attractively produced and authoritative information about global forest resources.

Global Core Set of Forest Related Indicators.

27. During the Working Group discussion, suggestions were made for improving the GCS. These are summarised in the following Table (where bold text shows insertion, strike-through text shows deletion and square brackets show comments):

	Global Core Set (draft)	unit
1	Forest area net change rate	%
2	Proportion of forest area located within legally established protected areas	%
3	Above-ground biomass stock in forest	Tonnes
4	Forest area designated and/or managed for protection of soil, ~~and~~ water**, infrastructure and managed natural resources** [make consistent with FRA treatment of management objectives]	~~% of total forest area~~ **Ha**
5	~~Change in~~ Employment related to the forest sector [including related downstream industry, research, education, tourism and NWFPs as far as possible]	~~% change~~ **Number FTE**
6	Existence of ~~effective~~ policies, **strategies** and institutions **which explicitly encourage** ~~supporting~~ SFM	References (title, date URL etc.)
7	Existence of ~~scientifically sound~~ national **or sub-national** forest assessment processes [use FRA 2020 terminology about characteristics of NFI process]	References (title, date URL etc.)

8	Existence of a national **or sub-national** ~~mechanism to secure multi-~~stakeholder **platform** ~~participation in the development and implementation of forest-related policies~~ [See FRA2020 definition of stakeholder platform]	References (title, date URL etc.)
9	Proportion of forest area under a long-term forest management plan [See FRA2020 for definition of long term forest management plan]	%
10	~~Proportion of~~ Forest area under an independently verified forest management certification scheme [See FRA 2020 for definition of independently verified forest management certification scheme]	% Ha
11		[Combined with 17]
12	**Volume of wood removals** [reinstated]	**m3**
13	Existence of traceability system(s) for wood products [caution needed: traceability may apply to legality, not sustainability]	References (title, date, URL, **state of development (operational, being developed, under consideration)** etc.
14	Proportion of forest area disturbed [if necessary reword to be consistent with FRA 2020]	% of forest area
15	~~Change in~~ Area of degraded forest [urgently requires further consideration]	% Ha
16	~~Change in~~ Number of forest dependent people in extreme poverty [important and further work needed but not for FRA]	~~% change~~ Number
17	Financial resources from all sources for the implementation of sustainable forest management [important and further work needed but not for FRA]	~~$/ha of forest~~ ~~(or trends in total amounts)~~ $
18	**Total supply of wood-based energy** [reinstated because of importance in both developing and developed countries]	**M j**
19		[PES dropped]
20		[Recovery rate dropped]
21	Net GHG sink/source of forests, **and carbon storage in harvested wood products** [UNFCCC monitoring process]	Tons C
New #1	**Change in area of primary forests** [to address Aichi target 5 using an FRA term]	**Ha**

28. The Working Groups noted that, as with all indicators, analysis must take account of context, and national circumstances. In some cases, it may not be clear whether an increase or a decrease of the indicator is "sustainable". In any case, the Global Core Set should be taken as a whole

29. The CPF Task Force should be informed that the following indicators require urgent work on concepts and/or definitions before they are usable, but should be in the GCS because of strong policy commitment:
   • #15 Area of forest degradation.
   • #16 Number of forest dependent people in extreme poverty.
   • #17 Finance from all sources for implementing SFM.

30. A "candidate list" of indicators/topics not yet suitable for inclusion in the GCS, but which deserve further consideration, was identified by the Working Groups for possible inclusion in a revised list:

- Contribution of forests to food security
- Payment for forest ecosystem services
- Economic aspects of SFM (e.g. forest share of GDP, livelihoods/revenues from forests)
- Social aspects of SFM

31. During the Plenary discussion on the GCS, experts further commented that:

- The GCS should not have too many indicators. Some experts were reluctant to add new indicators at this late stage; others considered that a set of about 20 indicators is probably just about acceptable.

- FRA can only meet the data needs relevant to some of the indicators. The CPF Task Force will need to identify sources of data for other GCS indicators.

- There needs to be a narrative around the GCS. Experience from regional C&I for SFM processes show that, as well as having a succinct meaningful title, all indicators need a clear rationale. The links to SDGs, GFG targets and Aichi Biodiversity Targets identified in Annex 1 of the Background Paper are helpful in this regard, but further work is needed including the development of companion notes for each indicator.

- It is important to concentrate on the indicators that meet high-level policy needs. Issues such as the contribution of forests to the livelihoods of many of the poorest people in the world (the figure of 1.6 billion is often quoted) and to food security are directly relevant to SDG1 and SDG2. There is a danger of being too forest-centric, focussing on indicators where data is readily available about the state of the world's forests; this would lead to an unbalanced list.

- Regional C&I for SFM processes have played a key role in developing the concepts underlying the Global Core Set, and might be involved in finalising the set. This applies especially to indicators addressed through the CFRQ mechanism.

- Countries may wish to use the GCS framework to structure national datasets.

- #6, #7, #8, #13: it was suggested that lists of references provide a useful data source but are rather unusual not appropriate as an indicator. On the other hand, these policies, processes and systems etc do demonstrate how countries have responded to the pressures represented by high level targets, and so this approach fits well with the established Pressure/State/Response structure of indicator sets.

