

## Criterion 3. Productive functions of forests

### Reporting Form 3.1: Increment and fellings

**Pan-European indicator 3.1:** Balance between net annual increment and annual fellings of wood on forest available for wood supply

**Reporting for 2011:** 27 countries reported on both net annual increment and fellings for 2005 (29 countries on NAI and 34 countries on fellings).

Out of 31 countries, which took part in the supplementary enquiry on reporting on FAWS, 23 countries reported on this indicator for forest available for wood supply in SoEF 2011(8 did not).

**Comments:** The reporting on FAWS is not consistent, as economic availability is not taken into account in several countries. There are also other somewhat unclear situations, as areas with strictly limited intervention.

With regard to the comparison with FRA, trees outside forest is not likely to represent any problem, but the distinction between total forest and FAWS may cause a difference.

There is often not any long-term trend for fellings. Thus it may be irrelevant to report for 2015. The annual average for reference year 2010 would include all available statistics by the time of the reporting (2008-2012).

Division of fellings by coniferous and non-coniferous? Re-organisation of the table, also showing removals? That may provide some useful information, but also increase the reporting burden.

**Suggestions:** The definition of FAWS could be changed to only take into account legal availability, or we could develop more detailed guidelines on how to assess accessibility/economic availability. Separate reporting on forest not available for wood supply? Forest not available for wood supply may also be unavailable for forest inventory.

Ask the ToS for recommendation

We should develop guidelines on how to prepare the best possible estimates if components are not directly available from inventories/records (default values) and for conversion from removals to fellings (when harvest statistics are used).

Report on periodic averages for reference years 1990, 2000, 2005 and 2010.

**Table 3.1: Increment and fellings**

Category	Year	Gross annual increment	Natural losses	Net annual increment	Fellings	
					Total	... of which: of natural losses
Volume (1000 m <sup>3</sup> o.b.)						
Forest available for wood supply	2010					
	2005					
	2000					
	1990					

**Reporting notes:**

1. Growing stock, increment, natural losses and fellings are reported over bark.
2. Figures for the reporting years refer to the averages for the 5-year periods 1988-1992, 1998-2002, 2003-2007 and 2008-2012 respectively, i.e. not the data for the "central year" (1990, 2000, 2005) noted in the Table above, e.g. 2003-2007 instead of 2005.
3. If no data on "Natural losses" exists, the country may provide reporting of NAI, with the accompanying comments.
4. Fellings of natural losses include felling of dead trees and cutting of trees already brought down by natural cause, e.g. by storm.

## Reporting Form 3.2: Roundwood

### Pan-European indicator 3.2: Value and quantity of marketed roundwood

**Reporting for 2011:** Data from 38 countries was available on volume of “Total removals”, 30 countries on “Marketed removals” and 33 countries on “Total removals from forest” in 2005. In terms of value of removals, the data was available for 27, 28 and 29 countries for that year, respectively.

**Comments:** Should we continue to report periodic averages, or report on individual years? FRA is going to use information from JFSQ, reported on an annual basis.

Should we maintain the distinction between total removals and total removals from forest? The difference is usually negligible (although in principle it would be of interest to see how much is harvested outside forests).

The table could also ask for figures over bark, together with additional information on bark coefficient.

**Suggestions:** Specify that the value should be reported in real terms (deflated prices), or both nominal and real. Ensure that the conversion is carried out in a consistent way for all countries.

Leave out the category “Total removals from forest”.

Should we report annual figures, or maintain the periodic reporting??

**Table 3.2: Removals**

Category	Year	Total Volume of removals (1000 m <sup>3</sup> u.b.)	Industrial roundwood		Woodfuel	
			Volume	Value	Volume	Value
			1000 m <sup>3</sup> u.b.	1000 local currency	1000 m <sup>3</sup> u.b.	1000 local currency
Total removals	2010	FRA T4c			FRA T4c	
	2005					
	2000					
	1990					
... of which marketed	2010					
	2005					
	2000					
	1990					
Total removals from forest	2010					
	2005					
	2000					
	1990					

