

## Improving Data and Information on the Potential Supply of Wood Resources: A European Approach from Multisource National Forest Inventories



Participating countries: AT, BE, CR, CY, CZ, DK, EE, FI, FR, DE, GR, HU, IS, IE, IT, LV, LT, NL, NO, PL, PT, RO, SR, SK, SI, ES, SW, CH, UK, US

Chair of the Action: Annemarie Bastrup-Birk, DK, ab@life.ku.dk

COST Science Officer: Melae Langbein, melae.langbein@cost.esf.org

[www.costfp1001.org](http://www.costfp1001.org)



Figure 1: Forest woody biomass at forest road (Bastrup-Birk, 2010)

### Objectives:

- To improve and harmonise data and information on the potential supply of wood resources at European level
- To compare and disseminate the methodologies, including remote sensing techniques, definitions and results of wood resource studies in European countries and develop best practices and harmonised guidelines in this field.
- To exchange information on difficulties and challenges and find harmonised solutions in e.g. modelling taper curves and assortments of trees or in assessing trees outside forests
- To help countries to improve their expertise in special modelling or remote sensing techniques in capacity building of these technical areas
- To contribute to building a comprehensive and reliable picture of potential wood supply as an input to energy, environment, forest policy making, and wood industry decision making

### Working Group 1

Focus is set on available field data and information from the NFIs and on sampling design and estimation techniques for wood resources. The work will take further the methodology for the harmonisation of NFIs performed under the COST Action E43. New variables are e.g. increment, fellings, and mortality. Other wooded land (OWL) and trees outside forest (TOF) will be investigated and harmonised definitions developed. Major questions to investigate are, how much wood is available at present (taking age classes and diameter thresholds into account), and how much will be available in the next decades. Recommendations for statistical sound data collection and estimation techniques will be given and the effects of different approaches on the results will be presented.

### Working Group 2

will investigate methods for improving estimates of wood resources by integrating remotely sensed and NFI field data. The overall aim is to develop scientifically sound practices for assessing tree biomass and other forest resources, inside and outside forests, in support of periodic and rapid updates of estimates at NUTS3 and regional levels. WG2 will provide an overview of the extent to which NFIs use remote sensing data, tools, and methods (e.g., satellite and airborne imagery, optical area, lidar and radar data). The role of remote sensing in improving the efficiency of sampling designs and the precision of estimates will be considered. Methods to estimate forest attributes, such as biomass and volume, for small areas and to map their spatial distribution will be discussed and evaluated. Special attention will be devoted to error estimation, detection of clear-cuts and other changes in forest resources for purposes of estimating changes in biomass.

### Working Group 3

will work on guidelines for harmonised forest information for better exchange of information between inventory data of standing volume and consumption statistics which follow market needs and developments. The WG3 will identify availability of production and trade statistics and the potential to improve information for a better transfer from NFI-data to consumption data. Cost factors and cost functions for the provision of wood in different stands and countries will be identified to get more information on the proportion of economic constraints and market available potential. Existing models with input from several countries will be evaluated and the applicability of available economic models at the European level, including harvest costs, competitive products will be tested.

### Main Achievements:

- improve the quality of European level data and information on usable wood resources. High quality information in this area is still lacking. Decision making on the national as well as on the European scale in the area of renewable energy is depending on the quality of the addressed type of information.
- improve the ability of the National Forest Inventories to meet national requirements for information on wood resources and to provide up-to-date harmonised information at European and international level.
- improve forests statistics on wood supply as data and methodologies to assess wood supply will be improved allowing for comparability of results.