FOREST MANAGEMENT AND USE SYSTEM

Forest Management System

Historical Background

Hattisunde Forest, as it existed previously, was destroyed by human and livestock intervention. People used the forest for fodder, for construction, and for making local leaf plates and leaf bowls. Until about ten years ago the forest was subjected to excessively heavy usage.

Nanda Prasad Aryal (sixty-two years old) of Mahadevsthian Village, Ward No 2, recollects his father telling him that Hattisunde Forest used to be a dense Sal forest. He was told that the forest was so dense that one could walk on tree branches and reach Hattisunde Village from Mahadevsthian without touching the ground. "I don't know how much of what I was told is true because I myself did not see such a dense forest there". He remembers seeing sparsely distributed Sal trees with thick fern bushes. Daya Nidhi Aryal (37 years old), from the same village, remembers seeing nothing but fern and the remains of a few Sal trees. According to Chhabi Narayan Shrestha (aged eighty), there was a large forest at Hattisunde until about 1918.

Nandi Kumari Magar's name was mentioned by several old people in relation to the history of the management of Hattisunde Forest. Nandi was the wife of the then headman, Lale Magar (a headman is locally called a Mukhiya). Nandi used to control the use of the forest by people belonging to villages other than Hattisunde, Mahadevsthian, and Kharka (during that time there was no Khaledare). Nandi used to harass men and women encroachers by cutting their hemp ropes (locally called namlo) and pulling off their baskets; or taking away the fodder, fuelwood, or Sal leaves collected by them. Nandi was not afraid to challenge anyone who encroached on Hattisunde Forest and who did not belong to these four villages. Other women were also involved in this voluntary forest protection including Nandi Kumari's younger sister, Tula Kumari, who today is the oldest resident of the villages (she is ninety-six). The women were active in this manner until 1918.

According to Nil Kantha Aryal of Kharka (aged seventy two) Hattisunde Forest was called the King's Forest because the Chhetris of Maudi Panchayat claimed control of it. They had initially assigned the Magars of Hattisunde to be the forest caretakers. In 1918, Amar Jung Shah, one of the Chhetris of Maudi, required wood to renovate the roof of a temple, "Maudi Kot Bhagawati Devisthan" in Maudi Panchayat, and wood was felled from the forest for that purpose by Nanda Kumari's husband, Lale Bahadur, the then Headman. Nandi did not object because the wood was for religious purposes, but the people of Kharka Gaun were opposed to the felling of trees from the forest to renovate the temple. The villagers of Kharka Gaun believed that Hattisunde Forest belonged to the four villages of Hattisunde, Kharka, Mahadevsthian, and Khaledare and that wood should not be taken away to places other than these four villages. The opposition was strong enough to cause the headman to leave the fallen Sal trees in the forest and fell Chillaune trees from another area called "Aale Sumaro" which during that time belonged to the Magars of Hattisunde. This incident seems to have caused some confusion concerning rules and ownership rights. This conflict grew deeper, especially between the Magars of Hattisunde and the Brahmins of Kharka.
Instead of attempting to resolve the conflict, more and more people cut down trees from the forest and constructed houses, cow sheds, etc. In 1952, Chuda Mani Magar of Hattisunde Village became the village headman. By that time very few trees were left and the practice of felling continued. No visible women leaders with an interest in protecting the forest emerged after Chuda Mani Magar came into power. Women, as well as men, participated in deforestation. Even Tek Narayan Shrestha, the current chairman of Hattisunde Forest Management Committee, admitted that he was responsible for felling trees.

**Current Management of Hattisunde-Mahadevsthun Forest**

Gauri Devi Aryal of Mahadevsthun developed a concern for the forest at Hattisunde through the protection of *Sal* trees that were growing on her own private land. A few years later, she also began to protect *Sal* trees growing in the Hattisunde Forest area adjacent to her paddy field which is situated below the current Hattisunde Forest. Villagers observed the *Sal* plants growing by the side of this paddy field and Gaura Devi pointed out to them the difference in thickness of these trees and the trees in the remainder of the forest area. It seems to have been from this instance that the idea evolved of protecting the whole of Hattisunde Forest.

Other villagers became instrumental in encouraging forest protection, namely Tek Narayan Shrestha (Chairman of Ward No 2), Nanda Prasad Aryal, and Tek Bahadur Aryal among others. Ten years ago Tek Narayan Shrestha brought up the issue of forest protection at a ward level meeting held at Kainjele Chautara. There had been extensive destruction of *Sal* trees and villagers were obliged to request Maida Panchayat to provide wood for construction. With this in mind, the representatives from the four villages of Hattisunde brought up the issue of forest protection. By that time Hattisunde Forest was depleted considerably and this led to serious discussion concerning methods to protect it. The proposal for conservation was easily accepted by both men and women as they did not have much to lose by it. On September 29, 1979, representatives from every household in the four villages met at Chautara Dando. The meeting, held under the Chairmanship of Tek Narayan Shrestha, decided to protect Hattisunde Forest and a plan of action was prepared. One of the understandings of that meeting (which is still strongly shared by the people of these four villages) is that the resources of the forest would be shared among all households on an equal basis. One of the *Damais* played the ceremonial musical instrument called *Narshimha* and the villagers marched around the forest area demarcating an imaginary forest protection line. Symbolically, the playing of this music informed every one in the neighbouring villages that this particular area was under protection from then on and that access to it was prohibited. The villagers also fixed a few red flags to signify the boundary of the area to be protected.

