FOREST PLANNING AND MANAGEMENT

OVERVIEW

PLANSFM:

The planning and implementation of sustainable forest management

Programme leader: Prof. Maarten Nieuwenhuis

Programme manager: Charles Harper

The management of forests in Ireland is evolving into an increasingly complex process. Two significant factors have contributed to this change. The first was the publication of the Irish National Forest Standard*. This document introduced Sustainable Forest Management (SFM) as the national standard and it requires that all management decisions are based on an evaluation of economic, social and environmental indicators. This standard requires the availability of a very wide range of data and the systems to collect, analyse and incorporate the information in management (planning) decision-making procedures. It has also introduced a need to widen the range of silvicultural and management practices, including the use of mixtures, diverse species, continuous cover systems and retention, while the range of potential products has widened to include biomass and bioenergy, carbon sequestration and biodiversity. The second change has been the expansion of private forestry. As a result, but also as a consequence of Coillte's diversification of management, the simple situation where one company with its standardised practices determines the status of the national forest estate, the forecasted (timber and non-timber) outputs, and the future development and make-up of the estate, has gone. There is now a need for private and public owners and management companies to have access to tools to collect, store, analyse and use the information necessary for the sustainable management of their estates.

The motivation for the projects that comprise the PLANSFM programme originates in these two major changes. The programme addresses the need for improved access to information and decision support systems required for the sustainable management of the national forest estate, both private and state-owned, in Ireland.

The main objective of the PLANSFM programme is to improve access to better quality information about the forest through the development of new inventory and analysis tools and improved software to support sustainable forest management decisions. The key issues addressed are focussed on improvements in private and state forestry: multi-resource inventory protocols, decision support tools, improved modelling

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* Anon. 2000. Irish National Forest Standard. Forest Service, Department of the Marine and Natural Resources. ISBN 0-9538874-0-5.

of forest growth and yield, improved forest volume assessment, and identifying and quantifying forest resources to maximise potential markets. In addition, the programme addresses the need for access to the results of previous forestry research trials and experiments, bringing added value to the existing data and ensuring the continued maintenance and assessment of existing, relevant experimental sites.

The long-term goals of the PLANSFM programme are to support the forest industry through the provision of improved tools to support sustainable forest management. These include:

- Improved volume and yield models for a wider range of tree species (and mixtures) than is currently available.

- Improved tools for carrying out, analysing, recording and reporting of multi-resource forest inventories and the timber and non-timber forecasts associated with the management plans developed using the inventory data.

- The provision of decision support tools for forestry on sensitive sites, including the western peatland forests.

- The evaluation and further development of new technology and data analysis procedures for multi-resource inventories, including terrestrial laser scanning and equipment for upper stem and crown measurements.

The key benefit the PLANSFM programme is bringing to Irish forestry is in the provision of better quality information about the forest, the best options for sustainable management of the forest using this information, and the provision of forecasts of timber and non-timber outputs at local and regional levels. This extends from the shape of individual tree stems, the yield of timber and non-timber outputs of the forest, the optimal conversion of trees to forest products, the provision of timber production forecasts based on actual inventory and management information, to giving scientists access to data from completed and ongoing forestry trials and experiments. The PLANSFM programme will result in new methods for timber measurement using laser scanning devices, new tools for modelling volume at tree and yield at stand level, the introduction of multi-resource inventory and forest management software in the forest industry, the production of local and regional timber and non-timber production forecasts, and, though an online database, improved access to the data produced by previous forestry research in Ireland.