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S T A T E M E N T I.

INFORMATION CONCERNING

WORLD'S TIMBER SUPPLIES.

by E. E. Lane-Poole

1918

Statement I

TIMBER SUPPLIES.

a. GENERAL REVIEW.

United States.

In a review of the world's lumber supplies published in the "Timber Trades Journal" of 14/8/20 it is stated that because of war conditions the United States and Canada are at least four years in arrear of their usual building programme, and Great Britain and the Continent are at least five years behind, apart from the very large demand for timber for reconstruction purposes.

Prior to the war the United States reached its peak of production. It was estimated that the production of timber of all kinds in the United States during 1920 would be 10,000,000,000 feet less than the highest production prior to the war, this shortage being due to vanishing resources, labour shortage, railway embargoes and lack of tonnage to foreign markets.

From the final report of the Reconstruction Committee of the Ministry for Reconstruction (England) it is learned in regard to the United States of America, that, according to a report made for the American Government in 1910, the annual cut removes three times as much timber as the annual growth can replace, while forest fires further hasten the depletion of the forests.

The home consumption of the United States is the largest in the world and has overtaken the production. The net exports of timber have in consequence been greatly reduced. That this reduction commenced before the war is evident from the fact that, whereas in 1910 the exports of timber from the United States amounted to 3,580,000,000 feet board measure, in 1913 it had fallen 3,000,000,000 feet.

Though the American forests still contain larger reserves of timber than those of any other country with the

possible exception of Russia, it is evident that after a limited number of years we can no longer count on supplies from that source. Their growing consumption and the measures they are taking to bring the annual cut into conformity with the annual growth will soon reduce their exports to nil.

From the report dated the 1st June, 1920, by the Forest Service, U.S.A. Department of Agriculture, in regard to timber depletion, prices, exports and concentration of ownership, it is learned that during the four years preceding the war imports of lumber and logs ranged from 1,100,000,000 to 1,300,000,000 board feet (superficial feet), or about one-third of the volume of exports during the same period. Beginning with 1917 there was a marked increase in wood imports. In 1918 imports exceeded exports by 100,000,000 superficial feet, and in 1919 the excess of imports was probably much greater.

In addition to 1,370,000 cords of pulp wood from Canada, in 1918 the United States imported 156,000 tons of paper, chiefly from the same source.

Canada's exports aggregating about 1,000,000,000 superficial feet of saw logs and manufactured lumber into the United States, and about 1,000,000,000 shingles annually, compete directly with similar products produced in the United States. There is, in fact, approximately the same flow of lumber across the boundary in each direction, determined by the favourable location of consuming regions in one country with respect to lumber producing centres in the other.

Imports of pulp wood, pulp and manufactured paper in 1918 to the United States practically all came from Canada, and these furnished about two-thirds of the newsprint paper consumed in the United States, a proportion which will steadily increase unless the foreign trade policy adopted by Canada prevents that course.

The United States also obtains cabinet woods such as mahogany and cigar-box cedar, and other valuable woods which cannot be obtained in the United States, its annual imports of cedar amounting to about 20,000,000 superficial feet, and of mahogany 50,000,000 superficial feet.

Scandinavia. The high prices ruling during the war led to anticipation fellings and increasedthe shipment for the time being; but in Norway, and it is believed, also in Sweden, the annual cut has been in excess of the annual growth.

Russia. Russia has probably the largest forest resources in the world, although the exact position in that regard is somewhat obscure. The area of land classed as forest in Russia and Siberia is enormous. By far the greater part belongs to the State. Much of the so-called forest, however is without commercial value. Of the 1,000,000 square miles of forest belonging to the State less than two-thirds of the area is true forest. The total area of true forest in Russia, Siberia and Finland is estimated at 896,000 square miles. These forests vary greatly in the amount of timber they carry and in the rate of growth. The forests of Central Russia appear to be generally of poor quality, and railway construction on a large scale would be necessary to make the timber in Siberia available for export.