The demarcated area was full of fern (*Gleichenia glauca*), and it was necessary to destroy the fern in order to permit saplings to regenerate. This was accomplished by burning it, and a great deal of community management was necessary to prevent the thatched roofs of the surrounding houses from catching fire. Thus, in April of 1980, representatives from each household arranged a water chain to protect the roofs in question. The fire was set at night so that the sparks flying near the houses could be easily spotted and extinguished. They covered the roofs with green banana leaves to delay the spread of fire, and the fire was started in patches to ensure that it did not spread too quickly. In this way, the fern was burnt down and all the *Sal* wood stumps were removed.

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5. This meeting was held on September 23rd, 1979.
By October, the grass had outgrown the Sal plants and the villagers decided to clear the grass. The decision to cut the grass was unanimous since grass was needed during the Dasain festival to feed the livestock. For three days the villagers were permitted to cut grass and everyone participated equally. In the process of clearing the grass, they ensured that the new Sal and Chilaune plants were saved. Since then access by human beings and livestock has been banned and strict penalties are imposed upon those who violate this rule.

Local Level Meetings About Hattisunde Forest Protection

A number of meetings held to discuss the protection and conservation of Hattisunde Forest. All the meetings, apart from the first one, were held at the settlement level. The first meeting had forest conservation as one of three items on the agenda. The other two items concerned local trail construction and latrine building. Representatives from the whole of Ward 2 were at this meeting and there were altogether forty-eight participants, thirteen from Hattisunde, six from Mahadevsth, fourteen from Apprechhap, ten from Kharka, three from Khahare, and two from Garamchhap. Decisions were made to protect Hattisunde Forest, build latrines for each household, and build one of the local trails. Of the three agenda items, only the protection of Hattisunde Forest was successfully implemented.

According to local records, the second meeting concerning Hattisunde Forest was held on January 2, 1980. This meeting was conducted at Chautara Dando, under the Chairmanship of Tek Narayan Shrestha, and thirty-seven people representing thirty-six households were present. This means that there were representatives from all the households throughout the four villages, indicating how important forest protection is to these villagers. During the meeting it was decided to impose the following fines for forest encroachment:

1. Stealing ground litter, Sal leaves, or other fodder for animal feeding or for animal bedding; collecting of fuelwood from Hattisunde Forest knowingly or unknowingly - Rs 25 for each violation.

2. Permitting a buffalo into the forest - Rs 10 per buffalo to be charged to the owner.

3. Permitting a cow or an oxen into the forest - Rs 5 per cow or oxen to be charged to the owner.

4. Permitting goats into the forest - Rs 2 per goat to be charged to the owner.

From 1979 (2036 B.S.) to August 1987 only ten violations were reported and each case was charged. In all cases, the violator, or the family concerned, paid the fine. The following cases and responses to the fines, on the part of concerned families, were documented by the study.

Krishna and Thuli Arval. Krishna P. Aryal (aged thirty-six) and Thuli Aryal (housewife aged twenty-eight) live in Kharka village. Their son, who was six years old at that time, along with three other children, started a fire in Hattisunde Forest. The fire was immediately spotted and extinguished. The families of all the children involved in the incident were charged Rs 1.25 each for failing to discipline their children and for failing to instruct them in forest conservation. The fine was paid at a meeting held the day after the incident.
Bhim Kumari Magar (aged forty-four) and Siba Bahadur Magar of Hattisunde Gaun. About four years ago, the wife collected *Chilane* fodder from Hattisunde Forest and was spotted felling the fodder. The next day a general discussion was held at Chautara Dando, Hattisunde. The husband, Siba Bahadur Magar, was asked to participate in this discussion and the family was subsequently charged Rs 25 for collecting fodder from the protected forest.

**Devi Prasad Aryal (aged sixty-five).** Four years ago Devi Prasad Aryal cut *Sal* fodder from one of the trees in Hattisunde Forest. He was seen doing so, and, the very next day, a meeting was called where it was decided to fine him Rs 30 for knowingly violating the rule, as he was one of the leading proponents of forest protection.

**Lok Nath Aryal of Kharka Gaun.** In 1980, his daughter-in-law (mentally disabled) felled *Sal* fodder from the forest and the family was charged Rs 25 for her infringement of forest rules.

