

# IRISH FORESTRY

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VOLUME VII.

DECEMBER, 1950.

NUMBERS 1 and 2

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## **THE NECESSITY FOR A FOREST POLICY**

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The Forest provides man with some of his most essential raw materials. To-day wood and other forest produce is being put to wider uses and is in greater demand than ever before. The Forest is beneficial in other respects; it protects the land against soil erosion; it conserves water supply and the flow of streams, it provides means of reclaiming swamps, and it protects, and in some cases has saved from extermination, some of the world's most interesting fauna. The Forest has a great recreational value and is an aid to health. And not least of all the Forest has permeated and inspired Music, Art, and Literature in almost every country in the world. A country which has lost her forests has lost something more than purely material advantage.

Mines, oilwells, and turf-bogs are also sources of raw materials but are dead things and end in exhaustion; they cannot be renewed. Policy formulated for their working must be limited by this fact. The forest, on the other hand, is a living community which, with wise treatment, may be maintained in productivity for ever.

Treat a forest like a mine and you'll get the same end result—a derelict waste. But there's a difference, for, whereas the mine is finished for good and all, the forest, even though exploited to destruction, can be re-created provided favourable soil and climatic conditions still remain, and given time, money, knowledge, and above all, wisdom.

Forests are products of the soil, but Forestry differs from Agriculture and Horticulture in that it deals with wild plants which have been little modified by cultivation, and in its being essentially a long-term enterprise. To be properly grown a forest requires skilled management throughout its life; neglect or incompetence in its early days may result in total loss; at later stages in loss both in the quantity and quality of timber produced.

A properly organised forest should fulfil two main conditions: it should furnish regular annual out-turns in perpetuity, and it should produce the maximum out-turn which the soil and climate are capable of producing. A forest fulfilling these conditions is

said to be organised on the principle of the *maximum sustained yield* and, unless there are special indications to the contrary such as where the protective value of a forest must take precedence to its supply value, this should be the ultimate aim of all sound forestry, however distant may appear the prospect of attainment.

Forest Policy is essentially a part of a wider policy of land utilization and it should be considered with due regard to the claims of agriculture, animal husbandry, and other purposes for which land is required. It has been suggested that a pre-requisite to the effective planning of the use of land would be a Land Utilization Board, constituted by the State, and on which all interests should be represented, to decide the use to which all land is put. Too often in the past has haphazard alienation of potential forest land involved a country in vast expenditure in its repurchase.

Forestry has a horizon beyond the limits of a lifetime and demands vision in its direction; it is a big subject in terms of land, finance, and the time factor and it is only natural therefore that, in most countries, it has come to be identified with State ownership and control. The degree of control exercised by the State usually depends on the extent to which forests are essential for protective purposes or for safeguarding a country's future supplies of timber and forest produce. The enormous inroads made into the world's timber resources by the two great wars have meant that no country can to-day afford to have its forests, or its potential forest lands, in an unproductive state. When large-scale afforestation becomes necessary heavy expenditure is involved; for instance, under Britain's Post-war Forest Policy it is estimated that the afforestation of 1,100,000 acres during the first ten years of the plan will cost £41,000,000 Nett.

The ultimate aim of all State enterprise should be the benefit to the people. Usually the people themselves are quick to assess the value of State undertakings and, when they consider it necessary, to criticise in no uncertain terms. In familiar services like Post and Telegraphs, Transport, Police, and Electricity, lack of vision in direction, or incompetence in working, soon become apparent to all and are felt as long as they continue; they can be remedied relatively quickly and usually without prejudice to the welfare of future generations. Not so in Forestry. The people see little of forest work and often understand less. Forestry is apt, therefore, to escape that critical and salutary appraisal the public bestows so readily on other, but more familiar, State enterprises. Errors in Forest Policy or management which may not be very apparent at the time may be fraught with most serious consequences later. An old saying recalled by my friend, Mr. Beresford Barrett, recently in the Societys journal, runs: "A DOCTOR buries his mistakes. A FORESTER is buried before his are found out!" But the main danger lies not in the mistakes of the forester. It lies in misguided or sterile Forest Policy, examples of which abound all over the world . . . derelict waste lands . . . countrysides without

tree shelter . . . hills without soil . . . streams without water . . . and the unlovely picture of people reduced to a "Cowdung and Corrugated Iron" domestic economy for want of firewood and timber.