- #15: the indicator should reflect the policy goal of forest landscape restoration, rather than measuring the area of degraded forest. Forest landscapes include, e.g., agro-forestry and pastoral systems as well as forests, and countries are identifying voluntary contributions to meet the Bonn Challenge.

- #17: add at end "at global, regional and national levels".

- #21: this should be revised to refer consistently to units of GHG rather than carbon.

- New #1: The area of Natural Forest, or Naturally Regenerated Forest, might be preferable to area of Primary Forest because the Primary Forest concept is not sufficiently well established and the data could be misleading. Furthermore, well managed planted forests can also be valuable for biodiversity. In any case, it is important that there is consistency with FRA.

Agenda item 10. Strengthening of FRA 2020

32. Ms Leticia Piña (FAO) introduced this item, focusing on capacity development. She explained that capacity building has always been a key issue for FRA, and that the objectives for FRA 2020 include further capacity building. This will be achieved through capacity building for completion of the FRA 2020 reports, with a Global Workshop, regional and sub-regional workshops; capacity building on use of remote sensing for the FRA reporting; and the strengthening of national networks for the FRA 2020 reporting process in order to enhance awareness and improve data availability and dissemination.

Agenda item 11. Working groups

33. Working Groups discussed capacity development and continued to discuss the FRA on-line platform. In addition, there was a parallel discussion on remote sensing and a FRA Advisory Group meeting.

Agenda item 12. Presentation of group reports and discussion

Capacity Development

34. The following feed-back from Working groups on capacity development was reported:

General recommendations

- FRA should make use of country experience and consider requesting collaboration from country experts to support the FRA secretariat.

- Have regional focal points in the FRA secretariat.

Comments/ Recommendations for Global workshops:

- Invite volunteer countries to compile pilot reports before the Global Workshop.

- Encourage NCs from the same regions/sub regions to work together.

- Select countries with good examples of a coordinated FRA reporting process and invite them to present their experiences during the workshop.

- Encourage coordination with those engaged in SDG reporting at different levels.

Comments/ Recommendations to strengthen the network of national correspondents, experts and partners at global level

- Have an online platform to support communication, but also keep the traditional channels (skype, telephone, email, etc).

- Have NC focal points animating the network.

Comments/ Recommendations for the Regional/ sub regional workshops

- If training is provided during the Workshop, then is good to meet towards the end to finalize the report.

- Workshops allow exchange of experiences with others in similar situations. They are better held sooner rather than later so as to know the state of the progress and be able to react if there are problems.

- Continue with FAQ document and include new questions when they arise.

- Consider allowing regional organizations and at least two participants per country, to attend; useful to include someone from the National Statistical Office

Comments/ Recommendations for the national level workshops

- Useful for countries to know how coordination with the National Statistical Offices works. In some countries collaboration has been established from long ago, in others the reality is different.

- Statistics at national level are organized differently. Suggest that NCs find out how it works at country level. Request FRA to provide information on the SDG process, including how this is organized at all levels, especially at country level.

Good examples at country level

- Collaborate with REDD+ teams at country level to strengthen the FRA network.

- Some countries have validation workshops for forest related data (with national and/or international participants).

35. During discussion, it was suggested that:
- Focal points for the Rio Conventions should be invited to regional/sub-regional national workshops on FRA to encourage collaboration.

Remote sensing
36. Following the parallel discussion on RS, the following additional suggestions were made:
- Sampling-based remote sensing survey is a key activity that should continue.

- Regarding Global forest mapping, the minimum ambition is to develop a visual product. Beyond that, the aim should be to integrate forest land use and human interaction; this should include, e.g. intact, primary and degraded forest – a process is needed to discuss detail and piloting.

- Update the Global Ecological Zones map to support the IPCC Good Practice Guidance refinement; and update default values of biomass and carbon for countries that lack national data.

- Continued country support and capacity development to develop national map products.

37. Points made during discussion were:
- The importance of validating RS products, and interaction with countries.

- The need for establishing an appropriate and efficient statistical design.

- The potential for using very high-resolution images to identify changes.

- The potential for using Collect Earth as a tool during FRA.

- The need for the FRA forest definition to be consistent with data that is collected.

Thursday 15 June
Field Trip

38. The Finnish hosts organized a study tour. Topics discussed were forest management in private forests; the utilisation and conservation of mires; the forest-based bioeconomy in North Karelia; and the management of protected forest areas in Finland (case study Koli National Park).

Friday 16 June
Agenda item 13. Wrap up of discussions and adoption of the report

39. The Chairperson presented the draft final report for consideration and adoption by the meeting, and invited experts to focus on Section III (Key findings and recommendations). The following points were made:

- Subject to the points made during this discussion, Section III successfully captures the key findings and recommendations.

- In addition, the FRA secretariat will make use of suggestions contained in Annex 4, recognising however that this Annex also includes general observations and some ideas that did not receive widespread support.

- It is important to further clarify the rationale for required reporting years in the documentation.

