## AFFORESTATION FOR BENGAL

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First of all I would like to thank you for giving me this opportunity of addressing you on this very important subject. It is a subject which I am interested in myself and it is also one in which

the Government is very interested.

The first point I would like to remark on is the necessity for afforestation. Apart altogether from the urgent necessity of stopping further soil erosion, Bengal must also make itself self supporting as regards forest products. At present Bengal is a deficit province so far as the area under forests is concerned. The area of Government forest per head of population is only '07 acre. Ecnonomists estimate that to be self supporting in forest products a country should have at least 20 % of its surface area under forests. Against this, Bengal has only 9 % and a good deal of that is protection forest such as in the Delta area and in the Darjeeling Hills, which must not be exploited. Therefore, there is an all round shortage of timber, firewood, charcoal, bamboos, and all the other minor forest products which are so essential to a country.

Other provinces are not so badly off, Bombay has 17 %, the Central Provinces 23, Madras 15, and the United Provinces 13. The average for the whole of India is 14 and the average for Europe is 26 %. I therefore, think you will agree with me that afforestation

in Bengal is both essential and urgent.

The Forest Department has been urging the Government of Bengal for many years to legislate for the afforestation of waste lands and for the conservation of what is left of the private forests. At long last a bill was introduced in the Bengal Assembly in 1944 for this purpose. Fortunately before the Ministry resigned the Bill passed successfully through a select committee so the Governor, considering the famine and other calamities which faced the province was able to make it a Governor's Act, and not postpone legislation any longer. The Bill was enacted in August, 1945 and, so far as private forests are concerned, and thanks to the co-operation and help of the Zeminders, I am glad to be able to report considerable progress. The idea of the private forest act is to help the owners put their forests in order; there will be no change in ownership, but, Government will have the power, and incidentally, the duty to tell the owner how to run his forests. Government will meet all expenditure for the first ten years, and in certain cases of hardship such as where there is a serious drop in revenue because of conservation—Government will make loans to the forest owners. That is the present position about the private forests in Bengal and it can now be said that it is a satisfactory position, or at least working up for that. Not so with the waste lands.

The province has millions of acres of cultivable waste land which should be afforested. The exact area is estimated to be 4 million acres, i.e., 9 % of the province or the equivalent of the forest area already under Government management. At present all this waste land is rapidly deteriorating in quality, and in some places that I have seen in West Bengal desert conditions are fast approaching. The only use this land is being put to is to provide grazing (and very poor grazing at that) for thousands of half-starved more or less useless cattle. The owners of these cattle are a menace to land owners. They refuse to pay any grazing fees, and when the cattle have cleared the waste lands of every blade of grass they then invade the private forests and eat up all the young seedlings; later on graziers even set fire to the forests so that they may have a nice young crop of grass coming up after the early rains. To my mind these graziers are as bad as any criminal tribe and they constitute a problem which must be faced. So much for grazing. I shall now revert back to the waste land problem. All these waste lands were under forest not so very long ago, until with the increase in the population they were deforested and cultivated for a few years until all the surface soil was washed away. They are highlands really, above the paddy field level and should never have been deforested. Now the problem is to get them back under forests as quickly as possible and see that they are never again deforested for cultivation. To do this we feel that there must be change of ownership, in other words that Government must acquire the waste lands and reafforest them. The private owners will never reafforest them. With this object in view we started preliminary enquiries sometime ago and were informed by some land owners keen on afforestation that they would give the land for nothing or practically next to nothing. However, when the time came and acquisition proceedings began the owners wanted fantastic prices. Government perhaps expects to have to pay more than a private individual but to be asked to pay 10 or 20 times what a private person would be asked is not good enough. We have, therefore, come to a standstill for the present about the afforestation of these waste lands. This is a very serious thing for the province, the people are crying out for forest produce, and soil erosion of the waste lands will continue unchecked if something is not done. Government have, therefore, been compelled to introduce a new Bill called the Bengal Acquisition of Waste Land Bill. The object of this Bill is to speed up the acquisition of waste lands and to acquire such land at something approaching its proper value. We have Forest Officers under training at Dehra Dun, Edinburgh and Oxford, so as soon as this Bill is enacted we shall be

in a strong position to take up afforestation immediately and in a big way. The idea is to have a Forest officer in every District in the Province. At present there are 10 Districts with Forest Officers and 17 without. All that we want now is the land, Government have even provided the money for the afforestation.

The afforestation of these waste lands is not going to be an easy matter. Some of them are as bare as a rock with which nothing can be done except to try and stop further erosion. All of you know that to grow even the poorest quality grass, even spear grass, that some surface soil is necessary. A tree requires a good deal more. It will not be possible, therefore, to reafforest Bengal in a night; it is going to be a long and tedious job to get these waste lands back into production from the terrible state that they are in now. Some experts think that we are taking on too much and that we are over optimistic, but we must try. To begin with, we shall have to stop further erosion, particularly sheet erosion, and thus improve the quality of the soil. The climate of Bengal is very much in our favour for this. In this damp, hot climate, vegetation comes in of itself and establishes itself quickly provided it is protected from cattle. As soon as the soil is reclaimed we propose to plant quick growing species suitable for the requirements of the local people such as species for building materials, agricultural implements, firewood, country boats, carts, furniture, fodder grasses, matchwood and paper pulp. The cultivation of bamboos and the conversion of some of the waste lands into grazing grounds is also part of the programme. As grazing will have to be restricted in the private forests it will be essential to grass down some of the waste lands for controlled grazing. This should help to improve the quality and breed of cattle and reduce the number of useless animals. I should have told you that the estimated area of unculturable waste land in Bengal amounts to the staggering figure of 18 % of the total area of the province. I am afraid nothing can be done about this at present, but we must try and stop any further cultivable waste land from becoming uncultivable.

That is the position to-day. After many years of difficulties and disappointments, lack of policy and lack of legislation, fighting up-hill all the time we have now reached a very interesting stage in in Forestry in Bengal. The prospects are bright and the future is so full of interest that I feel envious of our successors. The future programme is organised for them and they will have the pleasure of actually putting into practice something which is definitely for the good of the whole country and part of a world-wide programme. They will see waste lands planted up, soil erosion checked, plenty of water in the rivers for irrigation and river communication, and country boats plying their way all the year round as they used to do 20 or 50 years ago before wholesale deforestation was allowed.