1 National Forest Inventory

The set up of the German NFI meets a permanent, one-phase, stratified, cluster sampling (figure 1(a)). According to the sampling density for each federal state at minimum one sampling strata is defined (figure 1(b)).

Figure 1: Sampling scheme of the German NFI: a) systematic sampling grid including different sampling densities and b) the resulting sampling strata within each federal state
The 3rd NFI cycle was finished 2012. According to the federal forest act the next NFI has to be done in 2022. Therefore the field assessments will start in 2021. Specifically for the GHG-monitoring under the Kyoto protocol and the convention on climate change on a 8 km × 8 km subsample of the NFI sampling grid a carbon stock inventory will be conducted (figure 1(a), blue clusters).

Responsibility & Organization of the NFI
The compilation and evaluation of the data and the coordination tasks they entail are undertaken by the Federal Ministry of Food and Agriculture. For this purpose, it calls on the Thünen Institute of Forest Ecosystems (national inventory administration) which cooperates directly with the Land inventory administrations. In particular, the coordination tasks include:

- discussing all questions of importance with the Land inventory administrations to ensure that the National Forest Inventory is carried out uniformly, including the inventory inspection results,
- examining the data for plausibility and correcting implausible data,
- evaluating the data,
- clearing up doubts of supraregional importance.
The national inventory administration makes all the data of the former National Forest Inventories necessary for the repeat survey available to the Land inventory administrations, as well as the software for the following steps:

- data collection and validation,
- data management (selection as well as import and export of data for survey teams and national inventory administration),
- printout of sketches (maps) of the sample trees from the angle-count sampling.

The Land authority in charge of collecting the data (Land inventory administration) has the following tasks:

- planning and coordinating the deployment of the survey teams,
- preparing the documents for the survey teams,
- ensuring the proper collection of the data, including inventory inspection measures,
- controlling and correcting the data in consultation with the national inventory administration,
- releasing the verified data in the central database for use in the national inventory administration,
- informing the national inventory administration of the timetable for carrying out the inventory,
- informing the national inventory administration of additional Land-specific surveys.

The survey teams are responsible for measuring and describing the forest condition in accordance with these survey instructions and the directions of their Land inventory administration. A survey team consists of two people and is led by a qualified graduate forester (or a person with comparable qualifications).

Results
The results can be found on www.bundeswaldinventur.de and www.bwi.info

2 Research and Development

The results of the NFI 2012 are published in October 2014. At the moment the NFI working group is in an internal evaluating process:

- What is / what is not needed in further NFI-cycles?
• What should be changed, simplified, or in which fields we need more information / we should invest more power?

For this political processes had to be reviewed, potential further requirements must be analysed and incitations of the survey teams and the Land authorities had to taken into consideration.

The joint research project “Assessment of the sustainability of different forest management and timber use scenarios, with emphasis on climate protection and biodiversity conservation (WEHAM-Scenarios)” aims to develop forest management and wood use scenarios in consultation with stakeholders, to calculate these scenarios with the Forest Development and Timber Resource Modeling (WEHAM) and to conduct a sustainability assessment to compare scenario results, particularly focusing on climate change and biodiversity.

The project is funded from the forest climate fund by the Federal Ministry of Food and Agriculture (BMEL) and the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) via the project executing organization BLE.

For further information please see www.weham-szenarien.de.