

The Role of the Hungarian National Forest Inventory in Meeting Sustainability Goals

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Having signed international treaties, Hungary has entered into a commitment to continue with sustainable development. In our paper we want to show how the Hungarian government can meet these obligations using the Forestry Database.

The national forest inventory (NFI) has a long tradition in Hungary. The first order, to survey and map Hungary's forests, was decreed by Maria Theresa and came into force in 1769. The first forest act was issued in 1879. Treatment of the majority of forests had to be based on forest management plans. Sustainability was ensured based on existing age classes as it was ordered in 1920. In 1935 the forest act meant that forest owners had to manage their forest using forest management plans. Development of forest management plans has been supported by computerised data processing since 1970. The information collected by the NFI is stored in the National Forest Database. This database – expanding by systematic sampling– is used for reporting national and international annual statistics on Hungarian forests.

International obligations such as reporting to the Forest Resources Assessment of Food and Agriculture Organization of the United Nations (FAO 2006), to the Ministerial Conference on the Protection of Forests in Europe (MCPFE 2007) and to the United Nations Framework Convention on Climate Change (UNFCCC) concerning the Land Use, Land-Use Change and Forestry (LULUCF) (IPCC 2003), are also based on this information.

The NFI supplies data for Kyoto Protocol reporting. Growing stock information is calculated from the forest management, as well as afforestation, reforestation and deforestation (ARD) categories. The digital geographic information stored in the database is used to identify ARD areas.

Within the traditional NFI, tree species composition is assessed at the sub-compartment level. Additional descriptive data referring to the shrub and ground vegetation layers are also available in the NFI database. The organization responsible for biodiversity monitoring in Hungary is the Ministry of Rural Development. A special monitoring system was developed with more than 100 permanent 1-km² sample areas representing all the different habitats within Hungary, including forests. The main goal is to increase efficiency and improve the methods of biodiversity monitoring. A new approach is in development to use common sampling plots for forest inventory, forest condition monitoring and biodiversity monitoring. In line with these efforts, the National Forest Database will contain information on naturalness of sub-compartments in the near future.

In response to the European Union's new Life+ (the Financial Instrument for the Environment in the EU) call for proposals, an international project proposal has been submitted aiming at the elaboration of methodologies and implementation of new methods for the assessment of forest biodiversity.