

ABSTRACT

REPORT ON FORESTRY MISSION TO IRELAND

(15th February, 1951)

Stationery Office 2/-.

[For the convenience of members we present this summary of the Report and Recommendations prepared by the F.A.O. Forestry Adviser, Mr. D. Roy Cameron. The Adviser arrived in Dublin on 25th July, 1950, carried out a 1,200 mile tour of inspection, spent several days in consultations and left Dublin on 9th August.]

Introduction: The introduction sets out some basic points which have a bearing on Irish forest policy.

The disappearance of the primeval forest is attributed primarily to the influence of man. Livestock grazing destroyed natural regeneration and favoured peat formation in the moist climate without any desiccating summer droughts.

The insecurity of land tenure prior to 1900 also was inimical to the increase of the forest area. The landlords' demesnes supported their quota of woodland but this was maintained primarily for sport and amenity and catered only for restricted local timber needs. The general availability of turf as a fuel meant that firewood was of much less importance than in other European countries.

Recent forest area statistics are as follows:—

	April, 1942.	March, 1950.
Woodland in Private Ownership (acs.) ...	108,590	94,871
Woodland in State Ownership (acs.) ...	107,282	142,425
Woodland held by other Public Bodies (acs.)	5,047	5,047
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	220,919	242,343

During the emergency period up to March, 1950, 13,719 acres of privately owned woodland were transferred to the Forestry Division and State planting amounted to 35,143 acres.

Private woodlands are estimated to carry only 50% stocking and only 40,000 acres can be regarded as satisfactorily stocked. No large increase in this acreage can be expected in view of the virtual elimination of large estates, the predominance of small agricultural holdings and the continuing purchase of woodland by the Forest Authority. While private planting may add materially to the amenities and beauty of the countryside and provide limited local needs, it cannot be expected to make a significant contribution to the native timber supply.

In a large part of Ireland soil and climate are favourable to tree growth and on suitable sites results will equal if not exceed yields secured elsewhere in Europe.

The programme recommended is divided into two categories—

- (1) Commercial—to meet the minimum sawn softwood needs in an emergency and
- (2) Social—for soil conservation, stabilization of employment in congested areas and reclamation of idle lands.

COMMERCIAL PROGRAMME

Sawn Softwood Needs.

In 1948 the *per capita* consumption of sawn timber in Ireland was only about 2 cubic feet as compared with about 6 in Britain (in a year when consumption was abnormally restricted) and 10 in Denmark. It is estimated that Irish consumption may eventually be expected to increase to about $8\frac{1}{4}$ cubic feet per head as domestic forests come into bearing. For the present population of three millions this would amount to 150,000 standards (of 165 c.f.). Allowing for an increase in population of 50%, the consumption would be 225,000 standards but as this figure is considered excessive, it is rounded off to 200,000 standards. The commercial forestry programme is aimed to produce half this amount—100,000 standards.

Rates of Growth and Production per acre:

The lands to be dedicated to forestry, as included in the Forestry Division's Survey of Plantable Land are estimated to be suitable for species as follows: Sitka Spruce 25%, Norway Spruce 10%; Scots and Corsican Pine 15%; Japanese Larch and Insignis Pine 10%, European Larch 5%, Douglas Fir and hardwoods 5%; Contorta Pine 30%.

Based on this estimate and on these proportions being maintained in land acquisition, on land averaging Quality Class III of the British Yield Tables, and allowing a reduction in yield of 15% to cover risks, unsuitability of a proportion of the *Contorta Pine* for conversion to lumber, yield is fixed at 69 cubic feet Quarter Girth per acre per annum. This figure is almost identical with that of the British programme and compares with actual yields of 76 c. f. for the intensively managed Danish forests.

With a 50 year rotation only 80% of the merchantable volume of a tree will be of sufficient size to be suitable for the sawmill and further loss in conversion is put at 50%. This means that the yield in sawn timber is only 40% of true volume; 325 c.f.Q.G. (or the annual yield from 4.7 acres) will produce one standard of lumber. In round figures, therefore, 500,000 acres of commercial forest will supply the target of 100,000 standards. Annual planting is fixed at 11,750 acres.

This programme should be designed to meet Irish needs at costs which would enable manufacture of wood goods for sale at prices competitive on world markets. A considerable part of the lands are situated in the south and east. For economic working the commercial programme would have to be concentrated on those better forest lands and should be in aggregations of not less than 5,000 acres. This is the area needed to maintain a supply to a sawmill of 275,000 c.f. per annum capacity, hauls of 25-30 miles being considered economic.

In terms of 1950 F.O.B. costs of low grade timber imports the production would gross about £10 per acre with a profit element of about £2 per acre as compared with 16/8 from hill sheep grazing on similar lands. Employment per acre would be considerably increased.

SOCIAL PROGRAMME

Case for:

Ireland possesses, especially in the west, tens of thousands of acres which are of little or no agricultural value due to infertile soil, poor drainage, excess peat development and exposure to high winds. In these tracts Land Commission efforts to set up economic farm units have at best been only partially successful. It has been necessary to provide government subsidies and relief schemes in order to enable the local population to eke out a hard existence.

Forestry seems to provide an answer to this unfortunate situation. The development of modern mechanised planting technique gives promise of the establishment of forests on lands on which formerly trees could not be made to grow. Such forests will be of comparatively low productive capacity and cannot be expected to pay cumulative interest charges on the capital investment. Nevertheless the establishment of such forests would well serve the national interest. They might not produce much saw-log material but they would produce pit props and pulpwood in quantity and provide a reserve against national emergencies. Government funds, which now go into projects involving maintenance charges and no productive return, would under a social forestry programme become capital investments which in the long term would yield financial returns.