### Reporting notes:

1. Roundwood is to be reported “*under bark*”. “*Total removals*” include roundwood removed from all land-use categories, not only from forest or other wooded land.
2. The assessment of “*Total removals*” and “*Total removals from forest*” should also include wood that is removed for subsistence use with the value calculated on the basis of local roadside prices.
3. “*Marketed*” roundwood comprises all roundwood sold on markets. It excludes roundwood harvested for self-consumption (subsistence) and other forms of uses without market transaction.
4. The value reported should be the market value at the site of removal. If possible, felled (roadside) values should be reported. If a different basis is used (e.g. standing sales value), values should be converted to felled (roadside). In case where values are obtained from a point further down the production chain, transport costs and possible handling and/or processing costs should be discounted. Values and conversion factors used in the calculation should be provided in the comments.
5. Figures for the reporting years refer to the averages for the 5-year periods 1988-1992, 1998-2002 2003-2007, and 2008-2012 respectively, i.e. not the data for the “*central year*” (1990, 2000, 2005) noted in the Table above, e.g. 2003-2007 instead of 2005.
6. The pre-filled figures (if any) are drawn from the UNECE/FAO TIMBER database as of February 2010. Kindly note that any data for 2010 are in fact based on the year 2008 only. These data can be found through the FAOSTAT database at <http://faostat.fao.org/DesktopDefault.aspx?PageID=630&lang=en> and at the UNECE at <http://timber.unece.org/index.php?id=207>.

### Reporting Form 3.3: Non-wood goods

**Pan-European indicator 3.3:** Value and quantity of marketed non-wood goods from forest and other wooded land.

**Reporting for 2011:** Data on quantity of plant “non-wood products” was available for 25 countries, while data on value of plant “non-wood products” was received from 27 countries (at least for one product category). Data on quantity of animal “non-wood products” was available for 18 countries, while data on value of animal “non-wood products” was received from 21 countries (at least for one product category). The coverage of products categories was very uneven.

**Comments:** Are we going to collect data for 2010 only, or to initiate reporting on trends, e.g. by requesting data for 2005?

For most products it is probably difficult to detect any changes between 2005 and 2010. Maybe it is better to report only for 2010.

The FRA categories are less precise and hence less interesting.

The NACE Rev2 classification should be mentioned and considered. It specifies that growing of Christmas trees is not a forestry activity. Reporting note 7 – good point to exclude grazing. Similar the Iberian jam “pata negra” could also be excluded?

**Suggestions:** Report for 2010 in a similar way as we did for 2005. The relevance of certain categories of goods should be discussed.

**Table 3.3: Non-wood goods (2010):**

Rank (value)	Name of (groups of) product	Key species	Unit	Total harvested non-wood goods - quantity	Marketed non-wood goods		Non-wood goods category
					Quantity	Value in 1000 local currency	
1 <sup>st</sup>	FRA 4b						
2 <sup>nd</sup>							
3 <sup>rd</sup>							
4 <sup>th</sup>							
5 <sup>th</sup>							
6 <sup>th</sup>							
7 <sup>th</sup>							
8 <sup>th</sup>							
9 <sup>th</sup>							
10 <sup>th</sup>							
All other plant products							
All other animal products							
<b>TOTAL</b>							

**Reporting notes:**

1. Non-wood goods categories:

Code*/	Plant products / raw materials	Code*/	Animal products / raw materials
1	Christmas/New Year trees	8	Game meat
2	Mushrooms and truffles	9	Living animals
3	Fruits, berries and edible nuts	10	Pelts, hides, skins and trophies
4	Cork	11	Wild honey and bee-wax
5	Resins, raw material- medicine, aromatic products, colorants, dyes	12	Raw material for medicine, colorants
6	Decorative foliage, incl. ornamental plants, mosses, etc...	13	Other animal products
7	Other plant products		

\*/ Code (number) can be used for references in the Table (ranking) and “Country comments”.

