

Background information on “substantially altered indicators” within the Updated pan-European Indicators for SFM

Amongst the Updated pan-European Indicators (UPEI) for Sustainable Forest Management (SFM) that were adopted by the Madrid Ministerial Conference in 2015, there are a few indicators with altered name, full text, reported categories and/or rationale as compared to the previous set of the criteria and indicators (Improved Pan-European Indicators for SFM approved in 2003). Among the most altered indicators belong mainly quantitative indicators 6.4 “Investments in forests and forestry”; 6.10 “Recreation in forests”; 4.2 “Regeneration”; 4.3 “Naturalness”; 1.4 “Forest carbon” and the original quantitative indicator 3.5 “Forests under management plans”.

1. Quantitative indicator 6.4 “Investments in forests and forestry”

History of this indicator development is described in the following table:

Reporting for SoEF	Title (T)	Full text (FT)	Reported categories (RC)
2011	Expenditure for services	Total expenditures for long-term sustainable services from forests	Government expenditure on: - Ecological services, - Biosphere service, - Social and amenity, - Other services.
2015	Expenditure for services	Total expenditures for long-term sustainable services from forests	Total expenditures subdivided into: - gross expenditure on public forests; - transfer payment to private sector; - cost of forest administration Total revenue subdivided into: - gross revenue from public forests; - all other government revenues from forestry and forest products.
2020	Investments in forests and forestry	Total public and private investments in forests and forestry	The reported categories described in the Background information for the Updated pan-European Indicators for SFM as of 3 June 2015 correspond to those reported for SoEF 2015 plus Total private investments and Total private revenues. But it is not clarified so far, how should be understood the term “investments”.

Comments to the particular years:

SoEF 2011: Compliance among the title, full text and reported categories of Indicator 6.4; however only 18 out of 46 signatory countries reported at least some data, most likely due to the lack of information on the above mentioned reported categories at the national level.

SoEF 2015: Because of mentioned lack of the data on the expenditures for the ecological, biosphere, social and amenity services and in order to harmonize further the pan-European and the global reporting, reported categories were altered to the “Total expenditures” and “Total revenue”, but the title and full text of Indicator 6.4 remained unchanged. As a result, the mismatch between title and full text on one hand and reported categories on the other hand occurred. Moreover “Total revenue” was also reported as a subcategory of this indicator however not being mentioned the title and full text.

29 out of 46 signatory countries reported at least some data, indicating broader availability of information at the national level.

SoEF 2020: In 2015 the title of indicator was updated from „Expenditure for services“ to "Investments in forests and forestry". The reported categories described in the [Background information for the Updated pan-European Indicators for SFM](#) as of 3 June 2015 correspond to those reported for SoEF 2015 plus Total private investments and revenues. But it is not clarified so far, how should be understood the term “investments”. There are three options/alternatives:

- 1) Investments as a synonym to general economic terms: funding, expenditures, costs, resulting in following reporting categories:
 - Total public investments subdivided into:
 - gross expenditures on public forests,
 - transfer payment to private sector,
 - cost of forest administration; and
 - Total private investments.

Note: This alternative (1) follows the above mentioned background information as of 3 June 2015.
- 2) Investments as a synonym to capital expenditures (CAPEX) resulting in following reporting categories:
 - Total public capital expenditures in forestry,
 - Total private capital expenditures in forestry
- 3) Combination of both alternatives 1) and 2). This alternative 3) fits best to the proposals of the FOREST EUROPE workshop on the UPEI for SFM [FOREST EUROPE workshop on the UPEI for SFM](#) held in Spain on 27-29 April 2015 as well as FOREST EUROPE Advisory Group on updating of the pan-European indicators for SFM.

Proposals of the above mentioned workshop related to the Indicator 6.4: Investments in forests and forestry

“The participants reflected in the approach given by the Advisory Group to this indicator and on how expenditures are different from investments and how both considerations are meaningful to have into account, either in A4 and/or here trying not to double counting. It was also highlighted the need to better use economic terms as ‘Gross fixed capital formation’ but at the same time not to lose the noncapital side of it and how it can be better communicated.

It was reflected the possible need to broaden the definition of the sector including the value chain. As for the private dimension of the investments it was pointed out that though the difficulty to obtain information, there are good examples from forest industry and from forest owners together with industries that will be worthwhile having.”

By means of alternative 3) we should be able to obtain data related to value of "new annual additions to fixed assets as well as not to lose the noncapital components of investments". This reporting format is literally closer to the indicator name, however, introduces additional reporting categories and the availability of such data (mainly private investment and expenditures) is unknown.

Above mentioned reporting approach focuses on all public and private investments and capital expenditures to all public and private forests and should allow a better analysis of public and private aspects of forest management financing and also improve the completeness of reporting and the availability of data.

