Guidance for data delivery for the Special Contract 3

Delivery of plot data:

During the calculation process of plot data within SC3 an aggregation procedure i.e. spatial predictions for grid cells of different sizes are necessary for the production of visualisation tools and maps. Thus a special guidance for the delivery of the plot data was developed by scientific/thematic officers of SC3.

Photo interpretation:
Many European NFIs use photo interpretation techniques within their sampling design often with a higher sampling intensity as for field sampling. For data delivery within SC3 only ground (field) plots should be delivered.
Special cases: During the discussions on data delivery no difficulties have been encountered so far. If a country is still uncertain regarding this issue, please contact a scientific/thematic officer.

Non forest plots:
During the development of the methodology for the aggregation process it was decided to ask countries not only for data of forested plots, but also for non forest plots in order to have the necessary information on the sampling design available for the spatial prediction procedure. Within this procedure values for the basal area/ha for each grid cell of different sizes will be predicted. During the discussions it turned out that it should be possible for most of the countries to deliver non forest plots.
Special cases: According to the sampling design in GB (a forest map is produced before the samples are chosen) it will not be possible to deliver non forest plots as they do not exist. For Spain it should be possible to create the non forest plots according to the regular sampling grid. For Italy this has to be clarified.

Different sampling designs within one country:
In case a country uses different sampling designs for different regions (strata) it is important to include this information into the data delivery. It is needed afterwards for the spatial predictions in each grid cell. For data delivery this means:

- A special file called "stratum definition" shall be delivered by each country. This file includes only a STRATUM_CODE and the TOTAL_STRATUM_AREAIn the plot data file: within each plot record the stratum to which it belongs shall be included in the column STRATUM_CODE.
- The polygons of the strata should be sent to IFN.

It is up to IFN to "harmonise" the strata polygons with the European wide country polygons.

Plot weights:
In order to have the full information needed for the estimation and aggregation procedure a variable is included in the plot data file to include the weight of the plot called STATISTICAL_WEIGHT. It is relevant in case of different inclusion probabilities within a certain stratum. Details on the procedure to calculate the weight are given in the CSV File description for plot data.
Special cases: In countries with highly sophisticated sampling designs it might be complicated to derive the plot weight. But from the point of view of the scientific officers the plot weight has to be known by the countries for their national estimation procedures.

Different Domains:
In many European NFIs not all assessment variables are assessed or even defined on all sample plots. E.g. basal area/ha might not be defined on forest roads. A lot of other examples in different countries do exist. Thus the concept of domains was included into SC3 and two columns were included into the plot data file: DOMAIN_FOREST and DOMAIN_BASAL_AREA. The CSV file description of plot data provides clear additional information.

Plot partitioning:
In case a country partitions the plot on the border between forest and non forest (area decision instead of point decision) the country is asked to provide plot data according to a "point decision". Two procedures a possible:

- If the country also recorded the point decision on each plot, it should use it.
- If this point decision is not available the country should deliver plots which have more than 50% of forest share. In case of exactly 50% forest a random decision should be used with equal probabilities.

Countries are asked to provide the information whether a plot is partitioned or not in the IS_PARTINIONNING_PLOT column of the CSV plot file. The respective description file provides more information on details.

In case a plot is a partitioning plot countries do have to correct the basal area/ha value using a simple procedure in order to account for neglected plots with centres outside the forest: Expand the density value with the forest share of the plot.

Special cases: Plot partitioning has been discussed within the office holders of SC3intensively after the Vienna meeting. It became clear that for the sake of clearness for data delivery the solution explained above (being in accordance to the discussions of the Vienna meeting) should be chosen. Nevertheless additional explanations are necessary and important: In case a country includes partitioning of plots in their design and a domain boundary partitions a plot (e.g. a forest road) the same procedure for the decision to in- or exclude the plot for data delivery to SC3 for the domain basal area/ha has to be applied (plot centre see above). It is also necessary to expand the density value of the plot as described above. For future projects it is foreseen to adapt the structure of the data base to better account for plot partitioning at domain boundaries.

"Harmonisation" of forest area:
In general there is no special part on harmonisation of forest area foreseen within SC3. Nevertheless countries are asked to provide plot data for forest, where they should exclude other wooded land as far as possible. The definitions for forest and other wooded land should be taken from Cost E43 reference definitions.
Special cases: The harmonisation of forest area is known to be a very complicated issue and no intensive discussions have been taken place within SC3. In case of uncertainties concerning this issue countries are encouraged to contact a scientific/thematic officer.

Inventory cycle:
In case a country has conducted more than one assessment cycle the country is asked to provide the most recent cycle. The respective columns in the plot file are INV_DATE, TIME_PERIOD, REF_YEAR_BEGIN and REF_YEAR_END.