<u>The permanency of the supply must depend on the introduction of systematic management.</u>

It must also be remembered that the development of the Russian Empire is certain to be accompanied by an increased home consumption which may gradually curtail and even exhaust the reserves available for export.

France,
Portugal,
Spain,
Germany, ← } These are importing countries although they send

abroad certain classes of wood.

In the course of an article printed in the "Times Trades Supplement" Mr. A.H. Unwin, late Senior Conservator of Forests, Nigeria, states as follows:-

> "All timber comes from two sources - (a) forests or trees which have grown up unaided or unplanted by man, or (b) trees or forests which have been planted, sown, or attended by the present or the previous two generations of men. Up to the present the most timber has been obtained from the former source.
>
> "Under the original or virgin forests timber is cut from trees which have been growing for at least 500 years. In so far as such forests are not replanted, or trees do not grow again in that locality, man has used the "capital growing stand" of the forest which cannot be replaced under a minimum period of 40 or 100 years..... We are living on the world's "wood capital". As the most accessible forests have been utilised already any further supplies of timber will be obtained at greater cost than heretofore."
>
> "Europe, including Russian supplies, was not self-supporting before the war..... and even with the most complete development of the Swedish and Russian resources it is doubtful whether it will have sufficient timber for all its requirements".
>
> "Most of the smaller timber exporting countries of the world will, with increased development of internal trade, have little exportable surplus of timber. The Phillipine Islands constitute one of the few remaining resources of the Far East".
>
> "On the continent of Africa there are timber stands of great magnitude and these forests will provide one of the few great reserves of timber in the future. Much, however, of the timber in Central Africa is quite inaccessible at the present time so far as the world's chief markets are concerned.
>
> "From the Central American countries a certain amount of timber is exported, chiefly cedar, mahogany and hardwood; but as 85% of all timber used is obtained from the coniferous forests of the temperate zones, these exports do not materially affect the world's economy.
>
> "In South America it is probable that even those countries which are at present importers of timber would be in a position to export if the whole of their forest resources were opened up. Columbia, Ecuador, Venezuela and the Guianas are exporting countries as well as Brazil, which is estimated to have at least 640,000,000 acres of untouched forests containing approximately

"320,000,000,000 cubic feet of timber of various kinds. The Brazilian forests undoubtedly constitute one of the largest reserves of timber in the world and will have to be utilised; but many of these forests are situated on the banks of rivers 3,000 miles away from the ocean".

Summing up the world's timber position Mr. Unwin declares that there are two reserves in Central Africa and South America, a smaller reserve in Canada, and still smaller reserves in the Asiatic Islands, the Phillipines, Borneo and Papua.

From the Year Book of the Netherlands East Indies information has been gleaned regarding the forest resources of those fertile islands.

In Java the timbers are classed as Teak and Wild Timbers. The teak forests grow in the lower hill region of Central and East Java in a climate marked by a pronounced dry monsoon. At the end of 1918 the teak woods covered an area of 730,000 hectares, equal to about 1,805,000 acres (1 hectare equals 2.471 acres), of which 36% was organised into forest districts. As forest areas become cleared any lands not required for extending the land ~~under~~ population are at once replanted. Various methods of reforestation have been adopted, that generally practised at the present time being the combination of forestry and agriculture, the natives being allowed to plant farm crops between the rows of teak trees.

During the years 1912-1918 about 17,000 acres were replanted with teak annually.

Exports of teak wood ~~only~~ fell during the war period dwindling from 38,277 cubic metres, equal to about 1,351,745 cubic feet, in 1912 to 1,185 cubic metres, equal to 41,850 cubic feet, in 1918.

Knowledge regarding the practical value of the various kinds of wild timbers in Java is still very incomplete. The great value of these forests to Java lies

~~The World Generally~~

not so much in the value of the wood as in the hydrologic influence which they possess. The influence of the forests is of the greatest importance in a country like Java, since they prevent the water from flowing off too rapidly in the rainy season, while in the dry season the springs continue to provide water for the crops on the plains. It is probable also that the forests exert an influence on the climate.