**Khanal from Amari Gaun, Ward No 2, Maudi Panchayat.** Khanal from Amari Gaun knowingly felled *Sal* fodder and was charged Rs 30 for this violation.

**Two boys from Hattisunde Gaun and Khahare Gaun.** Three years ago, two boys of 10 and 12 years felled *Chilanae (Schima Wallichii)* and *Angerii (Lyonia formosa)* fodder from Hattisunde Forest. One of the boys was from Hattisunde Gaun and the other from Khahare Gaun. Their parents were charged Rs 25 each. The parents were charged on the grounds that these children were old enough to know the rules of forest protection and violated the rules knowingly.

A formal local level meeting was also held to resolve a conflict that arose as a consequence of the *Jarajuri* Award. On May 23, 1987, the villagers of Hattisunde, Kharka, Mahadevsthann, and Khahare got together at Chautara Dando in Hattisunde and met under the chairmanship of Tek Narayan Shrestha. A seven member Hattisunde Forest Management Committee was formed at this meeting in the presence of nine participants from Mahadevsthann, six from Khahare, four from Kharka, and ten from Hattisunde; representing a total of fifty-three households from Hattisunde, Mahadevsthann, Kharka, and Khahare. It was stated in the minutes of the above meeting that the newly formed Hattisunde Forest Management Committee would call a meeting on any matter that concerned Hattisunde Forest. How this decision was actually carried out is described under the heading below.

**Institutional Innovation and its Analysis**

The need for a Formal Management Committee was not felt until a year ago, because the villagers simply used to request Tek Narayan Shrestha to act as chairperson whenever they conducted settlement level meetings, and a member of each household acted as the representative on the Hattisunde Forest Management body. Very few people encroached upon the forest, but, if anyone did, the person involved or the owner of the livestock so doing was charged according to the assessment of the villagers and based on the type of violation. They, therefore, never hired a forest guard and fencing was not needed.

On April 18, 1986, Tek Narayan Shrestha, along with a few other villagers, including Gauri Devi Aryal, was invited by the *Jarajuri* Award Office to receive an award of Rs 1,000 for protecting Hattisunde Forest on their own initiative. The money was given to Tek Narayan Shrestha who, however, delayed disclosing the amount received to other villagers for a whole year. Because of this delay on the part of Tek Narayan Shrestha, the other villagers began to distrust him.
To avoid such a situation in future, the local people met on May 23, 1987, and formed a formal management committee to inform all the villagers of any new happenings concerning Hattisunde Forest protection and to share any awards forthcoming equally among all villagers. In that meeting, Tek Narayan Shrestha disclosed the exact amount he had received from the Jara Juri Award and an additional Rs 95 that had been used by Tek Narayan Shrestha to meet personal expenses. The villagers decided that he should pay back the principal, whenever money was needed by the villagers, along with the interest accruing. The interest rate set was 20 per cent per year.

Confusions and conflicts arising in the name of Hattisunde Forest were, therefore, resolved at the local level. Even though the latest committee structure appears formal, it has not taken any action after its formation. However, key people in the village cannot recall the names of the seven committee members without looking in the minutes, and this could mean that the committee had simply been formed to resolve the financial conflict.

Rural Institutions and Interest Groups

Hattisunde Forest Protection Plan is not the only rural institution formed in this area. The people from these four villages have several other institutions that have been formed around various interests. Some of them are described below.

Sharing of a Male Buffalo: The people of Kharka Gaun purchased male buffaloes for use in their village. Each household contributes a certain amount of money to buy a male buffalo and, once it is bought, it is cared for by one of the villagers. Other villagers bring their female buffaloes to be serviced and pay a mana (0.55 Liter) of corn flour in return for impregnation. The keeper of the male buffalo also receives all the manure for raising the buffalo and taking care of it. Villagers from outside Kharka can also use this buffalo on payment of a small amount of cash and a mana of corn flour. A male buffalo, once mature enough to fertilize, can be used for about four years.

During this study some people from Apprechhap (thirty-five households) and Kharka Gaun (nine households) were planning to buy a male buffalo and share it between the two villages, since the earlier one had died. They were also planning an improved method of management because past experience had showed that the household raising the buffalo had to put in a lot more labour to feed this animal in comparison to the return (of manure) the household received. Hence, a method of ensuring additional support from the user households had been proposed (e.g. provision of hay).

When asked if they had heard of hybrid or improved varieties of buffaloes, the villagers of Kharka Gaun replied that they would not buy one for the following reasons:

- Since female buffaloes are small, they thought that they would probably be incompatible with hybrid varieties of male buffalo.