In this roughly sketched background may be discerned two signposts towards a sound Forest Policy :—

- I. The subject should be approached from an angle of its own and with full appreciation of its long-term nature and the absolute necessity for continuity;
- II. The aim should be to bring to this and future generations all the benefits that Forestry can provide. To achieve this it is of the utmost importance to create an intelligent and critical public interest in Forestry.

And one might well add a warning sign with the words : "Forestry is a good cause but it can be damaged by false reasoning and mistaken conclusions, however well meant."

Sooner or later all countries are forced to recognise the necessity for laying down a sound Forest Policy. In some this fact has been realised whilst considerable tracts of the natural forests still remain and in these the main concern is to conserve and bring under proper management existing forest tracts; in others it has been realised only after the natural forests have been to a large extent, or wholly, destroyed, and here the problem is the long and expensive one of re-creating the forests.

In France and Germany the importance of proper forest conservation and management was appreciated over three centuries ago. I remember being immensely impressed by the long-term character of French forestry when, just after War No. I, as students working in the magnificent oak, beech, and hornbeam forests of Tronçais, we were told that these forests had been managed under a Working Plan drawn up in the time of Colbert, about 1675. Other recollections of French forest tours, with a bearing on policy, include those admirable communal and village forests. These were owned by the commune or village and managed by a forester lent from the State Forest Service. Not only did they provide their owners with free supplies of timber, firewood, and charcoal, but also, by sales to outsiders of forest produce, they provided funds for works of communal benefit such as schools, churches, recreation halls, and such-like.

And there was the working plan for the sand dune reclamation forests in the Ile d'Oleron on the Biscay coast. This was the kind of competent and practical forest plan one expects in France. It provided for the usual working circles—one for timber supply, one for firewood, one for resin tapping, and so on, but there was an additional point of interest: it had an Aesthetic Working Circle devoted wholly to the improvement of the landscape and the general amenities of the forest for local people and the many visitors who came there in the summer. The French are a practical people.

Nineteen per cent of the total area of France is under forests and of this 14 per cent is owned by the State, 21 per cent by public bodies, and 65 per cent by companies and private individuals. State control of forests under other ownership is light in France, except in the case of protection forests but plantations on mountain tops and slopes and on sand dunes are exempt from taxation for thirty years and on burnt-out areas for a period equal to the age of the wood destroyed with a limit of twenty years. Private owners may, on request, have their forests managed by the State under contract for a period of ten years upwards. It is well appreciated on the continent that properly managed forests are good investments yielding steady returns and offering good security.

Denmark is an example of a country which exercises strict State control over private forestry. In 1805 a Forest Law was introduced placing all existing forest lands, by whoever owned, under reservation and providing for their cultivation as high forest. In 1935 the Forest Law was amended and brought up-to-date and the degree of State control over private forests clearly defined. The management of private forests must be carried out under the direction and advice of State Forestry Inspectors. The buyer of a forest may not do any felling for ten years after purchase except that permitted by the inspector for the domestic needs of the estate or for the proper management of the forest. This aims at reducing speculation in woodland. Provision is made for arbitration between owners and the State by the institution of a committee consisting of three Government representatives and four representatives of the various private owners' associations. The late Professor Troup, in his work, *Forestry and State Control*, remarks, after personal experience of Danish forestry, that, in spite of the strict degree of control, there are remarkably few complaints from forest owners and the flourishing condition of the forests testifies to the efficacy of the law which operates with little friction. Nine per cent of the total area of Denmark is under forests and of this 24 per cent is owned by the State, 29 per cent is under communal ownership, and 47 per cent by private owners.