Of the total area of Java, which is about 32½ million acres, about 10% consisted of forest reserves at the end of 1918. These reserves, however, include the bare mountain slopes, the reforestation of which is thought necessary. The unreserved forests and other lands are destined for the gradual extension of agriculture. In the "outlying positions", as they are called, of the Netherlands East Indies vast tracts of forest are still to be found. Real iron-wood occurs in almost pure stands in South East Borneo and in South Sumatra. In several places are forests consisting almost entirely of teak trees or camphor trees; other areas again contain a mixture of various kinds of trees.

Information regarding the Malay Peninsula is to be found in the Malayan Science Bulletin No. 1 of April, 1921. According to that authority the consumption of wood during 1919 in the Federated Malay States was 3,100,778 tons, of which only 211,904 tons is represented by timber other than firewood.

The total outturn of timber and fuel from the forests of the Federated Malay States for the year 1920 was 1,008,552 tons, of which timber (exclusive of poles, fuel and charcoal) accounted for 128,884 tons as compared with 1916 when the total outturn of timber and fuel amounted to 942,250 tons, timber representing 95457 tons. This timber was all used locally.

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The area of productive forest in the Federated Malay States is set down as 13,500 square miles or 8,640,000 acres. The forest capital of the country is being used up more than twice as fast as it is being produced.

In the Straits Settlement the total consumption of timber and firewood is estimated at 1,500,000 tons per annum. The remaining productive forests in the Colony are said to cover only 166 square miles and most of the wood used must be imported. During 1918 most of the timber imported came from Sumatra and other parts of the Netherlands East Indies, Siam, and the unfederated Malay States.

In the latter the total consumption of wood is said to be in excess of 1,000,000 ~~acres~~ tons per annum while the area of productive forest remaining amounts to 7,500 square miles.

The total consumption of wood in the Malay Peninsula is in excess of 5½ million tons per annum.

In the early days of rubber planting much of the best and most accessible forest was destroyed. It is certain that the demand for wood will increase year by year for a considerable time, which raises the question as to what may be expected in the way of future supplies. The total remaining merchantable forest in the Malay peninsula is 21166 square miles. Areas are, however, being continually alienated and the greater part of the forest is difficult of access. A wood famine is already acute in thickly populated regions and the exhaustion of the forest will proceed more rapidly with increased population and additional industrial development. The complete exhaustion of the forests within a few generations can only be avoided by the most careful management.

In his report to the Empire Forestry Conference

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held in London in 1920 Mr. G.E.S.Cubitt, Conservator of Forests, Federated Malay States and Straits Settlement, gave information confirming what has already been stated. In the course of his address to the Conference he stated - "To sum up, we can look to the Federated Malay States for no timber for use outside the Federated Malay States. The utilisation of wood of all kinds in the Malay Peninsula is, from such information as I have been able to obtain, greater per capita than in any country in the world outside the United States".

Phillipine Islands

According to the annual report of the Director of Forestry for the fiscal year ending 31-12-1920 the utilization of timber (exclusive of firewood and charcoal and dye woods) from the public forests during that year was 554,997 cubic metres, equal to 19,599,608 cubic feet, compared with 495,228 cubic metres, equal to 17,488,878 cubic feet, in 1919, and 277,171 cubic metres, equal to 9788, 238 cubic feet in 1913. During the year 1920 the total quantity of lumber and timber exported from the Phillipine Islands was 13,862,256 board feet as compared with 6,813,256 board feet during the previous year. The chief markets for these timbers during the year 1920 were the United States of America, which absorbed 7,981,376 board feet, China 3,513,264 board feet, and the United Kingdom 1,026,504 board feet. During the same year 720,376 board feet of timber were exported to Australia. There appears to be every probability that the exports to China will increase on account of the productive and actual development of that country.

