



E-forest CSV File Description CS3 - Plot Data

**“Framework contract for the provision of forest data and services
in support to the European Forest Data Centre”
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1 File format

The file will contain information needed to submit data related to the plot in order to respond to the CS3 JRC Request.

Data types used are:

- **Integer:** Numeric value with no decimal.
- **Boolean:** Boolean value (represented as a 1 for true and a 0 for false).
- **Numeric:** Numeric value with decimals
The decimal separator must be a dot, there is no precision limit.
Value that is not measured should be left empty.
- **Code:** Code value, chosen in a list of valid codes given under the type of the data.
- **String:** alphanumeric value for free text
Value must not contain special characters like the carriage return or the semi-colon.
- **Date:** Date value.
The date format is YYYY-MM-DD.
- **Coordinate:** Coordinate value in numeric format
The coordinate must be given in degrees minutes seconds using WGS84.
The coordinate format is +/-DD.MM.SS.

Example:

```
//  
// Plot Data  
//  
// STRATUM_CODE; PLOT_CODE; INV_DATE; TIME_PERIOD; REF_YEAR_BEGIN; REF_YEAR_END;  
// STATISTICAL_WEIGHT; DOMAIN_BASAL_AREA; DOMAIN_FOREST; IS_FOREST_PLOT;  
// IS_PARTITIONING_PLOT; COMMENT  
FR01;1234;2006-01-26;1;2006;2009;0.5;1;1;1;1;test data plot
```

2 Description of fields

2.1 STRATUM_CODE

Description: This is an identifier for the stratum the plot belongs to. This code should correspond to the code given in the strata file.

Type: String

Condition: Mandatory

Example: FR_01

2.2 PLOT_CODE

Description: This is the identifier of the plot inside the country.

Type: String.

Condition: Mandatory

Example: A1234

Note: The plot code corresponds to a unique identifier used to identify the plot in all the files to upload. The plot code is a free code. It should be a unique and permanent identifier of the plot inside the country.

2.3 INV_DATE

Description: This is inventory date that means the date when the field plot has been assessed.

Type: Date

Condition: Mandatory

Example: 2006-01-26

2.4 TIME_PERIOD

Description: This is the cycle of inventory. It is the number of the ongoing cycle and not the duration of the cycle

Type: Integer

Condition: Mandatory

Example: 3

2.5 REF_YEAR_BEGIN

Description: This is the beginning reference year for the plot assessment.

Type: Integer

Condition: Mandatory

Example: 2006

2.6 REF_YEAR_END

Description: This is the ending reference year for the plot assessment

Type: Integer

Condition: Mandatory

Example: 2009

Note: set REF_YEAR_END=REF_YEAR_BEGIN if the reference year is a year and not a reference period.

This is the final year of the cycle, so the year of the plot assessment in general and not of the particular plot that you are registering. The measurement year of the plot corresponds to another code: INV_DATE.

2.7 STATISTICAL_WEIGHT

Description: This is the relative statistical weight of the plot when the sample inclusion probability is not equal for all plots in the stratum. If the same inclusion probability is used for all plots in the stratum, the STATISTICAL_WEIGHT is equal to 1.

Note on cluster sampling: Some countries (France) apply “false clusters” in the sense, that a random point generated by chance in a specific forest type generates additional plots (for instance a “cluster” of 4 plots in poplar plantations), while this is not the case in other forest types. All plots are considered independent. In this case plot weighting is needed (0.25 for a plot in a poplar plantation, 1 for other plots). The situation is different for a stratum with “true clusters”, i.e. clusters with the same geometric layout (but possibly with a varying number of plots located in the domain of study) for which independence of plot values within clusters can not be assumed. In this case, the random mechanism generates “anchor points” and the plot locations are given through a pre-defined set of vectors applied to all anchor points. Now, when the anchor points are drawn uniformly in the stratum, the plot weights are equal for all plots in the stratum (weight is 1). If, on the other hand, the sample inclusion probability is not equal for all anchor points, the relative statistical weight of the anchor point has to be given for all plots in the cluster. Plot weighting in the most complicated case of unequal inclusion probabilities of anchor points and varying cluster geometries within a single stratum is left as an exercise for those countries applying such a design!

