

## **Background document in relation to the Item 4 of the Agenda**

### **Specification of data requested from international data providers for SoEF 2020 report**

#### **Part I - requested from:**

ICP Forests, Programme Co-ordinating Centre  
Thünen Institute of Forest Ecosystems,  
Alfred Möller Straße 1, Haus 41/42  
16225 Eberswalde, Germany  
e-mail: icpforestsadmin@thuenen.de

#### **Indicator 2.1 - Deposition of air pollutants**

a) European maps with Level II plots indicating mean throughfall deposition of:

- ammonium nitrogen,
- nitrate nitrogen,
- sea-salt corrected sulphate sulphur,
- sea salt corrected calcium and
- sea salt corrected magnesium.

Method: Total throughfall deposition in  $\text{kg} \cdot \text{ha}^{-1}$  at each plot in the last available year (by Nov. 2018), based on Level II plots;

Time period: last available year (by Nov. 2018);

Examples: Figures 5-2,3,4,6,8 in ICP Forests Technical Report 2017 (<https://www.icp-forests.org/pdf/TR2017.pdf>); Figures 30-34 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

b) Graphical presentation of time series with spline of total deposition in  $\text{kg} \cdot \text{ha}^{-1} \cdot \text{year}^{-1}$  (yearly for years 1997-last available year) and for European sub-regions<sup>1</sup>; of

- ammonium nitrogen (N<sub>NH4</sub>),
- nitrate nitrogen (N<sub>NO3</sub>),

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#### **<sup>1</sup> European sub-regions:**

**North Europe:** Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Sweden

**Central-West Europe:** Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland, United Kingdom

**Central-East Europe:** Belarus, Czechia, Georgia, Hungary, Moldova, Poland, Romania, Slovakia, Ukraine,

**South-West Europe:** Andorra, Holy See, Italy, Malta, Monaco, Portugal, Spain,

**South-East Europe:** Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Macedonia, Montenegro, Serbia, Slovenia, Turkey,

- sea-salt corrected sulphate sulphur (S\_SO4)
- sea-salt corrected calcium (Ca) and
- sea-salt corrected selected base cations (Ca, Mg)

Method: mean by European sub-regions, based on Level II plots;  
 Time period: yearly for 1997- the last available year (by Nov. 2018);  
 Example: See Figures 35-39 in SoEF 2015  
<https://www.foresteurope.org/docs/fullsoef2015.pdf>

c) European maps with Level II plots indicating exceedance of critical loads (eq\*ha<sup>-1</sup>\*year<sup>-1</sup>) for acidity and nutrient nitrogen;

Method: CLRTAP recommended methods;  
 Time period: 2000, 2010, the last available year (by Nov. 2018);  
 Example: See Figures 15, 16 in SoEF 2011  
[https://www.foresteurope.org/documentos/State\\_of\\_Europes\\_Forests\\_2011\\_Report\\_Revision\\_November\\_2011.pdf](https://www.foresteurope.org/documentos/State_of_Europes_Forests_2011_Report_Revision_November_2011.pdf)

d) Data used for figures a), b), c) in tabular format (e.g. Excel)

### **Indicator 2.3 – Defoliation**

a) European map with Level I plots indicating mean plot defoliation of all tree species;

Method: Mean defoliation of trees in plot displayed in defoliation classes;  
 Time period: last available year (by Nov. 2018);  
 Example:

Figure 7-1 in ICP Forests Technical Report 2017 (<https://www.icp-forests.org/pdf/TR2017.pdf>)

Figure 41 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

b) European map with Level I plots indicating trend in defoliation of trees,

Method: Decrease, no difference or increase in mean defoliation in Level I plots;  
 Time period: 2010 - the last available year (by Nov. 2018);  
 Example: See Figure 42 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

Figure 42 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

c) Point + line graph of defoliation in Europe for principal tree species (Fagus sylvatica, Quercus ilex, Quercus petraea et robur, Picea abies, Pinus sylvestris, Pinus pinaster);

Method: Mean defoliation (%) per tree species;  
 Time period: yearly 1992 - the last available year (by Nov. 2018);  
 Example: See Figure 43 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

d) Data used for figures a), b), c) in tabular format (e.g. Excel)

## Part II - requested from:

Joint Research Centre  
European Soil Data Centre (ESDAC)  
Via Enrico Fermi, 2749  
I – 21027 Ispra (VA), Italia  
e-mail: Arwyn.JONES@ec.europa.eu

### Indicator 2.2 – Soil condition

a) European maps with LUCAS samples indicating state and trends in soil organic carbon (SOC);

Method: SOC concentration ( $\text{g}\cdot\text{kg}^{-1}$ ) in forest soils;

Time period: LUCAS 2015 survey; trend on samples from LUCAS survey 2009 and same plots in 2015

b) European maps with LUCAS samples indicating pH in 2015 and trends in pH (2009 – 2015)

