

FORECON

An economic evaluation of the market and non-market functions of forestry

PROJECT TEAM

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BACKGROUND

Policy decision-making in forestry needs to be well informed. This implies, amongst other things, that up to date information on the economic contribution of forestry to the national, regional and to local economies is collated. Furthermore, given that the multi-functional model of forestry, delivering economic, environmental, social and cultural benefits, is the new paradigm, this economic evaluation should include an assessment of the value of the public goods that forestry delivers, including climate change mitigation, biodiversity conservation and enhancement, water quality protection and enhancement, recreation, and landscape value. It is likely that different approaches to forest management deliver different public benefits. Thus the economic valuation associated with types of forest as differentiated by ownership, location, scale, management and species mix, needs to be assessed. This will yield strategic information by indicating the relative benefits of different types of forest.

OBJECTIVES

- Provide strategic information by indicating the relative benefits of forest management practice respectively directed at the outputs of recreation, biodiversity, landscape, water quality and carbon sequestration.
- Estimate the relative public benefits of public forestry and private forestry, including farm forestry.
- Determine the direct and indirect contribution of the tradable goods and services of forestry, including timber, game hunting, a small number of marketed leisure activities, cut foliage and forest food (i.e. berries and mushrooms) to the national, regional and local economies.
- Demonstrate the net public benefit of forestry in comparison with other land uses.

- Examine those factors which determine public benefits and determine if benefit transfer estimates from abroad would be applicable to Ireland.
- Place values in a public cost-benefit framework by comparing policy cost with the social benefits and combining this information with the private costs and benefits motivating forestry uptake over time.

PROGRESS

To date the project has focussed on examining the relative benefits of different forest management approaches to non-market forest benefits (NMFb) and on determining the direct and indirect contribution of tradable forestry goods and services to the economy.

After an extensive literature review was undertaken, two focus groups were held, one in Dublin and a second in Carrick-on-Shannon, to identify the main forestry issues that are relevant to the public. This process identified five issues, with associated levels, that are meaningful to the public and policy-makers. These are: species planted (conifer, mixed, or broadleaf), the inclusion of a biodiversity reserve area (0%, 15%, 30%), harvesting methods (block or individual tree harvesting), the inclusion of recreation trails (none, basic, and a network of trails and facilities) and location (close to cities and towns; in the wider countryside and in remote upland areas).

These issues, combined with a range of potential costs, were used to describe possible management approaches to the current policy to expand forest cover to 17% by 2030. Figure 1 contains one of 72 different combinations of options. By analysing how the public rank the different options, the relative marginal importance of these forest characteristics and a range of potential costs can be identified. The data will be used ultimately to produce willingness to pay estimates for changes in the levels of individual attributes through their combination with the cost parameter estimate.

In addition to the valuation section, a number of questions related to recreational use of forests and attitudinal and socio-demographic questions have been included in the survey. Survey data will be combined with forest spatial data in a GIS to investigate how existing forests influence people's attitudes to and values of forests.

A market research company was commissioned to administer the experiment in the form of a survey of 1,000 households in Ireland. The questionnaire was piloted in

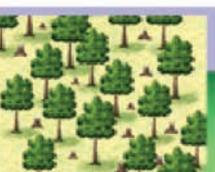
	Location	Tree Type	Reserve Area	Harvesting	Trails	Cost
Row 1						€25
Row 2						€25
Row 3						€70
Row 4	No New Forests Planted					€0

Figure 1: Sample choice set.

early December 2009 and produced positive results while providing useful information on necessary changes.

In assessing the direct and indirect contribution of tradable forestry goods and services to the economy, use is being made of the recently published Input-Output Table for 2005. The agriculture, fishing, and forestry sector has been disaggregated, as has the wood and wood products sector (into panelboards, sawmills, and other wood products).

ACTIVITIES PLANNED

- The household survey will be carried out in January and February and an analysis of the data collected will be completed by end September.
- The inter-industry distributions between the various forestry and wood sectors will be calculated. Sectoral multipliers will then be calculated and the total value of the forestry and wood products sectors to the Irish economy estimated.
- The direct contribution of game hunting, a small number of marketed leisure activities, and the cut foliage industry to the national economy will be estimated.