Delivery of plot coordinates:

There are two choices for the delivery of the coordinates of sample plots:

1) Delivery of "real" coordinates: These coordinates are the theoretical coordinates of the sample plots. This means that the plot coordinates according to the sampling grid are required and not ground measured GPS coordinates.
2) Delivery of shifted coordinates: In case a country prefers to shift the sample plot coordinates to the nearest centre of the 1x1 km INSPIRE grid the country is requested to snap the plot coordinates according to the sampling grid to the next centre of the 1x1 km grid (see Figure 1). If a country uses cluster sampling the procedure is divided into two steps: first snap the centre of the cluster according to the grid coordinates to the centre of the nearest 1x1 km INSPIRE grid. Secondly re-arrange the cluster around this new centre and provide this coordinates for all plots of a cluster. I.e. the plots belonging to one cluster do have different coordinates although they have been shifted (see Figure 2). This procedure should guarantee that the cluster geometry is still available in SC3. It is not requested from countries to correct coordinates of plots located outside country due to the shifting procedure.
3)

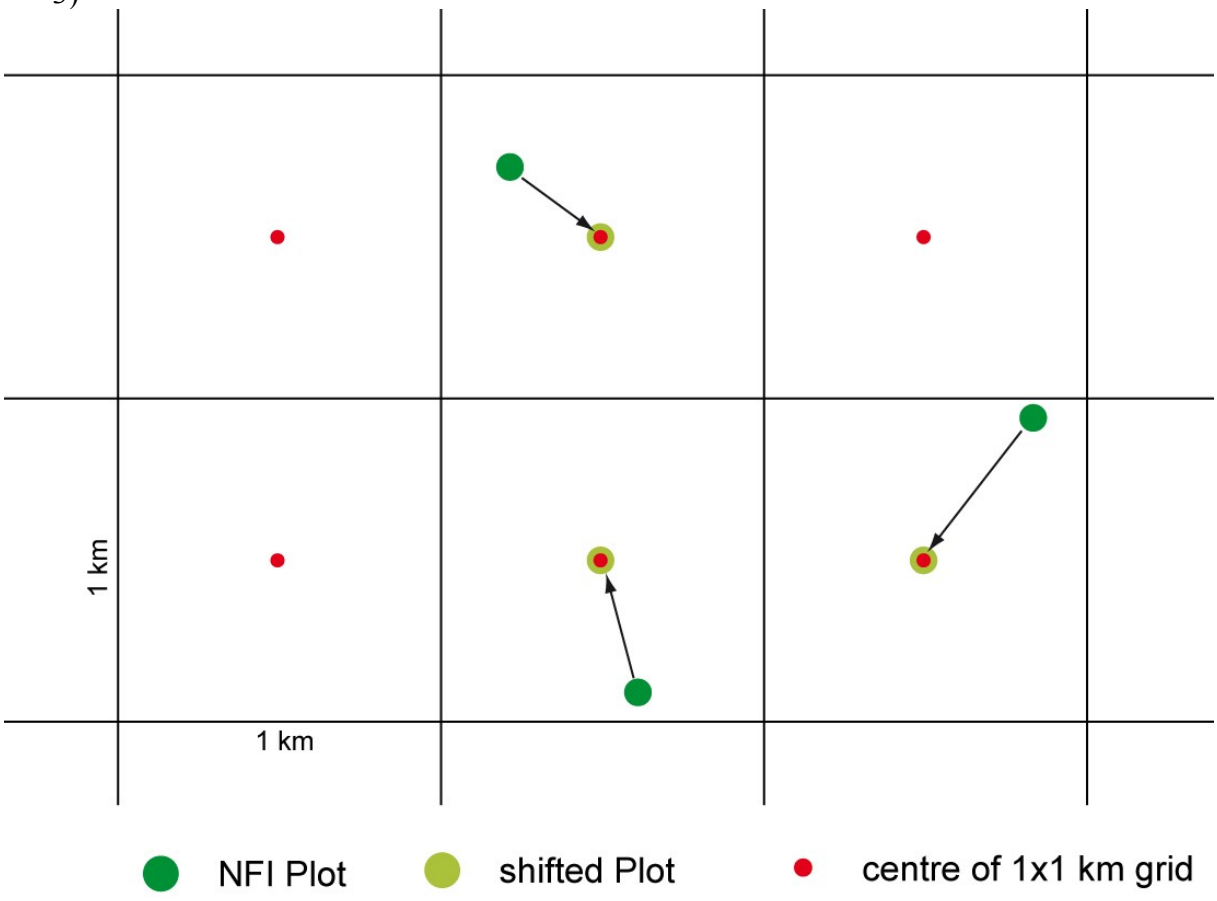

Figure 1: Shifting of coordinates for a single plot design

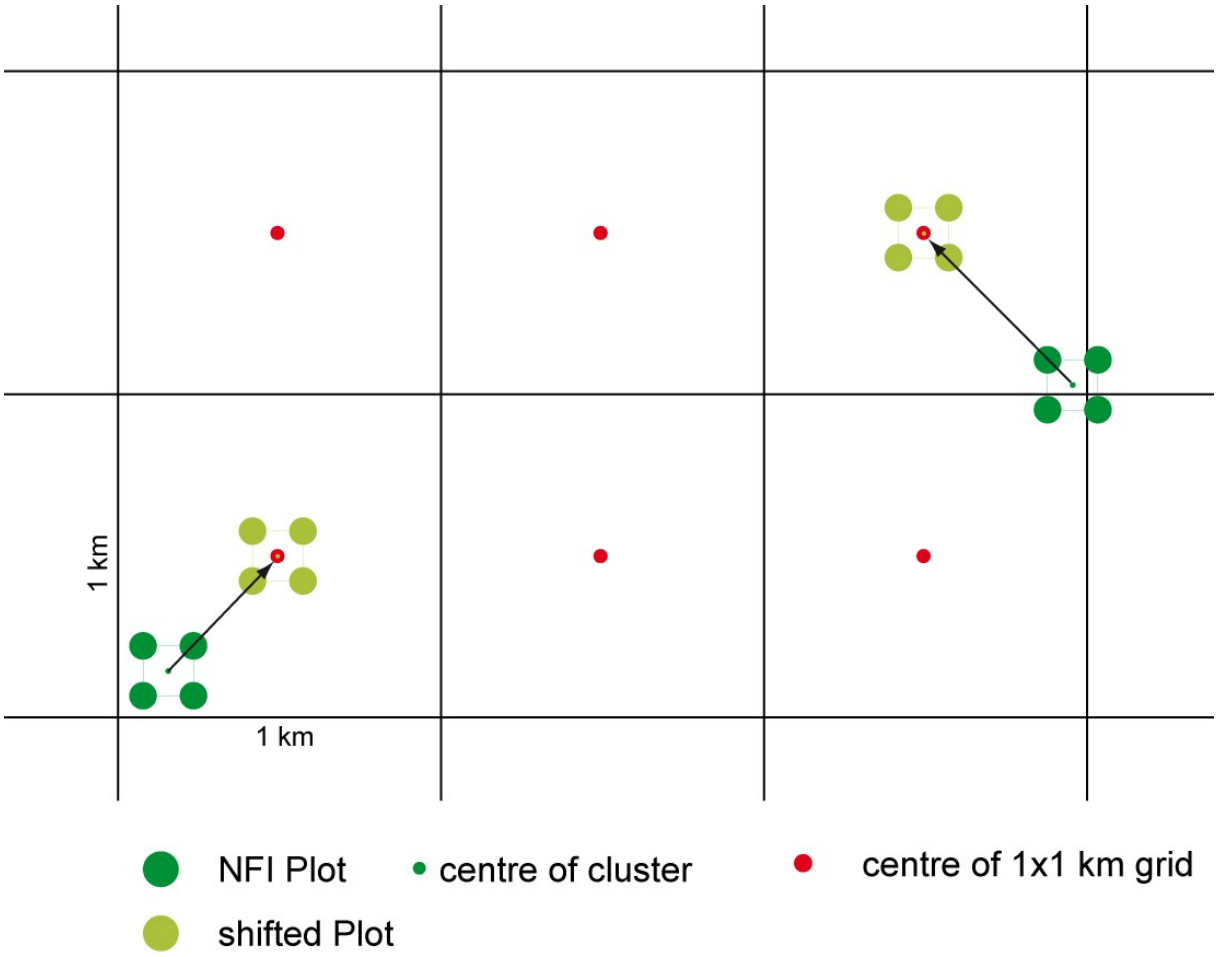

Figure 2: Shifting of coordinates for a cluster plot design

Delivery of species data:

Tree/shrubs:
For the delivery of basal area/ha values (per species) it is important to define the role of shrub species. Countries are asked to exclude a tree species (according to the SC3 list) when it is considered as a shrub according to the national definition even if there is a measured basal area for this shrub species. Shrub species according to the SC3 list are also excluded from data delivery.

Specifications on trees:
Dead trees and windthrown trees with measured basal areas are excluded from the data delivery. Basal area data should be delivered according to two different DBH thresholds: national DBH threshold and 12cm threshold. The respective column in the species data file is DBH_CLASS. This enables for two different evaluations of basal area/species: a non harmonized version with different DBH thresholds and a “harmonized” version with 12cm threshold (highest value for participating NFIs).