

SRI LANKA'S FOREST

In some forests of the wet zone where the stocking of the species *hora* (*diptero-carpus-zeylanicus*) is very high it has been found that opening up of the canopy in the course of carrying out logging operations results in the establishment of prolific natural regeneration so that an almost 90 per cent *hora* pole crop replaces the original mixed forest. This method of management called shelterwood regeneration could be applied successfully in this country only to those forests where there is abundant *hora* and such forests are, unfortunately, not common.

The present output of timber from the wet zone is about 2.5 million cu. ft. since the extent of forest is 532,000 acres the yield on a "per acre" basis is about 5 cu. ft. Taking the example of Switzerland (where the classical method of managing forests for production is adopted) the annual production of industrial wood in that country is 119 million cu. ft. from 9.88 million acres, or 12 cu. ft. per acre.

The comparatively low output from our wet zone forests, despite the better growing conditions in the tropics, is mainly due to the fact that large extents of productive forests in the low and mid-country wet zone are inaccessible, and as such, no timber at all is harvested from such areas. As pointed out by Tisseveerasinghe (1965) in his presidential address to this section in 1964, the main line of investment in as far as the wet zone forests are concerned should be in the construction of access roads. This will yield immediate returns by way of timber which could be harvested right away.

I must of course sound a note of warning here. Rendering more of the wet zone forests accessible with the forest law and its enforcement in its present state could easily result in extensive encroachments and illicit clearings. So unless effective action is first taken to prohibit all forest clearings in the wet zone it may be better to have the forests inaccessible rather than open them out to the would be encroacher.

I should estimate the present consumption of industrial wood in

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Ceylon at about 13 million cu. ft. (excluding the timber equivalent of imported pulp). The state forests provide about 8 million i.e. including unrecorded supplies. The projected demand for 1975 (FAO report) is between 17 and 20 million cu. ft. According to the same source, even if all the wet zone forests are systematically managed, the maximum sustained output that can be expected from them is about 5.6 million cu. ft. This means that even if we were to take measures to increase the output of timber from hitherto inaccessible wet zone forests we will still have to look elsewhere for the bulk of our future requirements of timber.

Let us turn our attention to the dry zone. This region had a great reputation in the past as being the source of the highly prized timbers like *satin*, *ebony* and *halmilla* which were popular in the European markets. But these and other preferred species have been selectively exploited over the years, and they are now a relatively scarce commodity.

One of the peculiar features of the forests in the dry zone is the paucity of regeneration of the dominants like *palu* and *satin*. *Halmilla* alone of the useful species shows good natural regeneration. The absence of regeneration of most of the dominants is indeed strange from the ecological point of view if we consider the dry zone forest to be a climax ecosystem.

Another unfortunate feature of the dry zone forest is that most of the preferred dominants are very slow growing. Studies of the increment of *palu* indicate that this species takes something like 200 years to reach a girth of 6 ft. (Wijesinghe, 1959) and *satin* is almost as slow-growing (Fernando 1962). A third depressing feature of these forests is the high proportion of inferior species. Selective exploitation of the good species in the past must undoubtedly have contributed to this imbalance.

Detailed inventories of the dry zone forests were made for the first time about 10 years ago on the joint Canada/Ceylon project under the Colombo Plan, and the data collected clearly show the poor

quality of the dry zone forests. The most abundant species is *wira* (*Drypetes septaris*) which accounts for 25 per cent of the total standing volume of timber in the dry zone. This species is not used as an industrial wood because of its poor form. The next is *palu* (*Manikara hexandra*) with 10.3 per cent. This is a good timber species. The third, *Euphoria longana*, is a shrub species which, like *wira* is not used, and it accounts for 6 per cent of the volume. In fact of the first 20 species (listed according to availability) only 7 are of high quality and all these together account for only 26 per cent of the volume.

The dry zone forests are classified as medium yield, low yield and unproductive in the Canada/Ceylon project report. The percentage of forests in each of these categories and the standing volume per acre are given in the table below:

In the first line I have given only the percentages, since they may be a more reliable guide as to the present situation than the actual areas. The actual extents in all three categories have decreased

Data on the natural forests of the dry zone (Canada/Ceylon Project)

	Medium yield	Low yield	Unproductive
Forest area in relation to Land area of dry zone	6	50	44
Total standing vol. per acre (in cu. ft.)	1097	701	309
Vol./acre (cu. ft.) of trees of Class I and Class II species over 16" diameter at breast ht.	180	106	40

since 1956 but the proportion of each may be approximately the same now as then.

The second line in the table gives the total standing volume of all species. The third line gives a picture of what could in fact be obtained when the forest is selectively exploited. These are extremely low yields by any standard.

At present the recorded yield from the dry and intermediate zone forests according to the State Timber Corporation, amounts to about 3½ million cu. ft. per annum. This includes the output from areas which are cleared for alienation and for reforestation as well as

some areas which are selectively exploited on the basis of a specified girth limit. The supply from areas cleared for alienation is a once and for all matter, so that if we are to assess the maximum capacity of the natural forests for the sustained supply of timber, we have to complete what could be obtained on a selective felling basis from areas that will be permanently retained in forest. On this basis, I should estimate 2-3 million cu. ft. per year would be the maximum that we could eventually expect from the natural forests of the dry zone. Within the next decade or so we could expect an increase in the output of timber as the Mahaweli Ganga Development scheme gets underway and more forests are cleared, but this increase, if it does occur, will be temporary and will be followed by a sharp decline. The FAO report gives an estimate of 5.5 million cu. ft. per year as being the output that can be expected on a continuing basis from the natural forests of the dry and intermediate zones. I think the FAO estimate is excessive. One reason for the eventual decline in the output which I said will occur is of course the decrease in the

area of forest, and another is that because of the extremely low increment of the natural forest, at the present rate of removal of wood, a longer recuperative period should be allowed between successive felling operations.

The capacity of the natural forests of the island to produce our requirements of industrial wood is therefore severely restricted, and we have increasingly to depend on forest plantations to produce our future needs.

(L. C. A. de S. Wijesinghe from "The role of forestry in the development of Ceylon's land resources". Presidential Address SLAAS Section B. 1971).