SC3 Thematic Officer Meeting – Minutes

1. Tree species list

The short tree species list updated by Annemarie following the country replies will be sent to all the consortium members.

"Species" must be understood as a genus, a true species or a subspecies

When uploading the data each country will have the following tasks:
> For all species for which the basal area is assessed, the country will provide:
> - the Flora Europea code of the tree species (the Flora Europea list will be available on the E-forest platform)
> - As comment : Genus, Species and Sub-Species in Latin name when these information are available
> - National code of the tree species (for checking if the correspondence between national code and Flora Europea is right).

n.b.:
- Codes should be added to distinguish Genus spp. when the country doesn't differentiate one species. This Genus spp. can be considered as a category for grouping all species belonging to the same Genus.
- Classes such as "other conifers" or "other broadleaves" should be skipped.

After all the data submissions the consortium will have to establish a short list of tree species based on the previous one and limited to species found in the database. This list will be provided to each data provider in order to specify:
- if the tree species is distinguished or not in the field
- if the species is considered as a tree or not in the country

In order to avoid misunderstanding, the information available for the JRC will be limited to the genus if one of the data providers doesn't distinguish a species linked to this genus.

2. Deliverable maps
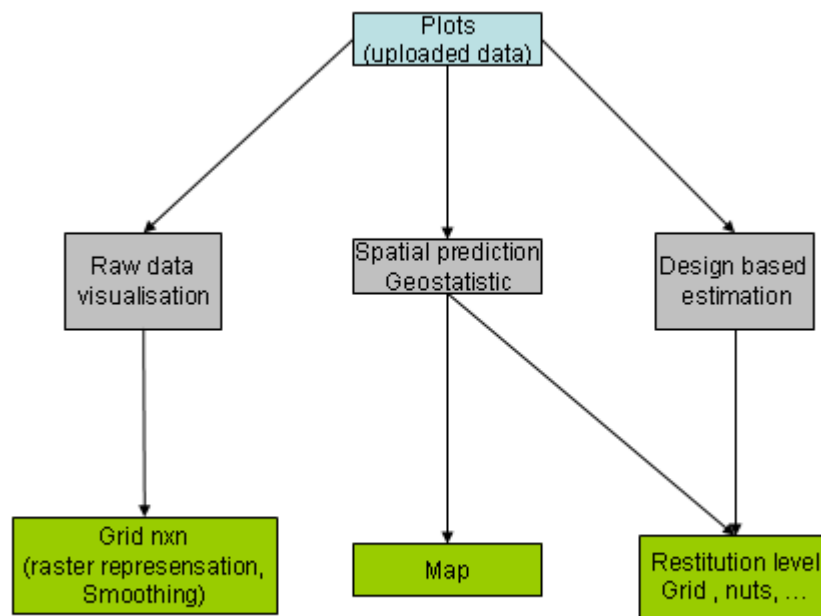
Legend:
In blue: national available data
In grey: the data transformation
In green: the possible deliverables

Figure 1. Flow chart to produce potential deliverables

The SC3 is concerned by the left part (raw data visualisation). Design based estimation could be used if the data provider submit data according to the Design based estimation conditions (uniform distribution inside the stratum, provision of forest <u>and</u> non forest plot). The files describing the requested format have been modified to add all these new mandatory fields.

2.1. Inventory plot distribution

To improve the information given by this type of map we could add the number of plots per grid cell by displaying a darker colour when the number of plots is higher.

2.2. Number of tree species per plot
(Instead of tree species richness)

For a cluster the different tree species will be counted only one time even if the tree species is present in several plots belonging to the same cluster.

2.3. Majority of broadleaves or conifers

One problem occurs when the sum of basal area for all the broadleaved species is equal to the sum of the basal area for all the coniferous species.
So, we will distinguish 4 cases:
- no information
- not applicable (as many broadleaves as conifers)
- majority of broadleaves
- majority of conifers

2.4. Total basal area
(Basal area per forest grid cell for all tree species together)

One problem has been identified: do we speak about basal area/ ha forest, basal area/ha forest and OWL or basal area/ha land area?
Finally we decided to choose the simplest solution: basal area/ha forest. So, we will not include OWL since this category is not at all harmonised in Europe.
The countries will be encouraged to stick to the forest Reference Definition and explain their deviance from the Reference Definition if there is one.
After the data provision a check would be made according to the country reports in the E43 book (action Camille).

2.5. Occurrence (presence/absence) of one tree species

3 classes: - no plot in the cell (no information)
                   - plot in the cell but the chosen species is not present
                   - plot in the cell and the chosen species is present in this plot
Show in some way the richness of information in the European NFIs.