Objective:

The objective would be to provide sufficient produce to pay operating costs but not capital investment charges.

The rate of land acquisition, planting, thinning, etc. under this Social Programme need not be as rigid as under the Commercial Programme but could be varied according to prevailing economic conditions. It seems safe to assume that there are at least 500,000 acres which in the national interest require to be afforested as part of the Social Programme.

IMPLEMENTATION OF PROGRAMME

Review Board:

In order to integrate forest policy into other land use programmes and to resolve conflicts between competing land uses, a sub-committee of the Cabinet should be set up to act as a Board of Review at the highest policy level. This Board would be assisted by an Inter-Departmental land use committee. Acquisition policy should be approved by the Board.

Finance:

Temporary budgetary difficulties should not be allowed to jeopardise the success of an undertaking involving a capital investment of the order of 100 millions pounds. Legislation is suggested to ensure at

least a minimum commitment to be included in the budget of each fiscal year.

Public Education:

There is no forest consciousness in the minds of the people of Ireland such as exists in Scandinavia and other nations where the forest is an important element in the national economy and way of life. The implementation of the programme will introduce an element strange to traditional habits and thinking. The innate conservatism and suspicion can be overcome only by using every modern implement of mass education, the press, radio, motion pictures and, particularly courses of lectures in rural districts.

Department of Forests:

Only a separate Department can be expected to wield the authority, prestige and influence necessary for the carrying out of so large a programme. Two alternatives are discussed—a Commission on the lines of the British Forestry Commission, the E.S.B. or *Bórd na Móna*; or a Government Department. While the former has important advantages in eliminating 'red tape', the Department would have its Minister in the Cabinet and on the Board of Review. This would make for steadier, if slower, progress with less danger of clashes or arbitrary decisions. Preference is given to the Departmental system only on the understanding that 'red tape' is reduced to a minimum.

The Minister for Forests should have freedom to gather round him the best technical, and administrative and public relations staff. Expert consultants might be offered short term appointments. The importance of satisfactory remuneration for all staff and satisfactory living accommodation for field staff is emphasised. Pensionable status is described as the common right of field personnel wherever forest management is practised.

ORGANISATION AND TECHNICAL PROBLEMS

Acquisition:

The basic responsibility of indicating the lands suitable for acquisition and the recommendations as to price to be offered must remain with the forest authorities. The present arrangement whereby Land Commission Inspectors are seconded to the Forestry Division to deal with land tenure complications and to advise on the relative importance of the differing elements in acquisition represents a very useful procedure. These Inspectors should however be under the direction of the Forestry Division as regards scope and priorities of work.

The Department should have power to arrange for local exchanges of land in order to cater for those farmers who are willing to trade but not to sell. The present price ceiling of £8 per acre should be raised

to £12 for good land with provision for higher prices in special cases where approved by the Board of Review. As an alternative to migration by the Land Commission a cash bonus might be added to the forestry value of lands. Compulsory acquisition proceedings are recommended where the holders of 75% or more of the rights of a suitable common-age agree to sell. The Forestry Division should take the initiative in selecting and offering to purchase suitable lands. A three year planting reserve should be built up with the minimum of delay.

Mechanisation:

The use of machinery in the nursery and in the preparation of land for planting has revolutionised afforestation techniques in recent decades. Costs have been significantly reduced and large areas previously unplantable have (by the use of heavy deep ploughing and subsoiling equipment) been transformed into valuable forest lands. The use of such equipment is strongly urged.

Research:

A strong Research organisation is necessary for efficiency and as an insurance measure, especially as such large use is being made of exotic species whose behaviour in mass plantations cannot be foreseen. Ireland has so much land which could be improved by mechanical treatment that it should be in time a world leader in this field. Other work awaiting the attention of a research organisation include seed provenance, new nursery techniques, use of fertilizers on poor ground, possible deleterious effects on the soil of pure coniferous plantations, introduction of hybrid poplars and crop protection studies.

Labour:

The payment of labour at the county rate with a bonus for piece-work over an agreed minimum is advocated. The County Councils should provide workers' houses on lands made available by the Forest authority.

Management:

In order to provide a market for thinnings preliminary studies of the possibilities of establishing pulp mills should be carried out.

The better type of land obtained through the break-up of demesnes should be devoted mainly to hardwoods in order to cater for local markets.

Education:

The afforestation programme should be administered by properly trained Irishmen. A corps of University-trained officers will have to be established and expanded. Pre-selection of likely candidates and assurance of employment on graduation is recommended. One of the first duties of the new Department will be to make a thorough assessment of future needs of professionally-trained staff and then to develop a comprehensive plan for training and recruitment in full collaboration

with the educational authorities. In Switzerland there is one University-trained forest officer for every 11,000 acres of forest land.

Expansion of the facilities for sub-professional training of foresters is also required and an arrangement whereby a certain number of the students might be given an opportunity of University education is recommended.

Rotation Ages:

The 50 year rotation proposed in the present programme should be adequate for Sitka, Douglas and Western Hemlock but longer rotations of 60 to 70 years will probably be necessary in the European species such as Scots pine, larch and Norway spruce.

Species.

Undue concentration on any single species is to be discouraged and European species should be used where growing conditions would seem to give promise of economic justification.