FRA includes alternative classification of products, which of them should be applied:

Category
<b><u>Plant products / raw material</u></b>
1. Food
2. Fodder
3. Raw material for medicine and aromatic products
4. Raw material for colorants and dyes
5. Raw material for utensils, handicrafts & construction
6. Ornamental plants
7. Exudates
8. Other plant products
<b><u>Animal products / raw material</u></b>
9. Living animals
10. Hides, skins and trophies
11. Wild honey and bee-wax
12. Wild meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

2. “*Marketed*” non-wood goods comprise all non-wood goods sold on markets. It excludes non-wood goods harvested for self-consumption (subsistence) and other forms of uses without market transaction.
3. Reference area for reporting is “*Total forest and other wooded land*”, not further divided into sub-classes. If data is available for sub-class “*Forest*” only, please report on this sub-class with explicit reference to “*Forest*” and provide a note under “*Country comments*”. If data is available for certain forest areas or ownership classes (e.g. state forests), but not for others, data should be reported with explicit indication of area (ha) and/or reference to the ownership class.
4. The non-wood good categories “*Christmas/New Year trees*”, “*Living animals*” as well as “*Pelts, hides, skins and trophies*” are to be reported in 1000 pieces, all other categories in tonnes. If goods are reported in different measurement units than those recommended, please specify under “*Country comments*”.
5. “*Mushrooms and truffles*” and “*Fruits, berries and nuts*”: Products from mushroom farms or fruits from trees outside forests, such as orchards, are to be excluded.
6. “*Resins, raw material for medicine, aromatic products, colorants and dyes*” includes extracts e.g. tannins, raw material for industrial extracts, essential and cosmetic oils.
7. “*Other plant products*” includes other products collected from forest and other wooded land, such as fodder, reproductive material (e.g. seeds, parts of plants) or other plant-based raw material for food and beverages. Note that grazing in the forest should be excluded. Please specify further categories if necessary.
8. “*Game meat*” (in tonnes) and “*Living animals*” (in 1000 pieces) “*from forest and other wooded land*” is to be understood to include game whose habitat is forest-related or –dependent. Please use expert judgment in classifications and provide information on game classes included under “*country comments*”. Meat and harvest from game farms are to be excluded. Note that marketed game only is to be included. Licenses for hunting are to be reported as “*Marketed Service*” under Reporting Form 9 “*Services*”. Only those marketed living animals that were caught in their natural habitat, should be reported under category “*Living animals*”.

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## Reporting Form 3.4: Services

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**Pan-European indicator 3.4:** Value of marketed services on forest and other wooded land

**Reporting for 2011:** Data on quantity of services was available for 5 countries, while data on value of services was reported by 15 countries (at least for one service category). The coverage of product's categories was very poor and uneven.

**Comments:** No comments

**Suggestions:** Keep the table as it is, report for 2010. Merge any development of reporting for this indicator with work on the indicator 6.4 Expenditures for services.

**Table 3.4: Marketed Services**

Rank (value)	Name of service/product	Unit	Service provision in 2010		Forest service category*/
			Amount of service/product	Value in 1000 local currency	
1 <sup>st</sup>					
2 <sup>nd</sup>					
3 <sup>rd</sup>					
4 <sup>th</sup>					
5 <sup>th</sup>					
6 <sup>th</sup>					
7 <sup>th</sup>					
8 <sup>th</sup>					
9 <sup>th</sup>					
10 <sup>th</sup>					
	Remaining total				
Total					

\*/ Please select and insert an appropriate category (code) from Reporting note 2.

**Country comments:**

\*/ Table 3.4 demands information for 2005 only, information on observed trends is welcome.

**Reporting notes:**

1. Marketed services reported should be forest-dependent or mainly forest-related, but are not necessarily to be marketed by forest owners (e.g. eco-tourism). Forest-related means that forests constitute an essential element of the service marketed. Please provide information on types of services included in the different classes under "Country comments", and report in appropriate sub-classes if possible. Note that only marketed services involving some kind of financial transaction should be included, and not hypothetical values of services that are currently free of cost to users/consumers.

2.. Categories of forest services (source: *Study on the Development and Marketing of Non-Market Forest Products and Services*) - more information and the final report of the project is now available at the European Commission Agriculture and Rural Development web page: [http://ec.europa.eu/agriculture/analysis/external/forest\\_products/](http://ec.europa.eu/agriculture/analysis/external/forest_products/). For each reported service/product please assign this to the most detailed category from the list below.

<b>Category</b>	<b>Code</b>
<b>Ecological services</b>	<b>1</b>
Water protection	1.1
Soil protection	1.2
Health protection	1.3
<b>Biospheric services</b>	<b>2</b>
Biodiversity protection	2.1
Climate regulation	2.2
<b>Social services</b>	<b>3</b>
Tourism	3.1
Recreation	3.2
Sport activities	3.3
<b>Amenity services</b>	<b>4</b>
Spiritual services	4.1
Cultural services	4.2
Historical services	4.3
<b>Other services</b>	<b>5</b>

3. Marketed ecological services include those related to indicators 5.1 and 5.2 (protection of soil, water and other environmental functions as well as infrastructure and managed natural resources) on a voluntary contractual basis with compensation or other payments from private or public bodies.