Problem of visualisation: using the 1×1 km INSPIRE grid the results can not be shown for the entire European map. It is not really a problem since the JRC could have access to the table results and to the map displaying parts of Europe. The zoom function should be limited to what it is relevant to show.

2.6. Basal area by different grid sizes (aggregation tool)

Aggregation (5×5 km and 10×10 km or perhaps even 50x50 km INSPIRE grids): see the document provided by Adrian "*plot_data.pdf*"
The condition required to apply the method described by Adrian is a systematic sampling, but some countries don't use the same sampling density on their whole national territory. It is not a problem if the country is divided in sub-zones with a systematic sampling in each sub-zone (i.e different densities between zones but the same inside one zone). In this case we can use an estimator.
The area of each sub-zone or stratum has to be known and must be asked to each provider of information.

⇨ A new CSV file must be added to define the strata. This strata file will contain the ID and the area of each stratum). Moreover, in the plot file a new column must be added to identify the stratum the plot belongs to.

⇨ The countries will be asked for the stratification and the corresponding GIS layers (for the restitution by grids).

Problem of inland waters: some countries such as Finland exclude water area. To easily harmonise between countries which exclude water area and the others we decided to all include all inland water bodies in the calculation of the total area.

For this last deliverable an estimator will be calculated according to the Adrian's document. The variance will also be determined. ⇨ Introduce a warning in the E-forest platform visualisation if the variance is too high.
Problem: it could occur that there will be not enough plots in the 5×5 or 10×10 km grid to calculate error estimation. Moreover, the restitution at 5×5 km grid seems not to be appropriate (we can not distinguish the plots). As the SC3 is a demonstration project, a bigger grid level (50x50 km) could be proposed to the JRC if necessary.

3. Forest/non forest information

A new column specifying if a plot is in forest or not might be included in the CSV files(according to the associated systematic sampling design). We must ask the consortium members if they are able to provide this information. If it is not possible, the strategy for aggregating the grid should be modified. That why this field is proposed as a mandatory field in the file format needed for the SC3.

4. Problem of clusters

If a country wants to provide degraded coordinates and has to manage clusters, then a proposed methodology is described hereafter:
- The country knows all the plots belonging to one cluster
- The country determines the centre of the clusters
- The country snaps the centre of the cluster to the nearest grid cell then calculates the vector for this shift.
- Then, this vector is used to shift all the plots belonging to the cluster to their new position. Thus, this shift keeps the geometry of the cluster and degraded all the coordinates (Figure 2).
- The country provides the shifted coordinates. For confidentiality purposes the country will not provide the vector used for translating the cluster so that the consortium members and the JRC will not have access to this information.

If the country provides the real coordinates of the cluster plots, the E-forest platform will carry out the translation of the cluster.

The Scientific Officers (especially Erkki Tomppo and Klemens Schadauer) will help the countries achieving this translation.

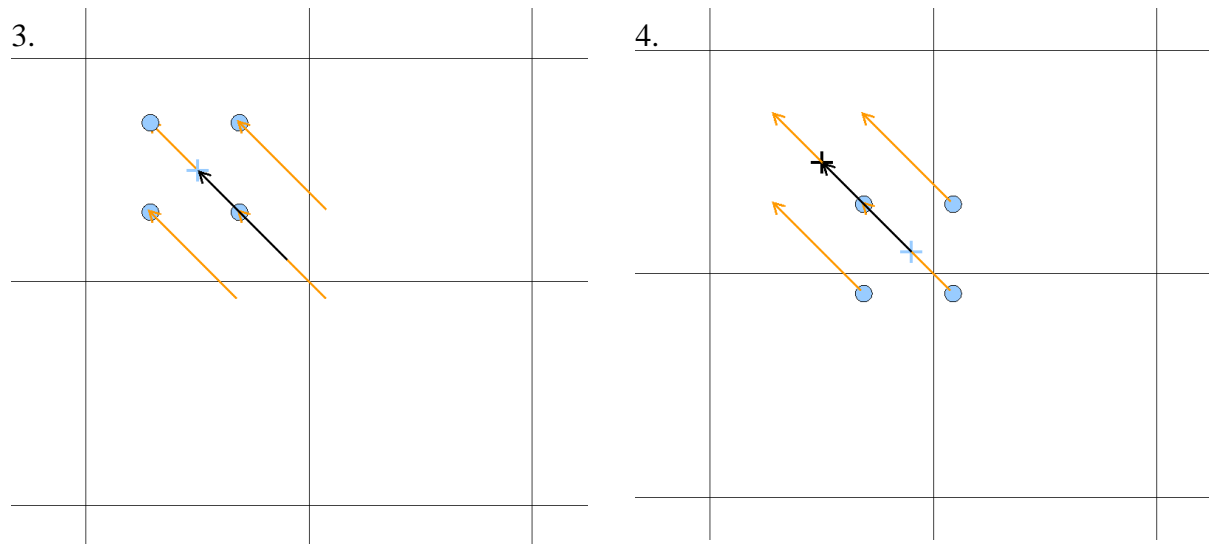1. Centre of the grid cell / Centre of the cluster   2.

