



Orienting forestry toward the needs of people

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How it is being done at a UNDP/FAO project in Benin

[FARMING IN THE FOREST IN BENIN the needs of people, cattle and soil are becoming too much for the soil](#)

Benin suffers from a shortage of forest resources, particularly fuelwood, joinery wood, construction timber and fodder.

In some districts, the chore of gathering fuelwood may occupy one whole day out of every four. It is often necessary to go 15 to 20 km from the village to find enough wood, and those who have to do this job - the women and children - are, therefore, subjected to a severe strain which has harmful effects on their health (particularly in the case of 7- to 8-year-old children). The shortage of fuelwood also means that food is badly cooked or not cooked at all, that water is not boiled, and that hygienic conditions are unsatisfactory. A bundle of fuelwood barely sufficient to cook food for three days costs F CFA 350-400, which represent a day's wages.

In many districts, agricultural waste such as straw, dead leaves' sorghum or millet stalks is used to cook food, thus depriving the soil of the humus needed to maintain or increase its fertility. Sometimes cow dung is used as fuel. The consequences for productivity are clear: production per hectare is very low. Some examples of yields in the district of Quaké, Province of Djougou, show how serious the problem. For rice, the yield per hectare is 650 kg, as against the normal yield of 1.5-2 tonnes. The same applies to yams - 6 tonnes as against 10-12, and groundnuts - 600 kg as against 1-1.5 tonnes. The situation is the same in most of the other provinces.

The lack of fodder has led to the cattle being moved to humid areas in the dry season, after they have eaten down to the roots all existing vegetation during the rainy season.

The simultaneous and combined effect of shifting cultivation and lack of fuelwood and fodder accelerates and accentuates the process of degeneration into savanna, and this may lead eventually to desertification where the soil structure is already bad.

It is, therefore, important to find a way of meeting the multiple needs of both people and cattle and of halting the progressive and inexorable impoverishment of the land, which has already resulted in an exodus of the people from certain rural areas.

The village forests programme has three objectives:

- To provide the inhabitants of the districts concerned with the fuelwood, timber and fodder they need.
- To increase soil fertility through the use of nitrogen-fixing plants and to economize on the use of chemical fertilizers in growing food crops.
- To provide examples of multipurpose forestry for demonstrations.

The programme is implemented through a network of agencies that spreads out and down to reach the peasants.

Forest extension work started when a high-level forestry unit was set up within the Centre d'action regional de développement rural (CARDER) directorate. In the provinces, extension work is entrusted to forestry agents, assisted if necessary by other rural development staff. Interest among the peasants in plantations is promoted by the various organized production structures: groupements ruraux à vocation cooperative (rural cooperative groups), the Centre agricole experimental de type socialiste (socialist-type experimental agricultural centre), the 4 D clubs for young farmers, school cooperatives and state and private societies. The actions undertaken to fulfil these objectives fall into three categories.

The first consists of expanding the traditional teak plantations for the production of joinery and carpentry wood. Campaigns to promote interest in such plantations among villagers and rural communities, begun in 1976 and conducted regularly ever since, have borne fruit. Teak plantations are now being established without promotion and there is a big demand for seedlings.

The nurseries which produce and sell teak seedlings are run by the Société rationale pour le développement forestier (SNAFOR) and the CARDERs, and are financially autonomous, cost-effective production units. In the southern part of the country, a very promising new trend is appearing, the setting up of small private nurseries in a number of places. This means that private individuals have already mastered the technique of raising teak seedlings in nurseries. It is, therefore, obvious that the process of expanding teak plantations has now acquired its own momentum and that the Government's programme for the propagation of these plantations in rural communities can, henceforth, be limited to the following operations:

- Initiating the process in new regions.
- Encouraging work in the CARDER nurseries to allow them to play the role they should in regulating supply and demand.

Since teak is not suitable for use as fuelwood, the Government decided to look for species that could be used for this purpose and to introduce them gradually into the village areas. On the basis of the results obtained from trials conducted over the past five years, three *Eucalyptus* varieties have been selected for the first plantations in south Benin: *Eucalyptus citriodora*, *Eucalyptus tereticornis* var. "Cook town" and *Eucalyptus torrelliana*. The plantations will be established where there is still enough land available and managed so as to produce fuelwood on a continuous basis. It has also been decided to introduce, on a very small scale, *Leucaena leucocephala* and *Albizia lebbek*.

In Benin, the shortage of fuelwood means that food is eaten raw, or badly cooked, that water is not boiled, that hygienic conditions are poor. It costs a full day's wages to buy barely enough wood to cook for three days.

The third category of actions consists of mixed forest and field crop plantations. For some time, agro-forestry has constituted a form of land utilization where it is advisable to have trees

on croplands. The forestry services and the peasants have used the *taungya* method to grow food crops and at the same time plant 7 000 ha with teak and eucalyptus. It is intended to introduce acacias in the near future so as to enrich the soil with humus and nitrogen and, at the same time, produce fuelwood quickly. A programme for enriching fallow land is also under way.

The plan that has been drawn up for implementing the programme for planting these species is as follows:

In 1980, a small central nursery was set up by the Forestry Department at Cotonou, and small plantations were established by rural cooperatives in the southern part of the country. The campaign, which was completed in December of that year, was entirely financed by the Government. Forty thousand plants were produced and entrusted to the units mentioned - 13 in all - which planted a total of 16.7 ha (93 percent of the planned programme). During 1980, the Forestry Department learned its lessons: it mastered new techniques and dealt with the problems of unfamiliar species. It also got the first reactions of communities to the new plantations. In 1981, the programme was extended in the south of the country. The target was to produce 100000 plants and to establish 50 ha of plantation. It also planned to train forestry personnel in the techniques and organization of the programme in order to be able to entrust to the CARDERs in 1982 responsibility for part of the operations in south Benin and, by 1983, responsibility for implementation of all operations in south Benin. In 1982, the programme should be well extended in southern Benin, the objective being 250000 plants and 125 ha of plantation. Small programmes are now scheduled for the central and northern parts of the country as well.

The results of these trials may seem quite modest at the moment, but they are important because they will help the country to establish multi-purpose forestry plantations based on proved realities. It should help to avoid the kind of errors in this work that occurred elsewhere and which resulted in discouragement that doomed vitally needed plantations that could have succeeded.

