



Forestry in Himalayan Bhutan

An interview with Dasho Chenkhap Dorji, former Director of Forests, Royal Government of Bhutan

[Dasho Chenkhap Dorji \(A. LE GARSMEUR\)](#)

*This interview was conducted for Unasylva in Bhutan by **Jenny Devitt**, a British freelance journalist who works regularly for the BBC's award-winning Farming World radio series. She also conducted the two shorter interviews included here and wrote the introductory and transitional material.*

- The tiny Himalayan Kingdom of Bhutan pursues an unusual and forward-looking forestry policy, particularly so perhaps for a country rich in forest resources which could be utilized commercially to provide a substantial source of foreign exchange.

The Bhutanese place the highest priority on the conservation of their forests and natural resources. Nearly 70 percent of this mountainous kingdom is covered in natural vegetation and forest, ranging from tropical in the south, where a small portion of the country touches on the northern Gangetic plains, to subalpine in the true Himalayas to the north, with the variations of deciduous subtropical, mixed coniferous and deciduous temperate and alpine in between.

Present government policy, implemented in 1974, partly grew out of sobering observations concerning the depleted forest resources of the kingdom's neighbours and those of other Asian countries. Dasho Chenkhap Dorji, until recently the Director of Forests in the Royal Government of Bhutan, was thus chiefly responsible for shaping the official policy. In this interview with *Unasylva*, he explains the policy and its background.

Unasylva: *Would you describe Bhutan's present forest policy?*

Dasho Chenkhap Dorji: Our main policy on forestry is conservation - it is topmost because we live in the mountains, and our forest management does not and will not aim solely at direct revenues. We give more weight to indirect revenues and indirect benefits like ecological balance, water management and soil preservation. To achieve part of this objective we have started social forestry schemes in which the government distributes seedlings free of cost, and the farmers on their own registered land try to plant as many trees as possible.

But why was such a far-sighted policy developed as far back as the early 1970s?

Even though the Royal Government of Bhutan is not very rich, and even though we do need revenue, after having seen the consequences of the past forestry management where a lot of forest disappeared from the accessible areas through shifting cultivation, forest fires and - in some places - overgrazing, we decided that we should not have large-scale forest utilization now. Rather, we decided to wait and try to put forest management on a sound footing, and

then gradually develop it in the future. Of course, we have always tried to take advantage of the mistakes made by others, especially in the nearby Himalayas. There, because of the disappearance of the forests, a lot of floods and other natural calamities have occurred. We do not want to repeat this in our country.

Bhutan (I. CEPEDA)

Obviously, one of the major reasons for the fact that you still have the bulk of your forests is that you have a very low population. [Bhutan's population is estimated at just over 1 million; its land mass is nearly 47 000 km².] But if the population were to increase, would there be serious pressures to harvest these forests prematurely?

I think the success of the conservation effort has been helped by the low population. Undoubtedly, however, when that population increases, there will be some increased pressure on the forests. However, the government is already taking steps so that people should - profession-wise - be diverted a little from farming, or from depending on the forests. Maybe some will be diverted toward industrial employment, so I think that there will not be that much pressure, but it will nevertheless increase somewhat.

Nevertheless, you are still almost 100 percent dependent on wood as a source of fuel, heating and lighting, are you not?

So far we have been totally dependent for our energy requirements on the forests. However, with the commissioning of our first big hydroelectric project in Chukka [an *Indian Government aid project to provide electricity for both Bhutan and North India, with North India using the greater part - Ed.*], the government considers that we should be able to supply electricity for lighting and heating for as many villages as possible. In the interior villages where the transmission line, because of its high cost, cannot reach, we are going to put up small hydroelectric plants, enough for each particular segregated village, and thereby reduce the pressure on the forests.

What is the policy on the felling of trees for fuelwood?

Farmers are free to collect dead, dying or dry wood from the nearby forests free of tax. They do not have to obtain a permit to do this. As for the urban areas, people there have to pay tax and also get a permit, and they have to get this from a government logging centre. I think, compared with other countries, the cost of timber in Bhutan is not too expensive - it is very reasonable.

What of tree planting - are there any subsidies for the farmers, to help them out with the costs?

There are no cash subsidies. The only thing we can consider a subsidy is that we give them free advice, and free seedlings - and these are available from the nurseries near their homes.

BHUTANESE WOMAN AND CHILD almost their only fuel is wood (F. MATTIOLI/PAM)

How much of the forest land in Bhutan belongs to the state and how much to the village people?

Basically in Bhutan the entire forest belongs to the state. However, there are very, very small patches, maybe one hectare per household, which are maintained for the collection of leaf litter - that is, just pure private forest or woodland. Otherwise maybe 99 percent is state forest.

