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THE FOREST RESOURCES OF
THE WORLD

The preceding number of this bulletin dealt with the coming shortage of timber in the United States and it discussed the problem of intensive timber production which may alleviate, but cannot totally prevent that shortage. It is reasonable to ask whither we may turn to supply this need and many have suggested that the great and little exploited timber regions of the tropics or of Russia might offer a solution. What is the character and extent of the world's forest

resources and can we hope for a timber supply from foreign sources? To answer these questions reference was made to Zon and Sparhawk's "Forest Resources of the World" for the following data.

The present area of productive forest in the world is probably about seven and a half billion acres - 22% of the land area of the world without the polar regions. The following table shows how the forest areas are divided among the six continental divisions:

Comparison of Forests in the Grand Divisions of the Earth

Continent	Forest Area	Ratio of	Ratio of	Forest Area per Inhabitant
		Forest Area to World's Forest Area	Forest Area to Total Area of Continent*	
	Million Acres	Per Cent	Per Cent	Acres
Asia	2,096	28.0	21.6	2.40
South America	2,093	28.0	44.0	32.45
North America	1,444	19.3	26.8	9.98
Africa	797	10.6	10.7	5.60
Europe	774	10.3	31.1	1.70
Australia and Oceania	283	3.8	15.1	34.70
Total	7,487	100.0	22.5	4.35

*Not including the polar regions

It is noteworthy that Asia and South America have approximately equal forest areas and they are the largest areas of all the continents. However, the land area of South America is much smaller than in Asia and as a result the per cent of forest to total land is twice as great. Also there are thirteen times as much forest area per inhabitant as there is in Asia. Australia and Oceania have the smallest forest area, and a very

low ratio of forest area compared to total area, but, being sparsely populated, the number of acres per capita is the highest of all. Europe and Africa have about equal forest areas but Africa is the larger continent by three times and thus Europe is three times as well wooded as Africa. Europe has the smallest forest area per capita. North America has twice as much forest land as Europe, and the per capita area is almost six times greater, but in

North America, a somewhat smaller per cent of the total land area is forested.

The great differences between the continents in the per cent of the land area which is forested are due mostly to the influences of climate, topography, and the forest policy of the inhabitants. Europe is uniformly densely forested, but all of the other divisions have large areas of desert, plains, and mountains, that bear little or no timber, and pull down the percentage of area forested. Asia has large areas of non-forested land including China, Arabia, Persia, Turkey, Palestine, etc. This continent has great coniferous timber resources in Siberia and considerable amounts of tropical hardwoods in India and the southeastern peninsula.

The forests of Australia are found on the northern and eastern coasts. The interior country is practically desert. The islands comprising Oceania are heavily wooded, mostly with tropical hardwoods which also form the major portion of Australia's timber.

Equatorial Africa is densely wooded but the Sahara Desert of North Africa and the plains of South Africa are not forested. African timber is almost all composed of tropical hardwoods.

South America is very heavily forested. The tropical hardwoods predominate and regions such as the Amazon basin contain vast quantities of these little known and but slightly exploited forests. There are some non-forested areas on the west coast and southern Argentine is almost treeless but, on the whole, this continent has a larger per cent of forested land than any other.

Americans are well aware of the effect of our western deserts and

arid western plain areas on the distribution of forests in the United States. Canada and the states have nearly equal areas of forest land but one-half of the Canadian timber lands lies in the far north where growth is slow and the commercial value is very low. Alaska has much of the same type of forest. Mexico is about 15% wooded. Excessively dry climate and forest destruction, begun by an old and highly developed Indian civilization, have caused large areas to be barren. In Central America and the West Indies the favorable climate has given rise to good forests.

These world-wide bodies of timber have in the past been much larger than they are at present. Exploitation and fire have made large forested areas barren, or at least have greatly decreased the density of the woods. The tendency of forest lands will be toward shrinkage as more fires, increased exploitation, and clearing of land suitable for agriculture continue. Coincident with this will be a gradually increasing demand for wood products. Our material development has been largely facilitated by an abundance of cheap timber and the future will rely upon it. The consumption doubles every 50 years and the development of wood substitutes does not keep pace with the constantly occurring new uses for wood. Closer utilization will make available products which before were wasted, but for final solution some factor of greater import must be sought.

Rapid increase in efficiency of water and rail transportation makes it possible for nations poor in wood supply to import from foreign sources. To what great sources can these countries turn? Where can we Americans look for our wood when the timber shortage comes?

Only Siberia and the tropics still have great bodies of unexploited timber adequate for such a demand.

If reasonably well managed, the tropical forests of Asia, Africa, the East Indies, and South America would continuously yield four times the present wood consumption of the world. There are reasons, however, for dissatisfaction in the face of this. Experts agree that it will be a great many years before the tropics will supply a large part of the world's demand for wood. It will be a difficult problem ever to develop these forests. It will mean efficient transportation and an abundance of cheap labor. The type of labor now available in such forests as those of tropical South America is most inefficient.

Tropical forests contain a great mixture of hardwood species, little known or unheard of in the world markets. The woods of recognized value are cabinet woods of limited use. It is doubtful that large quantities of good lumber and construction woods will be found there. Moreover, if these forests are, as in the case of all newly developed areas, exploited by private capital, much waste may attend the operations and our last great forest lands left barren. Also, general agricultural development will accompany the forest utilization and a great deal of tropical forest land has true agricultural value. Furthermore, the development of these regions will mean greatly increased wood utilization by new industries and by the augmented population which will follow or be necessary adjuncts to development.

Even though great supplies of tropical timber might be available, the fact remains that tropical woods are hardwoods and it is to coniferous woods that the world looks for its construction timber. Seventy-five per cent of the wood consumed, exclusive of fuel, is from coniferous forests - forests found mostly in the north temperate regions. The great coniferous areas are northern Europe and Asia and

our own softwood area in North America of which Idaho is a part.

The countries which may in the future export coniferous timber are Canada, Scandinavia, and Russia. Canada's great softwood forests lie mostly in the far North where growth is slow and stands are low in volume. Furthermore, much of the timber is pulpwood and her exports will be utilized by the British Empire. In Europe the timber exporting nations cannot hope fully to supply even the other European nations. This leads us to Siberia as the last resort and what do we find? Siberian forests are undeveloped and much of the area lies in the arctic region where a large timber crop probably never will be grown. Wood exports from Siberia will most likely go to adjacent countries having great timberless areas, especially China. Even though Siberia might be quickly developed, and that is problematical, all the timber that she could send into the United States would represent but a small part of our consumption and the transportation charges would be prohibitive.

It is clear that the bulk of our coniferous timber must be raised in this country and that all true forest land must be used for growing wood supplies. This obligation appears especially pressing when it is realized that we cut our coniferous saw timber 8.6 times as fast as it is grown. Idaho, being one of the great softwood producing states, will find that this national problem is, to a considerable degree, hers to solve. If Idaho is to maintain her present position as a state which cuts and ships out to other parts of the country great quantities of lumber, if she desires to perpetuate the logging and milling industries which represent an investment of \$50,000,000, and employ two-thirds of the state's industrial population, then Idaho must maintain her forest lands in a state of continuous productiveness.