The first declaration of Forst Policy to be made in the British Commonwealth was that of India, which then included Burma, in 1894. It may be of interest to follow the train of events in Burma, a country in which, as a forester, I have had the good fortune to spend a large part of my life.

Burma has in her great teak forests one of the world's great natural assets. From the earliest times teak has been prized as the most stable and durable timber. In 1826 when the British went into Lower Burma the Admiralty had for some time been running short of home-grown oak for the Royal Navy. The apparently inexhaustible supplies of teak in the Burma forests were a real godsend. But they weren't so inexhaustible as they seemed and between 1826 and the middle of the century farseeing people had at various times urged the Government of India to introduce

effective control over extraction. But for a long time the Government, as governments so often do, did nothing. It was true that felling licences contained a minimum girth and a compulsory planting clause but these, in the absence of adequate supervision, weren't worth the paper they were written on as far as forest conservation was concerned. And the Moulmein timber traders made hay whilst the sun shone. But the destruction of the teak forests went on. And then at long last, in 1855, the Government announced its intention to enforce supervision over felling and extraction and in 1856 Dr. Dietrich Brandis was appointed to the charge of the Burma forests.

Brandis, a German, was the first scientifically-trained forester to come to Burma. He was a great forester and a man of outstanding ability and drive. He convinced Government of the importance of working the forests on the principle of the sustained yield and of the necessity for a properly-trained forest service. He initiated the first forest working plans in Burma. From the day of Brandis's arrival forestry never looked back in India and Burma and he has well earned the title of "The Father of Indian Forestry."

It should be appreciated that the main problem in Burma was not the creation of new, but the conservation, improvement, and proper management of existing natural forests of great value. In 1894 the Government of India made its declaration of Forest Policy which has held good for both India and Burma upto the present day. This somewhat lengthy, but incidentally beautifully worded document, has been aptly summarised as follows:—

"The main object is the greatest good to the greatest number, attained by the following general principles—

- (a) that the preservation of the climatic and physical conditions comes before anything else,
- (b) that the preservation of the minimum amount of forest necessary for the well-being of the country is second only to (a).

Provided the above two conditions are fulfilled then,

- (c) Agriculture comes before Forestry,
- (d) the satisfaction of the needs of the local people free, or at cheap rates, comes before revenue, and
- (e) after all the above conditions have been satisfied the realisation of revenue to the greatest possible extent, compatible with the principle of a sustained yield, is permitted."

At the time of the Japanese invasion in 1942 Burma had 35,000 square miles of Reserved Forests and eight wild life sanctuaries covering 700 square miles. Over 80 per cent of the Reserves were worked under detailed prescriptions of Forest Working Plans sanctioned by Government. These working plans constituted a definite part of the implementation of the Forest Policy in that they ensured continuity of management and the

methodical collection and recording, year by year, of all important information concerning the forest tract to which they referred. Organised systematic forest research started with the establishment in 1906 of the Imperial Forest Research Institute at Dehra Dun in India with sections dealing with Silviculture, Working Plans, Entomology, Botany, Chemistry, and all branches of Utilisation. Burma had in addition her own local research officers in Silviculture, Working Plans, Entomology and Utilisation working in close co-operation with Dehra Dun. It is of interest to note that after the political separation of Burma from India in 1935 Burma still continued to subscribe to and retained her full pre-separation connection with forest research at Dehra Dun.

And now to come nearer home. Before War I the United Kingdom, including Ireland as it did then, had no Forest Policy. About 97 per cent of the 3,000,000 acres of existing forest was privately owned. The war caused heavy inroads into these not very large timber resources and in 1919 H.M. Forestry Commission was constituted to deal with the situation; the formation of the new Irish Free State put Ireland outside the scope of the Commission's activities from 1922.