We have seen some signs in one or two valleys not very far from the capital of what looks like very heavy deforestation. Is that old deforestation, or is it recent?

Whatever heavily deforested or denuded areas you see date back at least 70 to 80 years, but we are now reclaiming them through plantations and through conservation, letting the forest regenerate naturally.

How do you try to get your government's policy on forest conservation and wise forest use across to the villagers in the very remote areas, villagers who perhaps might not be well educated or well informed? Also, how do you prevent them from causing significant denudation or setting forest fires?

In order to save the forests from fires and other dangers - deliberate or accidental - first and foremost we have spread a network of forest guards throughout the country. Because of the lack of education and facilities it is very difficult for us to use the media as the main source of communication, and so therefore we have trained forest guards with some knowledge of forestry who constantly keep reminding people about the disadvantages of excessive felling and so on.

One of your country's major problems is an acute shortage of manpower, so how can you be sure that you can patrol your forests - and your game sanctuaries adequately?

Right now, of course, we have got a tremendous problem, because the area is large and the number of staff that we have in hand is acutely short. To mitigate this shortage we are trying to get help from the people through the public relations I mentioned and from the farmers and others to whom we give subsidies in terms of forest products. They give us information which helps us toward the protection of forests and flora in general.

How can you be sure that government policies on such matters are not unpopular with the local people? Perhaps they resent what they see as the interference of central government in their traditional affairs?

Of course, for the majority of the population of Bhutan, there was resentment when the Department of Forests was initiated because the people had always enjoyed a "free ride". Without even obtaining a permit they could get all the wood they needed near their houses. But, after having now gone through a period of more than ten years with these present policies, they are convinced that what the government is doing is right and for their benefit; that by preserving their forests and by creating more forests near to their homes they are ultimately going to save manpower and the forest is going to improve. This has been shown, for instance, through such things as fuelwood plantations raised by the government in and around their villages.

Taba forestry school

Bhutan possesses one forestry school, at Taba in the northern end of the valley of Thimphu. In a small collection of single-storey buildings, set out neatly with well-tended gardens containing small experimental plots of seedlings and food plants or plants with commercial potential, a small number of Bhutanese come for basic training in forestry before becoming forest guards and foresters.

Unlike sophisticated, multisubject courses taught in western countries, the courses at Taba are simple, aiming to impart the rudiments of forestry and forest management - the course for forest guards lasts only six months and that for the foresters one year. Some students come from government departments, with a little knowledge of the subject under their belts, but others come directly from school, with no knowledge or almost none.

The school was established originally in southern Bhutan in 1971, but because of problems of communication and medical aid it was moved to its present site in 1977. By 1984, 364 forest guards and 36 foresters had graduated from the school, and 24 forest guards had passed through again on refresher courses.

Says Tikaram Giri, the school's Director: "The main duty of the trainees when they pass out from here

will be to go to the rural areas and generate public participation in forestry activities, to tell the people why the forests should be protected and why and how they themselves would benefit. We emphasize the main agents of forest destruction - fire, shifting cultivation, excessive felling, overgrazing. Ours is a very, very mountainous country, and denuded areas here erode very rapidly because the land is so steep. If there is massive felling or grazing or a fire, our people can call, for instance, the village headman. He will get together a group of villagers and it will be explained to them all why the Forestry Department is asking the people to protect the forests."

The classrooms contain illustrated charts and posters of plant types, trees, seed germination, root systems and so on, and also colourful slogans telling of the dire consequences of bad and careless forest and land use. In one classroom a series of painted plaster and soil models show graphically the results of forest destruction: little gullies run down one barren model illustrating soil erosion; paper flames lick up the model trees on another. Tikaram Giri made these models himself as a simple and effective teaching aid.

"Our training programme", he says, "is based 40 percent on theory and 60 percent on practicals in the field. So what we do here is, early in the morning we give lectures, and in the afternoon we try to cover the same subject out in the field. We also take these trainees on an educational tour for two months. We take them to the different forest zones and try to identify local species, and tell them how to raise plantations or how to do thinnings. We have a look at soil erosion where it occurs and at river management.

"In Bhutan now we have to do something about the areas which are still barren. For example, when I came here to Taba in 1977, this hill was almost completely bare, as were most of the hills round Thimphu Valley. Now you can see that they are covered with natural vegetation and trees. This is not the result of plantation but of protection and subsequent natural regeneration. In Bhutan, we are not after major revenue from our forests. What we want is a good forest - that is our target."