- Table 2a: there was discussion about the use of the term primary forest, and its definition. It was stressed that other processes depend on FRA collecting this information and it is also one of the CFRQ variables. The Explanatory Notes should further clarify reporting on this variable.

- Table 2b: although rubber plantations are being dropped from Table 2b, they are still captured within the definition of forest.

- Table 5a: experts requested the opportunity to test the suggested new Table during the new on-line platform pilot.

- Table 6a: in some countries it can be problematic to identify land "owned by local, tribal and indigenous communities" as being in "private ownership". However, including an "of which by local, tribal and indigenous communities" under "public" ownership could also complicate reporting. The conclusion was to keep the current formulation.

- Table 7a: the FRA secretariat will share the proposals it receives with other experts who participated in the Expert Consultation.

- Table 8: it would be useful to allow countries to view and comment on UNIDO statistics on employment in the wood products industries.

- Table 9: asking for information about the number of graduates in a single year could mask fluctuations. Annual information should be requested. IFSA offered to help the FRA secretariat to develop the Explanatory Notes to clarify what is meant by "forest-related" education.

- Table 10a: align GCS indicators with FRA text on "references and weblinks to relevant policies, legislation and platforms" and on traceability systems.

- FRA on-line platform: maintain consistency between FRA platform, FAOSTAT, JFSQ and other external data sources used in the FRA reporting.

- GCS: comments on the discussion, as reported in this Annex should be sent to the FRA secretariat (fra@fao.org) before 30 June 2017.

- Capacity development: it was clarified that the purpose of having regional focal points is to give NCs a point of contact in the FRA secretariat.

40. The Chairperson invited experts to send the FRA secretariat comments on the Report Annexes before 30 June 2017. Subject to these possible amendments, the Report was endorsed.

Agenda item 14. FRA 2020 Next steps

41. Mr Anssi Pekkarinen (FAO) outlined the timeline for FRA 2020. The scoping process (2016-17) is nearing completion, capacity building is beginning, and data collection will start in early 2018. Data analysis will take place in 2018-19, followed by publications and outreach in 2019-20. So far, 161 NCs have been nominated. Following this Expert Consultation, the next steps are the finalization, internal clearance and FRA Advisory Group endorsement of the FRA 2020 specifications. FRA platform testing will start in September 2017. The RS work plan will also be finalized, based on experts' recommendations, and implementation of capacity building will start. Action on capacity development will include organising the Global and regional-sub regional workshops, and national level capacity building. There will be a Global Launch of FRA 2020 in Mexico in January or February 2018, with a focus on training and data entry. Reminding experts that the FRA 2020 is a partnership, he said that the vision for FRA 2020 is that it should be an acknowledged centre of excellence for global forest monitoring and capacity development, and the global hub for most recent and trusted forest information.

Agenda item 15. Closing session

Any other business

42. Mr Joberto Veloso de Freitas informed experts that the XX IUFRO World Forestry Congress will take place in Curitiba, Brazil, from 29 September to 5 October 2019.

Closing remarks

43. Mr Kari Korhonen (Natural Resources Institute Finland, Luke), thanked experts for holding their Expert Consultation in Joensuu.

44. Mr Anssi Pekkarinen (FAO) reiterated thanks to the Natural Resources Institute Finland (Luke) and the City of Joensuu for their support. He also expressed appreciation for financial contributions from the Finnish Ministry of Foreign Affairs, the Finnish Ministry of Agriculture and Forestry, and the European Union. In addition, he thanked MTK (the Finnish Forest Owners' Association), the Regional Council of North Karelia, the Finnish Forests & Parks Service and all others who had provided hospitality during the field trip. Finally, he thanked the Chair, members of the Advisory Group, the drafting committee and experts for their constructive participation in the Expert Consultation.

45. Experts thanked staff in the FAO secretariat and the Natural Resources Institute, Finland (Luke) for all their hard work in organising a successful meeting.

46. The Chairperson closed the Expert Consultation at 11.15 am.

Annex 5 List of FRA 2020 Tables

Table 1a Extent of forest, other wooded land and other land
Table 1b Annual forest area loss, gain and net change
Table 2a Forest characteristics
Table 2b Specific forest categories
Table 3a Growing stock
Table 3b Growing stock composition
Table 3c Biomass stock
Table 3d Carbon stock
Table 4 Non wood forest products removals 2015
Table 5a Management objective
Table 5b Forest area within protected areas and forest area with long-term management plans
Table 6a Forest ownership
Table 6b Holder of management rights of public forests
Table 7a Disturbances
Table 7b Area affected by fire
Table 7c Degraded forest
Table 8 Employment
Table 9 Graduation of students in forest-related education
Table 10a Policies, Legislation and national platform for stakeholder participation in forest policy
Table 10b Area of permanent forest estate

Annex 6 Pictures from the Expert Consultation

Figure 1. Plenary session 12.6.2017

Figure 2. Group photo 12.6.2017

Figure 3. Group work 13.6.2017

Figure 4. Group reports and discussions 14.6.2017

Figure 5. Field trip to Kontiolahti near Joensuu meeting a private forest owner 15.6.2017

Figure 6. Group photo at Koli National Park 15.6.2017

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