This reporting approach maintains the consistency with previous reporting for SoEF 2015 and is consistent with the one applied in the FAO FRA. However this indicator is now set up wider as compared to FRA/CFRQ where only public expenditure on forestry is reported.

Another important question is, whether we should continue with data collection and reporting on “revenues” from the forest and forest industry. Data collection and reporting on “revenues” are not required by the current title and full text of the indicator 6.4, nor were they required previously. However, despite this fact, “revenues” were reported within the indicator 6.4 in previous reporting cycle (SoEF 2015) and data on “revenues” is still collected within FAO FRA process (Question 17).

In the Background information as of 3 June 2015 there are stipulated these classes to be reported within the revenues: Total public revenue, subdivided in: Gross revenue from public forests; All other government revenues from forestry and forest products and Total private revenue.

Possible question is also, whether the reporting on revenues should not be moved into the indicator 6.3 (Net revenue). Then there would be better interconnection between moved subcategory "Total revenues" and the title of indicator than if this reported subcategory remains under indicator 6.4 (Investments in forests and forestry).

Considering all mentioned questions related to further routing of the reporting on quantitative indicator 6.4 Investment in forest and forestry, the LUB team triggered the online survey through the following link: https://www.surveymonkey.com/r/Questionnaire_indicator_6_4. Head of the FOREST EUROPE LUB sent kind request to all signatories and observers of the FOREST EUROPE to express their countries’ opinions on the future reporting approach to the mentioned indicator. We recommended the countries’ focal points to fill in the questionnaire in close cooperation with the experts who report data related to the socio-economic criteria & indicators and/or the European economic accounts for forestry.

In addition to the online survey there was triggered also discussion at the FOREST EUROPE LUB Communication platform <http://foresteurope.org/forestforum/communication-platform/?wpforo=signin> within which we expected the expert opinions on related questions; mainly in relation to incorporation of above mentioned changes in indicator 6.4 into the Joint FORESTEUROPE/UNECE/FAO questionnaire on quantitative indicators with minimal negative impacts on the continuity of FOREST EUROPE reporting on SFM and on its mutual comparability and connection with FAO Forest Resources Assessment. Disadvantage is very low active participation of experts in the discussion until now.

A preliminary proposal of the “Reporting form 6.4: Investments in forest and forestry” building on the above mentioned alternative 3) is in the **Annex 1** to this background information. After processing of outcomes of mentioned online survey on countries’ opinions the proposal will be reformulated accordingly. There are also some relevant opinions that this indicator could be linked to Eurostat Economic Accounts for Forestry or similar, where some harmonization efforts have already been done. However, neither this proposed solution is fully comprehensive in relation to required reported categories.

2. Quantitative indicator 6.10 “Recreation in forests”

The title and full text of the indicator 6.10 were altered in the UPEI for SFM as follows:

Actual title according to the UPEI: “Recreation in forests”; original wording was: “Accessibility for recreation”.

Actual full text according to the UPEI: “The use of forests and other wooded land for recreation in terms of right of access, provision of facilities and intensity of use”; original wording was: “Area of forests and other wooded land where public has a right of access for recreational purposes and indication of intensity of use”.

Reported categories were partly, but just formally, altered with no proposal to change the reporting approach and definitions in Background information for UPEI for SFM as of 3 June 2015.

The new wording of the indicator 6.10 Recreation in forests was complemented by the text “provision of facilities and intensity of use” which will have to be reflected in the respective reporting form of the Joint FOREST EUROPE/UNECE/FAO questionnaire on quantitative indicators and in the next report on State of Europe’s Forests (2020). It is necessary to formulate the reporting approach and definition for “provision of facilities” in relation to the recreation in forests and to propose which facilities should be monitored and reported.

To reach this aim we have analysed available literature sources related to this topic^{1,2}. In addition, we have triggered discussion at the FOREST EUROPE LUB Communication platform <http://foresteurope.org/forestforum/communication-platform/?wpforo=signin> and asked experts for their opinions mainly on the following questions: (i) How the forest recreation facilities should be specified/defined? (ii) What types of facilities for recreation in forests should be reported? (iii) Do you support compilation of the pre-defined list of facility types complemented with an option to add additional types? In this work the LUB team has closely cooperated with the joint ECE/FAO Forestry and Timber Section.

Based on this work a preliminary proposal of the “Reporting form 6.10: Recreation in forests” was elaborated (**Annex 2**). It was submitted on further discussion within the FOREST EUROPE LUB Communication platform and on the basis of obtained comments the proposal could be reformulated accordingly.