3.

4.

Figure 2. Cluster shifting.

5. Sub-plots

The problem of plot partitioning (sub-plots) has been discussed.
Two different rules applied are in NFIS:

- Forest plot or not: the country decides to declare the plot as forest plot if the centre of the plot is in forest and a forest boundary correction is made. If not the plot is declared as non forest plot and so no sub-plot is considered.
- The country divides the plot and measures both parts in forest and outside forest (proportion of each needed). In this case the plot is neither in forest, nor outside forest but included in the NFI sampling design as a sub-plot..

The final conclusion was that the countries using sub-plots should harmonise them according to the others.
The following tasks will be done by countries using sub-plots:

1. Distinguish if the centre of the plot is in forest or not, or if the forest area covers more than 50% of the plot. (A rule for determining if the plot is in forest or not should be defined).
2. Correction for the completion of the plot (boundary correction).

The countries using plot partitioning will be consulted to know if this solution is realistic.

The Scientific Officers (especially Erkki Tomppo and Klemens Schadauer) will help the countries on this point.

A column will be added on the plot CSV file to specify if the plot is partitioned or not.

6. Data provision

The guidelines for filling in the CSV files and data submission will be written by Erkki Tomppo and Klemens Schadauer preferably before the end of next week. The format file (files needed for SC3) will be provided by the French NFI to be completed.

Three cases will be differentiated:
- The country provides real coordinates
- The country provides coordinates corresponding to the centre of the 1×1 km grid
- The country uses clusters

To help countries which do not provide real coordinates or use clusters, the coordinates of the 1×1 km grid cell centre will be available on the platform.

7. Planning and organization of the SC3

Some contact person for data submission must be identified (UK action Camille) and/or confirmed (SW and FI action Annemarie).

The consortium members must validate the outputs!!!

A Permanent Committee of consortium should be defined.

8. INTAMAP

The INTAMAP tool could be used for SC2 for smoothing purposes. INTAMAP does not concern the SC3. As INTAMAP is based on R, it could be a good starting point to evaluate geostatistical algorithms such as those used in Finland.

9. Recommendation/Strategy

Some unsolved problems will appear under SC3. For instance, different plot sizes among countries, different minimum diameter of measured trees. These issues will be listed in the SC3 final report and recommendations will be made to the JRC for a further SC on harmonisation.
Different topics could be reported:
- Feedback on the data submission (reactivity of the countries, how it works, difficulties met …)
- Quality of the data
- Usefulness of data
- Harmonisation to achieve
- Time period
- Update of the description IT system
- Estimation method/smoothing
- Estimation of harmonization: time needed, money, etc.
Discussion for new possible specific contracts:
- Data: enrichment of the database with tree data in order to calculate variable such as volume, biomass, EU indicators, etc
- Methodology: spatial prediction and statistical prediction
- Harmonisation processes
- Qualitative variable determination such as : Forest type
- Enhancement of the platform using multisource dataset

10. Timetable

Friday, **October 9:** Minutes of the Thematic Officer meeting and documentation on CSV files will be sent

Thursday, **October 15:** Guidelines for data provision written by Erkki and Klemens will be sent to the consortium members. The contact person for each country has to be identified before this date (action Annemarie and Camille).

December 15: Deadline for the first data provision. After this first phase of submission 50% of the amount will be paid.

January 12-13, 2010: A meeting is planed in Vienna to explain the data use, the deliverables, the further projects, etc. The estimators described in the document of Adrian could be developed to be presented during this meeting. This meeting is mandatory for all data providers (the travel fees are included in the amount allocated to each country under SC3).
January 14, 2010: ENFIN steering committee.

February 15, 2010: Deadline for the second data provision and validation phase (consistency checks). Once the data will be uploaded and validated the remaining amount will be paid.

May 1, 2010: Results of the feasibility of mapping – SC3 deliverables to the JRC (10 months after the signature of the contract).