Test with w_j denoting the statistical weights of plots and y_j denoting the observed (measured) target variable densities (per hectare) of plots; $\sum(w_j \times y_j) / \sum(w_j)$, where the sums are over all plots in the domain, is expected to be an unbiased estimate of the true spatial density of the target variable in the domain.

Type: numeric

Condition: Mandatory

Example: 0.25

Note: This weight is a coefficient that doesn't have any unit.

2.8 DOMAIN_BASAL_AREA

Description: indicates whether the plot belongs to the domain in which the basal area (basal_area) is defined (estimated). Note: For the target variable basal area, this domain comprises usually all forest plots. But there are exceptions in some countries: Austria, for instance, defines basal area on the domain “productive forest” (excluding forest roads, for instance). In this case the plot variable domain_basal_area is 1 for all plots falling into “productive forests” and 0 for all other plots in the stratum (non-forest plots, OWL plots, non-productive forest plots ...). If the basal area is missing for some plot in the (productive forest) domain, the domain_basal_area variable must be set to -1 instead of 1 (missing value).

Type: Code

Condition: Mandatory

Example: 1

Code list: (refer to the codes above)

Code	Label
0	The plot is in a domain in which the variable is not defined
1	The plot is in the domain in which the variable is defined, the plot and the variable are assessed
-1	The plot is in the domain in which the variable is defined ,the plot or the variable is not assessed (missing value)

This domain refers to the basal area variable provided in the basal area file.
The plot refers to a terrestrial grid

2.9 DOMAIN_FOREST

Description: indicates whether the plot belongs to the domain in which the forest area (is_forest_plot) is defined (estimated). Note: For the target variable IS_FOREST_PLOT, which is used to estimate the forest area, this domain comprises usually all plots in the stratum, including all non-forest plots (thus, the default is to set domain_forest=1 for all plots in the sample, including non-forest plots). In some countries, and if the percentage of forest (forest cover) for some stratum should be given – to give an example - with respect to the land area (without inland water), the country may choose to declare plots located in inland water as not belonging to the domain for forest area estimation (domain_forest=0); but these cases should be rare. If the is_forest_plot variable is not available for some plot (missing information) and the plot is known to belong to the domain in which the percentage of forest should be calculated based on the is_forest_plot target variable, the domain_forest variable gets code -1 (missing). Note: the domain for the target variable basal_area is usually (roughly) forest, the domain for the target variable is_forest is usually (roughly) the whole stratum!

Type: Code

Condition: Mandatory

Example: 1

Code list: (refer to the codes above)

Code	Label
0	The plot is in a domain in which the variable is not defined
1	The plot is in the domain in which the variable is defined, the plot and the variable are assessed
-1	The plot is in the domain in which the variable is defined, the plot or the variable is not assessed (missing value)

This domain refers to the variable is_forest_plot variable provided in this file.

2.10 IS_FOREST_PLOT

Description: Tells if the plot corresponds to a forest plot or not (1 for true, 0 for false). Mid-point of plot decides.

Type: Boolean

Condition: Mandatory

Example: 1

Note: This variable is related to the "DOMAIN_FOREST" domain.

2.11 IS_PARTINIONNING_PLOT

Description: This field indicates whether the plot is a partitioned (or shared) plot between forest and non-forest land (OWL is considered non-forest land). More precisely, this variable indicates whether subplot transformation (=1) or not(=0), i.e. correction of sample inclusion probabilities for trees at the forest boundary, has been needed to calculate the local density of the basal area variable (basal area per ha). Depending on NFI, if there is a strict limit with land use or land cover detected on the plot inventoried area, subplots can be used to manage this situation. In that case, it is up to the country to provide the information of the plot using the subplots. This field allows the country to indicate that subplots have been used. Note that this indicator variable is 0 for plots with mid-points outside forest, even for a partitioned plot between forest and non-forest.

Condition: Mandatory

Example: 1

Type: Boolean

Note:

2.12 COMMENT

Description: This field is an optional comment field.

Type: String

Condition: Optional

Example: This plot is a permanent plot