

A FOREST POLICY FOR AUSTRALIA

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OF the many national assets that together we are wont to call our natural resources, there are few which hold so important a place in the economy of the nation as the forest. It differs from most other resources because, though under unsound management it certainly is exhaustible, it is nearly always replenishable, while, if it is utilised on sound sylvicultural principle, the forest becomes an inexhaustible asset. It is customary to look upon the mineral fields, be they gold or base metals or coal, the mother of industries, as the most valuable natural resources of the nation. Yet the mineral fields are all exhaustible, and a time will come when the last ounce of gold and the last ton of coal will have been won from the soil. In this the mineral fields differ essentially from the forest. The actual wealth of a mine may be regarded as a finite quantity, while the wealth of a forest is infinite. So long as the commercial profits of the undertaking are to a large extent utilised within the boundaries of the country, the work of winning the mineral from the ground is one which may well be left to the unrestricted activities of private enterprise. It is to the advantage of the nation to reap the whole golden harvest and utilise the wealth it yields to develop the commerce and industries which must follow in the wake of the mining industry. With the forest the position is entirely different. It happens all too frequently that forests are handed over to a private individual or to a company who treats it as one would do a mine, reaps all the crop, and leaves the area devastated and useless. Private commercial enterprise knows no other motive than private gain; it sees no further than the profits of to-day. If it looks forward at all, it is only as far as the time taken to write off its depreciating assets. The forests in such hands are naturally doomed; and so it is that no nation that has given the matter thought has allowed its forests to fall into the hands of the private individual or corporation.

From the earliest times the forests have been regarded as the property of the community in general, the reason being that the forest is an everlasting source of wealth, and is not the property of one generation alone, but of the nation for all time. The Romans were quick to realise this fundamental principle, and Justinian's Pandects lay down that the cutting of the coppice must be conducted by the timbermen as by the father of a family (sicut pater familias caedebat), and the large timber trees were to be reserved for the State's use.* The community could utilise the timber crop, but in such a manner that those who followed after them would find a supply sufficient for their needs alone, and they again would leave sufficient, and so on down the ages, the forest would continue to yield its unfailing crop of timber. The early laws differ only in degree from those that are in force in the forests of Europe today. The basis of all methods of forest management is the same, viz. a restriction of the cutting so as to assure a continuity of supply.

In addition to the obvious value of timber, which has been felt from the beginning of time, the forests were found to have another value, which was almost as great, and this is their influence on the surrounding conditions of climate, water, and soil. Forests exert a beneficial influence by reducing the extremes of heat and cold, they increase the precipitation to a slight extent,

* Ulpian VII. ad edict. provinciale

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while in mountainous country they act as great water storers, holding up the surplus of water which falls from the sky and letting it out slowly in the form of springs, so maintaining a constant flow in the rivers of the plains. The devastation wrought in the forests of the Alps and Vosges by graziers was followed by such appalling results that France learned a lesson never to be forgotten. Erosion of the hill sides, formation of torrents, destructive floods wiping out whole farms and villages were some of the results. The destruction of the forests of Algiers and certain other parts of Africa and Asia has been followed by the invasion of the desert sands, and vast areas of agricultural land have been rendered unproductive. Had Justinian's law been followed, and the cutting conducted as though by the father of a family, then they would only have cut what the forest would have replaced, and none of the disasters would have followed. Instead, France is spending millions on her Reboisement des Montagnes, and in Algiers recourse is being had to the planting of Australian eucalyptus to restore the forest conditions and stem the invasion of the desert.

With the knowledge of the true role of the forest there came the realisation in many countries that the area of forest still remaining was inadequate for the needs of the community. The result was that the cutting laws were made more restrictive, and the tending of the woods became an urgent necessity. Colbert's cry "La France perira faute de bois", led the way in that country towards the adoption of a sound forest policy, with the result that France did not perish through lack of wood, but her forests went far to enable both her own countrymen and the British to defeat the Germans. Sad inroads have been made into the forest wealth of France since 1914, and her forest working plans have been broken. Without those forests it would have been difficult, if not impossible, to keep the Allied Armies on the Western Front in the field. Colbert was followed by other foresters; and all the nations who were not actually on the threshold of their development took steps to reserve what forests they possessed for the national good. The cult of forestry became slowly recognised, and the care of the forests became the charge of skilled men, whose duty it was to stand between the timberman and the nation and apportion the timber crop in such a manner as to benefit the whole community for all time, and not only the present day convert-er of of the wood. The forester laid down working plans for the management of the forests, and these were based on sound sylvicultural principles, and extended over long periods. The plans restricted the amount of timber that could be felled annually, and the amount permissible was, of course, the possible, or the quantity that the whole forest would grow in a year. The position of the felling section for each year was fixed; the operations necessary to assure the regeneration and proper growth of the best species on the cut-out areas were laid down. In this way a maximum of forest produce was assured; and yet only the forest interest was cut and utilised, the forest capital remained intact. In the utilisation, waste was, as far as possible, eliminated, which was a comparatively easy matter with a large timber-using population to cater for.