- They believed that hybrid varieties were only available with the Livestock Development Office or with a Project. They felt that this process would take a lot of time, patience, and too many bureaucratic procedures and they are too busy to go through such procedures.
The want to be independent and feared that their way of raising and sharing a male buffalo among the neighbouring villages might not be the way a project would like them to raise or share it. For them, such a possibility would exist if they received a hybrid.

The above statements indicate that these villagers, given a choice, prefer to remain independent and maximize whatever resources are currently available to them.

**Sugarcane Squeezing Machine:** Until twenty five years ago, the people of Hattisunde, Kharka, Mahadevsthan, and Khahare villages were not aware of metal sugarcane squeezing machines. They used to make a wooden machine locally and this required a lot of wood. As the wood for construction became more difficult to find, people started to look for alternatives. It was then that they learned that a metal machine was available in Kathmandu. Four people from Ward No 2 contributed money to purchase the machine which was then shared among other households on payment of an hourly rental fee. This machine was broken about 5-7 years ago and three households contributed to purchase another one.

Currently, the price for renting the sugarcane machine is about Rs 25 per day. Since very little sugarcane is grown, the machine is operated manually whereas oxen run the machine in other villages. They plant sugarcane not as a cash crop but to meet their household need for molasses which they use (during festivals) to make desserts and to smoke with tobacco.

**The School Building at Amari Maudi Panchayat:** The villagers of Kharka Gaun, Mahadevsthan, and Amari Gaun constructed a school building. They provided free labour as well as money to buy building tools and wood for construction. The School was completed eighteen years ago and is called Amarabati Primary School. It offers education up to 5th grade.

**Alternative Forest.** Since the protection of Hattisunde Forest began, most villagers have been optimizing the forest resources that are available on their own land. In addition, they collect fuelwood and fodder from, and graze animals in, other forested areas. The people of Khahare, for instance, get their forest products from a forest called Paleko Ban. This used to be a protected forest area years ago which is why it is still called Paleko Ban (protected forest). The people of Kharka collected their forest products from Bhujiya Lose and Titre Pani forests. The people of Hattisunde Village collect their forest products from Junge Khola where there are still some trees and the people of Mahadevsthan collect their forest products from Khahare Forest.

**Use System**

The people do not think that Hattisunde Forest is old enough to be harvested. Hence, rules to use it in a sustainable fashion have yet to be developed. Local people have become flexible in the use of Hattisunde Forest, for minor purposes, during the last year. According to the villagers, Hattisunde Forest is being used, or may be used in the future, in the following manner.

**Grazing.** At present, most of the trees are tall and livestock cannot damage them easily. The villagers, recognizing this, have stopped charging fines, since last year, for livestock found grazing in the forest. However, the trees are tall and dense and not much sun penetrates, so as a result ground litter is almost absent. This creates a natural barrier to livestock grazing. Further, the villagers themselves discourage livestock from entering the forest to protect them from wildlife.

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6. *Paleko Ban* means nurtured (*Paleko*), forest (*ban*).
Collecting Sal Leaves. Women are not allowed to collect Sal leaves by pulling at Sal trees because it is feared that this might make the trees crooked and unusable as construction wood. Yet, if the women need a small amount of leaves in an emergency they are allowed to collect them free of charge. This practice started in the summer of 1987. Women of all fifty-three households are allowed to collect Sal leaves on an equal basis.

Special Occasions. On special occasions, such as weddings, thread ceremonies, etc., the local people require Sal Linga (a young Sal tree) for ceremonial decoration and are allowed to collect Sal Linga for such purposes. Similarly, they are allowed to collect Sal wood to carry a dead body. These resources are available free of charge to all villagers.

In and Out-Migration. The people believe that anyone who leaves the four villages will automatically lose the right to use the resources of Hattisunde Forest. Similarly, anyone who migrates into any one of these four villages automatically acquires the right to use the resources of this forest.

Resource Distribution. Local people claim that resources from Hattisunde Forest will be distributed on an equal basis among all the villagers. For example, if someone has five sons and another person has one son, all six boys, when they reach adulthood (eighteen years old), will be eligible for a share of forest products on an equal basis. Their rationale that being a resident of any one of these villages, in itself, makes a young man or woman eligible for equal use of Hattisunde Forest. Some villagers stated that, by the time trees are old enough for harvesting, a price per tree felled might be introduced so that those who wish to build a larger house can buy more wood on payment of cash. However, they are not sure how they will go about harvesting the forest.

Thinning. As the forest, at present, is too dense, the villagers are thinking of weeding out some of the trees that are crooked so that they can be used for fuelwood, fodder, etc. Such thinning will provide more room so that the straight trees can grow thicker. Whatever wood or fodder they get out of the forest, they hope to share among the fifty-three households on an equal basis. If a household does not participate in thinning, then that family will not get a share of fodder or fuelwood. However, they do not know how to go about thinning out the forest and sought technical advice from the research team. The research team was unable to help them.