

Level II plots – main issues of Manual Part II

General points part II

Level II standard plots / Level II core plots

Mandatory / optional parameters

Plot description

Stand description

Still minor changes

Level II plots – main issues of Manual Part II

4.1.2.2 Level II sites

4.1.2.3 Level II plot

4.1.2.4 Level II sub-plots

4.1.2.5 Level II buffer zone

4.2.2.2 Selection of sites

Ecological issues and logistics

National importance

Existing time series and data

4.2.2.3 Site and plot design

Permanent

Georeferenced

Minimum 0.25 ha

4.2.2.4 Type of Level II sites and plots

Level II standard: obligatory surveys

Crown condition (annually)

Tree growth (5 years)

Foliar chemistry (2 years)

Ground vegetation (5 years)

Deposition (cont.)

Soil (10 years)

Meteorology (10% of the plots) (cont.)

Level II core: voluntary. Standard, plus:

Litterfall (cont.)

Phenology

Growth (intensive)

Soil solution

Soil water

Air quality

Ozone injury (cont. except Northern Europe)

4.1.3 Mandatory and optional variables

Two main sets of variables are defined, called “*mandatory*” or “*optional*” variables. The status means that within the respective investigations the mandatory variables must be measured. On the other hand, “optional” identifies those parameters that may or may not be measured. This status must not be confused with the obligation of EU-Member States to assess and submit data under relevant EU Regulations.

Level II standard

„any“ IM plot

any surveys with
any variables

obligatory

| | | |
|---------------|---|-------|
| Crown | m | + opt |
| Growth | m | + opt |
| Foli | m | + opt |
| Soil | m | + opt |
| Meteo | m | + opt |

| | | |
|-----------|---|-------|
| Litter | m | + opt |
| Pheno | m | + opt |
| Growth | m | + opt |
| Soil sol | m | + opt |
| S. water | m | + opt |
| Air qual. | m | + opt |
| O3 inj. | m | + opt |

Level II core

voluntary

| | | |
|------------------|---|-------|
| Crown | m | + opt |
| Growth | m | + opt |
| Foliar | m | + opt |
| GV | m | + opt |
| Depo | m | + opt |
| Soil | m | + opt |
| Me | m | + opt |
| Pheno | m | + opt |
| Growth | m | + opt |
| Soil sol | m | + opt |
| S. water | m | + opt |
| Air qual. | m | + opt |
| O3 inj. | m | + opt |

* if according to
Manual !!!
* if data quality
requirements o.k.

Data base



5.1.1 Plot description

submitted at plot installation or whenever changes are occurring

| Variable | Reporting unit | Target plot type | | |
|-------------------|-------------------|------------------|-------------------|---------------|
| | | Level I | Level II standard | Level II core |
| Country code | Code | m | m | m |
| Plot number | Number | m | m | m |
| Plot size | hectare | m | m | m |
| Plot design | Code | m | m | m |
| Installation date | Date | m | m | m |
| Plot status | Active/Not active | o | m | m |
| NFI status | Y/N | m | o | o |
| Latitude | WGS84 | m | m | m |
| Longitude | WGS84 | m | m | m |
| Altitude class | Code | m | m | m |
| Altitude | metres | o | o | o |
| Orientation | Code | m | m | m |
| Slope | Degrees | o | m | m |

5.1.2 Stand description

Information on the stand must be reported every five years. (2010, 2015, 2020..)

Table 2. Quick reference of variables to be reported for the general stand description.

| Variable | Reporting unit | Target plot type | | |
|------------------------------|----------------|------------------|----------|---------------|
| | | Level I | Level II | Level II core |
| Stand history | code | o | m | m |
| Previous land use | code | o | m | m |
| Origin of actual stand | code | o | m | m |
| Main tree species | code | m | m | m |
| Type of tree species mixture | code | o | m | m |
| Top height | meter | o | m | m |
| Forest type | code | m | m | m |
| Age class | code | m | m | m |
| Number of tree layers | code | o | m | m |
| Coverage of tree layers | 5 % steps | o | m | m |
| Canopy closure | 5 % steps | m | m | m |
| Protection status | code | o | m | m |
| Fencing | code | o | m | m |
| Non-timber utilisation | code | o | m | m |
| Management type | code | o | m | m |
| Intensity of management | code | o | m | m |
| Management method | code | o | m | m |
| Forest ownership | code | o | m | m |

o – optional, m - mandatory

4.2.1.4 Plot design (Level I)

“Although desirable, it is not necessary that plots are of the same size and shape between different countries; rather it is essential that they are of **the same size and shape within a country.**”

=> “Although desirable, it is not necessary that plots are of the same size and shape between different countries; rather it is essential that they are of **the same design within a country, respectively German Bundesländer.**”

“A European wide soil condition survey has been carried out twice based on Level I plots. The concept foresees a repetition of the **soil survey every ten years**. Methods for soil condition surveys are in Part X.”

=> “A European wide soil condition survey has been carried out twice based on Level I plots. The concept foresees a repetition of the **soil survey in larger time intervals (e.g. every ten or twenty years). Soil surveys should be carried out temporally synchronized in all participating countries**. Methods for soil condition surveys are in Part X.”