[PINES IN CENTRAL BHUTAN a policy emphasizing conservation \(F. MATTIOLI/PAM\)](#)

[OUTSIDE A HEALTH CARE CENTRE trying to involve them In forestry \(FAO\)](#)

Regarding the protection of the forests, I think I would say that people in the recent past still used to feel that the forests were not really their concern. In some sectors they definitely did do some damage by girdling and killing trees. The law says that dead, dying or dry trees can be collected and used for whatever purpose they want, so some people would just peel off the bark to make the trees die. To mitigate this problem we have recently launched an experiment in which we are dividing the forest in two parts, one of which belongs to the people of the district and one to the state. The district forest will be properly planned, and systematic management will be supervised by the district authorities. Whatever income they get from their own forest will be ploughed back in the form of district development. And as far as logging is concerned, the new rules state that the same will be true for any profit from logging operations. And the profit on the income from their own forests will be distributed to the people. This should cause them to take much better care of their forests in their own districts in the future.

What major problems, if any, have you found in your government's forestry policy?

I do not think we have any major problems with the application of the policy, but of course we do still have the problem of shifting cultivation. Government policy prohibits shifting cultivation, but this is something we cannot just sort out overnight. Shifting cultivation will be very difficult to eradicate in a short time because it has been practiced since time immemorial, and it affects the poorer section of the community. In order to try and curb it, the government has launched a regular resettlement programme, and we think over the next five or ten years we will be able to sort out this problem. *You lay heavy emphasis on forest conservation. What about the conservation of forest flora and fauna?* [Bhutan has a great abundance of wildlife, with many rare species surviving in comfortable numbers, as far as one can judge from the scant information available. *In some countries there is a direct conflict between the interests of*

foresters and those of wildlife; is this true in Bhutan as well?

Bhutan is in a unique position, because wildlife and forestry here are both managed by the same head of department, in the same ministry, think that without forest conservation there can be no wildlife conservation, because the forest is largely the habitat of the wildlife. So far, about 20 percent of the country is in areas designated for wildlife conservation. At the present time do not see any conflict between the conservation of wildlife flora and fauna and the utilization of wood, because we have created sanctuaries, parks and conservation areas spread throughout tropical and subtropical-to-alpine regions. Commercial harvesting of timber is not being permitted in those areas. Also I think the people have no resentment against our policy because the majority of Bhutanese are Buddhists, and they do not like to kill.

Gedu plywood factory: Bhutan's only wood-based industry

[IN THE GEDU PLYWOOD FACTORY trying to be self-supporting \(A. LE GARSMEUR\)](#)

Bhutan began building a veneer and plywood factory at Gedu in the southwest part of the country in 1981. By the following year, the factory had begun production of veneer with machinery supplied under a UNDP/FAO project. Commercial production of plywood and blackboard is planned to start in 1985. FAO has also been assisting in training people to operate machinery needed for the logging roads being constructed into the thick forest surrounding the factory.

The factory of the Gedu Wood Manufacturing Corporation, run by the Ministry of Trade, Industry and Forests, has been built in an outstandingly beautiful, steep and dense subtropical forest. Here virtually the only signs of human presence occur at tiny roadside and deep-valley settlements, where severe localized denudation and destruction have taken place particularly surrounding the nearby ramshackle shanty town and shacks spawned by the ten-year-old Chukka hydroelectric scheme.

Some 140 species of trees, many of them valuable hardwoods, grow within a 16-km radius of the factory alone, though at present it makes use of only about 35 species, among them walnut, chestnut, birch, alder, rosewood, teak and oak. About 120 Bhutanese nationals do the more skilled work in the factory, and 50 foreigners do unskilled labour.

Nawang Gyetse, the manager of Gedu, hopes that in a few years the factory, at present running at a substantial loss, will start to make money for Bhutan's national coffers:

This is just the beginning, and we have had some teething problems, of manpower for instance, and log supply, because the people feeding the mill are foresters and they are very keen to preserve the forest. So we get conflicts sometimes between them and us! At present this is the only factory and do not think that the government has any others planned.

Our basic aim in this country is good forest management not to cut down all the forest for industrial purposes. So dead, dying and diseased trees are utilized first and then the older trees, in order to let the younger ones underneath grow more strongly.

"Previously what we were doing in Bhutan was selling round timber to India, and then buying it back again in the form of plywood - which is obviously more expensive. So the government decided that rather than sell wood in log form we should put up a factory and produce the expensive and luxury products ourselves and get more revenue from them directly.

"But still, conservation of the forests is paramount, so this industry is "by the way" - something on a very small scale. It does not mean that we are going to put up 7 or 10 or 11 factories. There have been reports drawn up saying that with the forest resources we have and the income we could get from them, we could sustain between 15 and 20 huge plywood factories, but we are not going to do this. Everyone here in this country loves the forest, and it has played a very important part in Bhutanese life - and I think it will stay that way."



