

BAMBOO MANAGEMENT

Bamboo harvesting in this FMU is managed in two ways, by government permits and by traditional rules. The locally, long-standing traditional management system of Khaling-Kharungla, however, has collapsed in recent years, especially after the national highway was built and the more recent construction of the forest road, both of which have given easy access to outsiders, thus raising the commercial value of local bamboo.

The government permit system

In 1979, the Divisional Forestry Office introduced a system of permits for cutting bamboo to contractors seeking access to the bamboo resources of this FMU. Since then, all commercial harvesting has been conducted under this system. (Illegal local cutting goes uncounted.) The permit fee is 8 Nu per 100 culms.

According to the local Forest Range Officer, a permit can be issued for cutting up to 1,000 culms at a time, at the rate previously noted, 8 Nu per 100. But, while the government system controls access and has increased the commercial value of bamboo, it has also contributed to the demise of a pre-existing protection system by ignoring local tradition.

The local protection system

Traditionally (before 1979), an indigenous conservation system called 'ridam' was practised by local villagers, the original users of this forest. Ridam is well known in eastern Bhutan as a generic, long-standing method of protecting mountain forest resources. It sets down strict and locally unique rules about seasonal access and closure (Box 1). As long as the forest remained relatively undisturbed by commercial pressures or other imposed changes (outside of traditional practices), ridam worked well as a protection system. It has the potential to be reinstated, perhaps with modification, thus recognising the local people's important role in a more participatory management process.

At Khaling-Kharungla, bamboo harvesting was traditionally carried out only by local users, mostly from mid-October through December (extending less intensively up to April).

¹⁸ At Wamrong (Lumang Block) it is customary for women, including older girls, to work alongside men in cutting and dragging bamboo out of the forest. In Khaling, by comparison, it is customary only for men and boys to do this work.

Box 1: Ridam

(‘ri’ = ‘mountain’ + ‘dam’ = ‘restricted, prohibited’)

‘Ridam’ is an indigenous practice in eastern Bhutan that strictly prohibits people from entering or using a designated mountain forest area during specified periods each year. The concept is bound by both place and time and is firmly fixed in local cultural practice and belief. In the past, ridam at Khaling-Kharungla was observed during the 7th to 9th months of the Bhutanese calendar (mid-August to mid-October). During these two months, all access to the forest was strictly prohibited; and forest-based activities such as timber cutting, fuelwood collection, bamboo harvesting, collecting medicinal plants, herding, and hunting were totally banned.

Local people believe that, if ridam is broken, the guardian deities of forest and farm will cause crop damage by sending violent storms (rain, hail, wind). As this is the main harvest season, storm damage to crops is especially feared (and not uncommon).

As is typical with such long-standing local traditions, the practice of ridam has had a noticeable positive effect on the environment, as well as on the local socio-economy. For one, it provides a period of rest for both young wildlife and plants (e.g., bamboo, grass, trees) to mature relatively undisturbed by humans during the late warm, wet monsoon growing season. For another, it effectively focuses villager attention on the important activities of agricultural field management and harvest. As ridam was observed in the high forest of Khaling-Kharungla during two of the most busy months of the agricultural cycle, this taboo served to focus farmer attention on farming, well away from the forest.

According to local informants, ridam at Khaling-Kharungla was diligently observed until recently. The breakdown of ridam began with the opening of the National Eastern Highway in 1962, which increased outside access to local resources. The traditional system further eroded after 1979, the year the forest department imposed their control over harvesting forest products with the introduction of a permit-for-cutting system. Both of these events opened access to forest resources to outside entrepreneurs, unfamiliar and unconcerned with ridam. Village leaders complain that they have been powerless to stop strangers from contracting locals to harvest forest products throughout the year, in ignorance of tradition.

In Buddhist Bhutan, there are many such beliefs and traditional practices affecting the natural environment – trees and forests, streams, lakes and mountains, and wildlife. Local practices like ridam encourage respect for nature and discourage resource abuse. They typically have a strong hold on local people and promote a cautious attitude towards the environment.

For further discussion, see TFDP 2000, Ch.4: ‘The Environment in Bhutanese Culture’; also Choden 1996.

Throughout the rest of the year, access was discouraged (though not entirely closed), until the seventh to the ninth months of the Bhutanese calendar (mid-August to mid-October) when access was strictly forbidden. During these two, crucial months, according to the rules of ridam, access by villagers to the entire forest for any purpose was entirely prohibited. These months correspond to the most important season for new bamboo growth; thus the ridam closure contributed to the well-being of young and vulnerable bamboo, as well as other flora and fauna of the forest.

Ridam has, until recently, been followed at Khaling-Kharungla since time immemorial, because of the local belief that breaking the rules would bring destructive storms with serious damage to field crops. One important result was the focusing of villagers’ attention on agriculture, away from all forest-based activities. Another was the imposition of a rest period on the forest, protecting young plants and animals during the crucial and most vulnerable season for maturation.

The traditional ridam system began to break down at Khaling-Kharungla from 1962 onwards, but markedly after 1979 when the government permit system was imposed. The permit system ignores the rights of local leaders to regulate access to the forest and has encouraged relatively uncontrolled access to bamboo resources by outside contractors who know or care little about local custom or belief. As a result, ridam is now regularly violated, with concerned villagers and their leaders virtually powerless to act. Some villagers remember that, for a few years after 1979, there were, indeed, crop-damaging storms. In time, however, this disincentive to breaking the rules was ignored. In discussions with local leaders, they voiced their desire to reinstate ridam by seeking a more active participatory role in forest management planning¹⁷¹.