In spite of a serious lack of finance between the two wars, by 1939 Britain had acquired a forest estate of 700,000 acres of which 434,000 acres had been put under woodland; private owners with the aid of Government grants had planted an additional 126,000 acres. In 1919 a Research Branch was set up consisting of forest officers dealing with Silviculture, Rate of Growth and Production, and an Entomologist and a Mycologist; it was the duty of the chief research officer to keep in close touch with executive officers to ensure that no important problems were being overlooked.

Hitler's war brought a second great exploitation of British woodlands, but the Forestry Commissioners lost no time and by the beginning of 1943, whilst the war was still at its grimmest, produced an extremely competent survey of the whole position of British forestry, past, present, and plans for the future in a report on *Post-war Forest Policy*\*. This report should be read by anyone interested in forestry as a model review of the facts on which a Forest Policy is based. The report was accepted by Parliament in 1946. It envisages within 50 years the rehabilitation of 2,000,000 acres of existing woodland and the afforestation of 3,000,000 acres of bare ground with an ultimate objective of 5,000,000 acres of effective forest. It is considered that, although the ultimate yield of 5,000,000 acres will represent only about 35 per cent of Britain's requirements calculated at present levels of consumption, it will, nevertheless, provide a vital reserve of timber for the emergency of war. The plan provides for the continuance of research on a greatly enhanced scale. In respect of education in forestry it estimates that 30-40 Forest Officers (University) and 200-250

\* "Post-war Policy"—Report by H.M. Forestry Commissioners. H.M. Stationery Office, York House, Kingsway, London, W.C.2. Price 2s.

Foresters (Forestry School) will have to be recruited every year for the State Forest Service. On the amenity side proposals are included for the addition of twenty national parks during the first ten-year period and for the continuance of the most successful wartime practice of bringing schools out to holiday camps in the forests where boys may enjoy the novelty of camp life and do useful work.

In Britain control over private woodlands is provided for by the Dedication of Woodlands Scheme. Under this private owners are given financial and practical assistance by Government in return for an agreement to use the land dedicated in such a way that timber production is the main object and to work to a plan of forestry operations approved by the Forestry Commissioners. When the scheme was first put forward private owners were unwilling to commit themselves owing to alleged inadequacies of timber prices and of planting grants, the arbitration clause, and the apparently irrevocable nature of the draft agreement. Negotiations went on between the Commission and the United Kingdom Forestry Committee—which represented the several forestry societies and the private owners—and all points of contention were satisfactorily settled early in 1950 and the scheme should now forge ahead. Planting grants have been increased to £12 an acre, maintenance to 4s. per acre annually, provision has been made for an entirely independent arbitration committee, and for an owner to secure the release of his woodland from dedication, under certain conditions.

His Majesty's Forestry Commissioners emphasise five pre-requisites for the success of British Forestry:—

1. Recognition by Government of the importance of timber production at home.
2. Continuity of National Policy including finance.
3. An *ad hoc* authority with the duties of formulating policy for Government.
4. A unified Forest Service, highly qualified in the professional sense and imbued with a keen *esprit de corps*.
5. The provision of adequate services for Research, Education and Information.

Lastly, let us consider the state of Forestry in our own country, Ireland.

A reference to Irish Forest Policy is contained in the last report on Forestry by the Minister of Lands for the period 1938 to 1943. It reads as follows:—

“The forest policy remains as laid down in previous reports, namely, to create a home supply of raw timber sufficient to meet home requirements, as far as it is possible to grow in this country the kind of timber required. It has been estimated that the total national objective of both State and private woodland should be 700,000 acres of afforested land, including 100,000 acres of protection forest and 600,000 acres of productive forest.”

The Forestry Act, 1946, is an Act “to make further and better

provision in relation to Forestry." In addition to provision for acquisition, planting, general and limited felling licences and other clauses dealing with control of private woodland, the Act empowers the Minister of Lands to establish a Consultative Committee to advise and assist him on forestry matters; and to undertake the collection, preparation, and publication of statistics; to make experiments and research as he thinks fit for the purpose of promoting forestry, and to disseminate information likely to arouse, stimulate, or increase public interest in Forestry.