Yet, with all this care and forethought, a country like France soon found itself unable to supply its own needs in timber, and was forced to import large quantities. Germany, too, who had perfected a particularly fine, if somewhat rigid, forest policy, and who possesses no less than 30,000,000 acres of forest, has also been obliged to rely on imported wood to make up the deficiency of her local supplies. There arose the question then of how great an area in comparison to the total area of the country it is necessary to keep under forest for the supply of timber for the general needs of the community. This matter has

been thoroughly investigated, and it has been laid down that an area of forest equal to one-quarter of the total extent is the bare minimum necessary in a well-developed country. There are not many countries that possess this proportion of forest today, forest policies in most instances having come too late to save the necessary area. The result has been that most of the older countries have become large importers of timber, and are dependent on two sources of supply. Countries like Russia and Scandinavia, that have an excess of forest, and countries which have not reached their full development, and where forests, in consequence, are large in proportion to their population, such as Canada and other British Dominions, also countries along the West African coast.

In those British Dominions, where forests occurred in large areas they were naturally regarded by the early pioneer as obstacles to settlement, and were in most instances greatly destroyed before a market for the timber was found. When an outlet was discovered, and saw-mills and the lumbering business generally came to be established, the young nation, that had always regarded the forests as its natural enemy, very naturally welcomed this means of clearing the land. The mills were to be the forerunner of settlement, and every encouragement was given to the lumber company to take up larger areas of forest and develop an export trade. Concessions were granted on terms which we today can only regard as most generous; leases were taken by the saw-miller on a practically pepper-corn rental, and he was regarded almost in the light of a philanthropist. Even today the larger milling companies still take up the attitude that they have been, and are, the saviours of the State, and have done it an incalculable benefit through the clearing of land, the circulation of money in wages, and the purchase of produce. In reality, such concerns have destroyed a large portion of the national wealth by forcing an export market for the timber before the local demand has grown sufficiently to absorb the smaller sizes and other timber not ordered from overseas. Such timber, through the lack of any local market, and the impossibility of stacking and storing it, has been burnt. The sawmillers of the Dominions were not slow to seize on their opportunities, and soon it was not a case of cutting timber on agricultural land to assist land settlement, but cutting timber anywhere and everywhere. Their road was made easy for them, for the pioneer population continued to encourage them, until finally they became so well established, and wielded so strong an influence with local Governments, as to make their position unassailable.

The forests were treated as mines, whose wealth is exhausted and not replenishable, and the science of forestry was lost sight of in the endeavour to saw up all the crop in sight. It was often argued, and is today in New Zealand, that the local timbers grow too slowly, and are not worth any form of conservative cutting, but recourse must be had to exotics. Instead of ascertaining the actual growth per acre per annum of the forest, and allowing that quantity of timber, and that only, to be cut, the whole forest was attacked, and the crop reaped as quickly as possible. The unfortunate part is that the saw-miller in his inroads on the virgin forest only takes the best of the crop; he chooses all the fine-grade mill logs, all the straightest piles for harbor work, and cleanest poles for telegraph and other purposes. He leaves the forest in a deplorable state; the percentage of over-mature and dying trees, which in a virgin forest is always great, is naturally increased; while the best of the timber, which should have made the future forests, goes in piles and poles. The fires following the logging operations are a further menace, and it is often the case that whole forest regions have been destroyed through this cause. Thus, while we see the older countries embarking on a policy of careful utilization, under which the forests yield a perpetual crop of timber,

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, the young countries, profiting by the older ones' need for lumber supplies, embarked on a system of reckless exploitation.

(To be continued)