While the local markets are still likely to absorb large quantities of timber the development of the lumber industry on a scale warranted by the resources of the Phillipine forests will depend very largely on the better development of the export markets which appear to have received too little

attention, local lumbermen already in the export trade having sufficient orders to fill and those engaged in the local trade being unwilling to handle the export business.

During 1920 the total lumber and timber imports to the Philippine Islands amounted to 7,838,912 board feet or more than 50% of the total exports, the United States with 5,712,976 board feet and Canada with 1,550,992 board feet being the principal suppliers. 80% to 90% of the total production of timber, in addition to imports, was absorbed within the Islands during that year.

British North Borneo

In Bulletin No. 2 (1916) by the Conservator of Forests of British North Borneo, published by the Department of Forests, Government of British North Borneo, it is stated that "the forests of British North Borneo carry heavy stands of relatively soft woods as well as hardwoods. They can compete with the other timbers on the Australian markets for the same purposes for which these timbers are used, but should bring higher prices as they excel them for interior finishing and furniture. If the requirements of the Australian market are carefully studied and if North Borneo were in a position to fill orders, it should be possible to place a considerable quantity of timber there each year.

The natural markets for Borneo hardwoods are South China, India, the Western United States and London. Softwoods should find a ready sale especially in North China and Australia.

No estimate has been found as to the total stand of timber in British North Borneo, but, in one instance following the coast line for 150 miles there are over 1,000,000 acres of forest within 20 miles of the coast on which the stand of timber will average over 1,500 cubic feet to the acre. Within this stand blocks of over 50,000 acres can be located on which the stand will be well over 2,000 cubic feet per acre. In that district alone the permanent annual possibility

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would be over 8,500,000 cubic feet of timbers which have already been well received on foreign markets. The exploitation of forests of British North Borneo has not been developed to the extent they deserve, partly because of the lack of authentic information as to their extent and value. Other factors involve transport and a greater knowledge of the timbers themselves.

In all there are estimated to be more than 2,000,000 acres of commercial forests within 20 miles of the coast. Further large tracts of virgin forest are known to occur, but of ~~which~~ these no particulars are available.

The total quantity of timber exported during the year 1912 was 1,448,639 cubic feet. In 1913 this figure rose to 1,728,049 cubic feet. During the war period shipping difficulties gradually reduced exports. 91% of the timber shipped in 1915 went to Hong Kong. Exports consisted of about 90% in the log and 10% sawn. Of the sawn timber 62% was shipped to London.

India

The total area of forests under the control of the Forests Department in India in 1919-20 was 250,949 square miles, being 23.2% of the total area of India. In addition, corporate bodies are estimated to own 8,000 square miles of forests, and private individuals 77,000 square miles, the total area of forests for India being 336,000 square miles.

India has had a Forests Department for the last 55 years and operations on a large scale have been carried out by it with a view to protecting the forests from fires and replanting deforested areas. The area of plantations ~~during~~ last year was 247,~~000~~ square miles.

b. British Empire

Within the Empire Canada has reserves of timber which rank after those of Russia and the United States as the third largest in the world, but unfortunately, forest fires destroy more timber than is felled by the lumberman's axe. ~~Any~~ annual destruction by fires is being put down by authorities as several times the annual growth.

The forest capital of Canada is growing less year by year.

Newfoundland has considerable reserves of timber covering 10,000 square miles, but more than a third of this area has been taken over by a single company for the production chiefly of paper pulp.

Labrador, a dependency of Newfoundland, is believed to have considerable reserves of timber suitable for pulp wood and pit wood.

India, South Africa, Australia and New Zealand are already importers of soft wood.

The United Kingdom is becoming every year more dependent on Russia. The only large reserves within the Empire are those of Canada which are rapidly being depleted by fire.

According to the summary of statements prepared by the British Empire Forestry Conference, London, 1920, the total area of the British Empire is 9,160,220 square miles, of which the total area of merchantable forest is only 685,130 square miles, there being in addition 1,112,030 square miles of unprofitable or inaccessible forest.