4. Marketed biospheric services include services related to indicator 4.6 (in-situ or ex-situ gene conservation of genetic resources) as well as indicator 4.9 (protected forest area) e.g. nature protection on a voluntary contractual basis with compensation or other payments from private or public bodies (this includes Natura 2000). This class also includes carbon-sequestration related afforestation projects in the context of the Kyoto Protocol – should such projects be included, please specify the amount under “*Country comments*”. Note that the reporting under this category is complementary to reporting under indicator 4.9. While in indicator 4.9 the main objective is to determine the quality of protection, the main focus here is to determine monetary values from market or quasi-market transaction for environmental services.

5. Marketed social services include e.g. hunting or fishing licenses, renting of huts and houses as well as forest-based leisure, sport and outdoor adventure activities and educational services that are not free of cost to consumers (the public, schools,..). Please use “*Country comments*” to report on further criteria used for including different services. Recreational services not exchanged via market transaction are not to be reported. (see also indicator 6.10).

6. Amenity services include those related to spiritual, cultural and historical functions, e.g. sacred, religious, or other forms of spiritual inspiration, sites of worship, landscape features (mountains and waterfalls), “*memories*” in the landscape from past cultural ties, aesthetic enjoyment and inspiration, historic artifacts.

7. Other marketed services include e.g. payments to woodland owners for licenses for gravel extraction, telecommunication masts, wind farms and electricity distribution.

8. The reference area for reporting is “*Total FOWL*”, not further divided into sub-classes “*Forest*” and “*Other wooded land*”. If data is available for some forest areas, e.g. for state forests or sub-class “*Forest*”, please give an expert judgment on the likely value for “*Total forest and other wooded land*”. Please report on actually available data on which expert judgment is based under “*Country comments*”.

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**Reporting Form 3.5: Forests under management plans**

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**Pan-European indicator 3.5:** Proportion of forest and other wooded land under a management plan or equivalent

**Reporting for 2011:** An increasing number of countries has reported on area of forest under management plans or its equivalent – 34 and 28 countries, respectively reported for at least one reporting year. Additionally 28 countries reported on area of other wooded land under management plan or its equivalent but only half of them provided values other than “0”.

**Comments:** FRA requests separate information on forest covered by management plans for production and for conservation, as well as the area under FMP that is monitored annually.

To avoid confusion and inconsistency, we would need to specify how plans for protected areas should be treated. Conservation functions in multiple use forest are normally included in the same plan as for production and would be difficult to separate.

**Suggestions:** Add an additional column for data from nature management plans in protected areas/reserves, or change the reporting notes to explicitly specify that such areas should be included under “equivalents”.

**Table 3.5: Forests under management plans**

Category	Year	Management plans	Equivalents	Total
		(% )		
Forest	2010			FRA T14a
	2005			
	2000			
	1990			
Other wooded land	2010			
	2005			
	2000			
	1990			
Total forest and other wooded land	2010			
	2005			
	2000			
	1990			

**Reporting notes:**

1. Figures are to be reported separately and exclusively for the two categories. The percentages of forest land and of other wooded land covered by the following categories should be reported:
  - a) forest management plans, defined by the MCPFE as “ Information (in the form of text, maps, tables and graphs) collected during (periodic) forest inventories at operational forest units level (stands, compartments), and operations planned for individual stands or compartments to reach the management goals (MCPFE, 2002)”;
  - b) equivalents, defined by the MCPFE as “Information collected on forest area, at forest management or aggregated forest management unit level (forest blocks, farms, enterprises, watersheds, municipalities, or wider units), and strategies/management activities planned to reach the management or development goals” (MCPFE, 2002).
2. The maximum sum of area covered is up to 100% of total FOWL. Areas covered by a management plan and an equivalent should thus be counted only once, and reported in category “*Management plans*”.
3. Data sources: please specify sources separately for forest, other wooded land and total FOWL if sources differ.