Method: in forest soils; indicative pH categories < 4.5, 4.5 – 5.5, 5.5 – 6.8, 6.8 – 7.2, > 7.2; indicative trend categories < -0.75, -0.75 – -0.25, -0.25 – 0.25, 0.25 – 0.75, > 0.75;

Time period: LUCAS 2015 survey; LUCAS 2009 survey + repeated survey at the same plots in 2015

Example: Figure 41 on defoliation in SoEF 2015

<https://www.foresteurope.org/docs/fullsoef2015.pdf> or Figures 18, 19 in SoEF 2011

[https://www.foresteurope.org/documentos/State\\_of\\_Europes\\_Forests\\_2011\\_Report\\_Revised\\_November\\_2011.pdf](https://www.foresteurope.org/documentos/State_of_Europes_Forests_2011_Report_Revised_November_2011.pdf)

c) European maps with LUCAS samples indicating state and trends in Base saturation and/or Cation Exchange Capacity in forest soils;

Method: Base saturation (%) and/or Cation Exchange Capacity ( $\text{cmol}\cdot\text{kg}^{-1}$ );

Time period: LUCAS 2015 survey; trend on samples from LUCAS survey 2009 and same plots in 2015

d) European maps with LUCAS samples indicating state and trends in C/N ratio in forest soils;

Time period: LUCAS 2015 survey; trend on samples from LUCAS survey 2009 and same plots in 2015

e) Soil Organic carbon concentration of LUCAS Soil samples by SoEF region

Example: Table 19 in SoEF 2015 <https://www.foresteurope.org/docs/fullsoef2015.pdf>

f) Share of LUCAS topsoil samples with different pH categories by region

Example: Figure 40 in SoEF 2015 <https://www.foresteurope.org/docs/fullsoef2015.pdf>

g) Data used for figures a), b), c), d) in tabular format (e.g. Excel)

### **Part III – requested from:**

EUFORGEN Secretariat  
c/o European Forest Institute (EFI)  
Platz der Vereinten Nationen, 7  
53113 Bonn, Germany  
e-mail: michele.bozzano@efi.int

### **Indicator 4.6 – Genetic resources**

a) Area managed for conservation and utilization of forest tree genetic resources (*in situ*)

Method: Cumulative area (ha) by FOREST EUROPE signatory countries<sup>2</sup>;

Time period: update for years 1990, 2000, 2010, 2015, last available year (by Nov. 2018);

Example: Annex 8 – Table 32 in SoEF 2015

(<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

b) Area managed for conservation and utilization of forest tree genetic resources (*ex situ*)

Method: Cumulative area (ha) by FOREST EUROPE signatory countries;

Time period: update for years 1990, 2000, 2010, 2015, last available year (by Nov. 2018);

Example: Annex 8 – Table 32 in SoEF 2015

(<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

c) Area managed for seed production;

Method: Cumulative area (ha) by FOREST EUROPE signatory countries;

Time period: update for years 1990, 2000, 2010, 2015, last available year (by Nov. 2018);

Example: Annex 8 – Table 32 in SoEF 2015

(<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

d) Area managed for in situ conservation of forest tree genetic resources by tree species

Method: Cumulative area (ha) in Europe by tree species; number of countries;

Time period: update for years 1990, 2000, 2010, 2015, last available year (by Nov. 2018);

Example: Annex 8 – Table 33 in SoEF 2015

(<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

e) Area managed for ex situ conservation of forest tree genetic resources by tree species

Method: Cumulative area (ha) in FOREST EUROPE signatory countries; number of countries;

Time period: update for years 1990, 2000, 2010, 2015, last available year (by Nov. 2018);

Example: Annex 8 – Table 34 in SoEF 2015

(<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

f) Area managed for seed production by tree species;

Method: Cumulative area (ha) in FOREST EUROPE signatory countries; number of countries;

Time period: update for years 1990, 2000, 2010, 2015, last available year (by Nov. 2018);

Example: Annex 8 – Table 35 in SoEF 2015

(<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

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<sup>2</sup> <https://foresteurope.org/list-signatory-countries/>

g) Map: Pinus sylvestris - distribution range and units managed for genetic conservation

Example: Figure 72 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

h) Map: Quercus petraea: distribution range and units managed for genetic conservation

Example: Figure 73 in SoEF 2015 (<https://www.foresteurope.org/docs/fullsoef2015.pdf>)

**Notes:**

Data on following indicators were requested, and according to received instructions downloaded, from EUROSTAT database (<http://ec.europa.eu/eurostat/data/database>) for pre-filling of the quantitative part of the questionnaire:

**Indicator 6.2 - Contribution of forest sector to GDP**

**Indicator 6.3 - Net revenue**

**Indicator 6.4 - Investments in forests and forestry**

**Indicator 6.5 - Forest sector workforce**

Data on following indicators are expected to be provided by the partner in data collection – the Secretariat of UNECE/FAO Joint Forestry and Timber Section:

**Indicator 6.7 – Wood consumption**

**Indicator 6.8 – Trade in wood**

**Indicator 6.9 – Wood energy** (data already provided for pre-filling)