Resource working circles

A variety of activities involving people's participation in the management of resources, including bamboos, is discussed in the FMU Management Plan. The plan describes a system of 'working circles', defined as areas for special resource management, each following a set of recognised and agreed-upon objectives. The most common objectives are production and protection. Production typically deals with commercial timber harvesting, while protection is usually concerned with biodiversity and watershed conservation.

While the classical definition of production and protection working circles focuses largely on the technical and commercial aspects of timber extraction, the definition for working circles in Khaling-Kharungla FMU does take into account some of a complex set of local socioeconomic considerations. This is the entry point for the application of social forestry concepts and practices, although they have not yet been implemented. (One objective of this study is to encourage more attention to resource management planning and implementation.) The working circles planned for all FMUs under the Third Forestry Development Project typically include community-oriented objectives, alongside scientific research objectives, although these have often not been fully implemented.

The plan divides the FMU into two management classes and several types of working circle, with most emphasis on harvesting hardwoods (logging), as follows¹⁸¹.

- **Production:** two **production working circles**, including a **hardwood working circle** of 3,804.39ha in three blocks (at Khaling, Kurchilo, and Bephu villages) and a **community working circle** with a jurisdiction of 1,261.42ha in one block (near Brekha village). A **bamboo working circle** is to be taken up (in future) under the community working circle at Brekha.

¹⁷¹ Wangchuk (1998: 85, after Talbot and Lynch 1994; Guha 1989) observes that "The process of increasing state regulation generally changes the relationship between the resource availability and the communities from a customary one to a formal one." State appropriation "has generally shown negative effects" on indigenous knowledge and traditional practices. "The process tends to favour fragmentation of the community ...and the erosion of social bonds... [by impacting] the social organisational capability and local resource management institutions at the community and household levels. It influences the perception of the sustainability of the forest resources traditionally used by the local communities."

¹⁸¹ Note that areas within a working circle can either overlap or be non-contiguous, and that working circles may overlap with one another.

- **Protection:** a single **protection working circle**, with a 2,210.76ha jurisdiction, lying within the Khaling and Kharungla blocks. This includes a 603.77ha site designated as Sherubtse College Nature Study Area.¹⁹

Discussion

Silvicultural management of bamboo has never been practised in eastern Bhutan despite its importance as a widely used alternative forest resource. The 1996 FMU Management Plan points out the significance of bamboo in the local subsistence economy, but it does not fully recognise the growing importance of its commercialisation²⁰. Due to heavy commercial demand in recent years, however, harvesting of the main local species, *B. grossa*, is under pressure with the very real risk of overexploitation leading to a marked degradation of the most easily accessible parts of the forest. The little degradation noted in the 1996 plan, including a growing shortage of mature *B. grossa* culms, is described as being due to uncontrolled cutting "in an unsustainable and haphazard manner," presumably by local cutters. To aggravate the situation even further, the plan continues, annual migratory cattle herders from nearby Merak and Sakteng have "carelessly and recklessly cut down the young culms and shoots of all sizes and age classes, while grazing their cattle." This perception, in turn, fuels the ethnic conflict between the local villagers and Brokpas over access and use of the forest (Chamling 1996: 42).

Local irritation with the Brokpa is complicated by the fact that their form of transhumance is a traditional activity, one which quite literally defines them culturally – as "underlying all aspects of Brokpa life" (Wangmo 1990: 55). Hence, it is not easily changed nor revoked.

More recent conflicts have arisen over the building of the forest access road and logging. In early 1999 and again in 2000, logging operations within the FMU were temporarily closed down after local villagers complained of their lack of involvement and petitioned the new Tashigang District Commissioner (the 'Dasho Dzongdag') to halt them. The villagers listed several complaints, including damage to agricultural lands caused by construction of the logging access road. An underlying cause of their complaints, however, is the loss of local control over access to the forest by outsiders and breakdown of the traditional rules of ridam.

The FMU Management Plan anticipated some of these causes of conflict, but totally ignores the indigenous ridam system. To their credit, the writers of the plan described several management options of considerable importance, such as participatory resource management, including training and demonstrations in bamboo silviculture and management for resident bamboo harvesters and transhumance livestock grazers alike. To date, however, no decisive action has been taken either in forming a bamboo working circle or the broader community working circle through which these social forestry objectives could be put into effect.

¹⁹ Sherubtse College, for the liberal arts and sciences, is Bhutan's only institution of higher education. It is located a few miles from the study area, at Kanglung, in Tashigang District.

²⁰ The 1996 plan says that only "a small quantity is commercially traded" (Chamling 1996:41).

What appears to be needed is a combination of the following:

- better information about bamboo as an alternative forest resource and how it responds to harvesting;
- better information on the level of bamboo resource use and economic demand under both subsistence and commercial conditions;
- more attention to the complex issues of traditional tenure, including knowledge and management systems governing forest resource access, especially by local residents and migratory herders;
- consideration of ways to adapt both traditional and scientific systems to bamboo resource management; and
- a higher level of mutual respect and understanding between all resource stakeholders (old and new), enabling accommodation and encouraging compromise among them using established conflict resolution criteria and tools.^[21]

Our initial findings indicate a serious and growing threat to the bamboo resources of Khaling-Kharungla FMU. These findings are based on rough field observations and discussion. To determine the magnitude of the threat more analytically, however, we also applied a plant-vulnerability assessment and ranking system that was adapted with modifications from an earlier example in the literature.