Table 6.10a “Accessibility for recreation” remains without substantial changes. “Intensity of use” (Table 6.10b) should be reported not only in annual number of visits totally, but also relatively in number of visits per hectare/square kilometre. In Table 6.10c “Recreation facilities” there should be reported Forest roads and paths available for public recreation in forests and of that marked for hiking, biking, cross country skiing, etc. as predefined facilities. In addition, countries are invited to the pilot voluntary reporting also on other recreational facilities operated for recreation in forests in the same Table (6.10c) to test availability and comparability of the particular data, definitions as well as feasibility of such a survey. In case of availability of the reliable national data, countries could report for instance these categories: Accommodation facilities (mountain hotels, cottages, apartments); Camping sites; Overnight shelters; Picnic sites allowing for open air fire; Nature schools; Sites for nature studying (educational walkways, nature exhibitions, protected sites, geological localities, sites of cultural heritage, famous trees ...); Bird and wildlife watching localities; Cableways and lifts; Parking lots; etc.

¹ T. Sievänen, A. Arnberger, J. Dehez, N. Grant, F. S. Jensen and H. Skov-Petersen (eds.), 2008: Forest Recreation Monitoring – a European Perspective. Working Papers of the Finnish Forest Research Institute 79. Available at: <http://www.metla.fi/julkaisut/workingpapers/2008/mwp079.htm>

² T. Sievänen, A. Arnberger, J. Dehez, D. Edwards, P. Fredman, M. Hunziker et Jensen S.F.: 2015. Development of Forest Europe Indicator 6.10. Available at: <http://cemadoc.irstea.fr/cemoa/PUB00044695>

3. Quantitative indicators 4.2 “Regeneration” and 4.3 “Naturalness”

The full text of this indicator was improved in the UPEI for SFM to this updated wording: “Total forest area by stand origin and area of annual forest regeneration and expansion”; original wording was: “Area of regeneration within even-aged stands and uneven-aged stands, classified by regeneration type”.

In accordance with the updated full text of this indicator we have proposed the updated “Reporting Form 4.2: Regeneration” (**Annex 3**) as follows: Firstly, wording of reported categories was harmonized with altered full text of the indicator. Secondly, we found useful to add the category on “Unknown” origin. And thirdly, we proposed to change the order of words “expansion” and “regeneration” because of much higher frequency and area of “regeneration” compared to “expansion”.

Because there are a close relations between the indicators „Stand origin“ and "Naturalness" we proposed also some changes in the “Reporting Form 4.3: Naturalness” (**Annex 4**) aimed at more detailed classification of the types of Naturalness in the Table 4.3b. The proposed solution enables better understanding of these relations with the positive impacts on the quality of reporting, and even it unifies both FAO FRA and FOREST EUROPE reporting.

4. Quantitative indicator 1.4 “Forest carbon”

In the UPEI for the SFM were altered the title and full text of this indicator by the complementing of the following reported category: “Carbon stock and stock change in harvested wood products”.

The source for this information will be the annual country reports on greenhouse gas inventories to UNFCCC/KP. The considered carbon pool is defined as the wood products in service life within the country. The carbon pool includes products generated from the wood production in the country in forests and land converted to forests. The losses from the pool are to landfill and the atmosphere. Emissions from landfill are reported under the waste sector of the inventory.

For the carbon balance purposes the roundwood category is split to the industrial roundwood and fuelwood subcategories. Contrary to the energetic use of wood (fuelwood) for which an instantaneous oxidation is applied, the long-term used Harvested Wood Products (HWP) as sawnwood, wood-based panels and paper represent a carbon pool with specific half-lives. For the assessment, the half-lives can be applied according to table 2.8.2 in IPCC 2013 GL for KP: 35 years for sawnwood, 25 years for wood-based panels and 2 years for paper products. The estimation approach applied for HWP accounting calculates delayed emissions on the basis of the annual stock change of semi-finished wood products using the first order decay function following equation 12.1 in the IPCC 2006 GL, Vol. 4, Ch. 12. The carbon stock changes in forests are estimated in the category 4.A (Forest Land). Countries may use also specific reporting approach if reliable data is available on the national level.

It is necessary to contact respective body of the UNFCCC/KP (as an international data provider) and agree on provision of the HWP related data for the needs of this indicator.

5. Originally quantitative indicator: “Forests under management plan”

In the UPEI for the SFM this indicator was transferred from quantitative indicators into the qualitative indicators C.1 as a descriptive question b. Its title was altered by adding the word “equivalent”, so new wording of the indicator is “Forest under management plan or equivalent”. Reported categories were complemented by the new one: percentage of forest land with management plans and / or equivalents.

From the viewpoint of harmonization of the approach to both “Forests under management plans” and “Forests under third party certification schemes” (marked as a descriptive question c.), this transfer can be considered appropriate. However, in spite of this transfer, all the reported categories are still “quantitative” (area and percentage). This is the same also in case of “certification schemes”. Therefore, we are missing some “descriptive questions” on type, obligation, content, quality, etc. of the management plans which we have proposed as part of data collection within this updated qualitative indicator. Also definition of the “other forest-related types of management documents/instruments at operational level” will have to be further developed.