Education in Forestry is provided by the well-known and highly successful Foresters' School at Avondale, County Wicklow, and by the Degree Course in Forestry (B.Agr.Sc.) offered by the National University of Ireland at University College, Dublin. Since the degree course was inaugurated only about half of those graduating have been able to find employment in Irish forestry; at the present time there is only one Irish student taking the course.

In 1947 there was approximately 130,000 acres of State owned and 91,000 acres of privately owned forest, a total of 221,000 acres or 1.3 per cent of the total land area of Twenty-six-county Ireland. This 1.3 per cent of tree-covered land is far from being fully productive forest consisting as it does largely of recently heavily exploited older woods and immature plantations. We have the deplorable distinction of having a lower percentage of forests than any other country of western Europe, e.g., Germany 24 per cent, Switzerland 23 per cent, France 19 per cent, Belgium 18 per cent, Denmark 9 per cent, The Netherlands 8 per cent, and Britain 5.5 per cent. The fact that our forests are small in area should not, however, blind us to the debt we owe to the enterprise and enthusiasm of private owners in the past, and to a young forest service which has achieved most successful results within the limited finance provided. Those who have followed the tours arranged by the Society of Irish Foresters well know what excellent woodlands skilled silviculture has produced in our soils and climate.

The passing of the comprehensive Forestry Act of 1946 and the recent announcement by the Minister of Lands that Government proposes to step up the annual planting programme to 25,000 acres and the overall target to 1,000,000 acres indicate that Ireland is at long last on the eve of big developments in Forestry; developments which if wisely planned will have a profound effect on the future welfare of the country.

Well, I have tried, in the compass of this paper, to sketch for you a general background to Forest Policy, and to illustrate how some other countries have tackled their forest problems. May I, in conclusion, pick out some of what I consider are the highlights in the approach to a sound Forest Policy:—

1. If you're going to have a Forest Policy at all don't be shy about it. Issue it in the shape of a clearly-worded, formal declaration, widely published and frequently reiterated.



2. Recognise in the declaration of policy that continuity, unaffected by political or other changes, is essential to sound forestry and assure sufficient funds to carry out the accepted policy over a period of years.

3. Give the people in an easily understandable form all the facts and figures on which the policy is based. Competent Public Relations in Forestry are essential to arouse an intelligent and critical public interest.

4. Aim at giving the people *all* the benefits of Forestry; not merely timber and protection. Aesthetic and recreational possibilities deserve an important place as aids in restoring a long-lost forest consciousness and appeal particularly to the young; the people who matter most.

5. Consider Forest Policy with due regard to other uses of land and in relation to social and economic needs. If in some cases silvicultural considerations have to be subordinated to other needs, e.g., the afforestation of poor soils in the West, say so.

6. Make provision for Research and Working Plans as integral parts of Forest Policy. Working Plans because they are essential not only to ensure continuity of management but also because they provide for the methodical collection and record of all relevant information about the tract to which they refer; information that is often neglected and seldom readily available when urgently wanted. Research because it provides for the expert sifting and recording of knowledge already gained and for the properly co-ordinated investigation of existing and future problems.

7. Don't ignore Private Forestry or leave it to sink or swim under nothing more than the felling and replanting clauses of a Forestry Act. The rehabilitation and proper management of private woodlands demands the same certainty in future action as does that of State forests; and the ultimate responsibility for this must fall on the State.

8. And finally, in respect of Education in Forestry, provide for the highest possible standard of technical training within the State Forestry Organisation, and for close co-operation with the Universities whose role it must be to supply in adequate numbers men of high professional qualifications in forestry.

In putting a Forest Policy into effect no other single consideration equals in importance the human factor. Scales of pay, conditions of work and service, housing, and amenities must be sufficiently attractive to secure the right type of young men; and there's only one right type for Forestry, the best.

Forestry is a good cause. Here in Ireland are all the ingredients of success. Let us make success certain and complete by following a wise and resolute Forest Policy.