

An overview of participatory forestry in Nepal's Tarai

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Participatory forest management and development activities have been existing in the Tarai region of Nepal in different forms such as user group forestry, leasehold forestry, agro-forestry, religious forestry, and private forestry. User group forestry is found to be one of the effective activities in the region due to readily available high value timber for income generation and for providing jobs to local people. A joint approach between the Department of Forest and local people is necessary for managing forests effectively and sustainably, which requires the different model of FUG, particularly in benefiting sharing mechanism in the Tarai.

Keywords: Participatory forest management, community forestry, leasehold forestry, agro-forestry, religious forestry, private forestry, Tarai, Nepal

Forest area per capita-wise is the lowest in the Tarai comparing to the hills. About 16% of the forests in the Tarai are categorised as potential production forests and can be harvested up to 108 cum/ha (FSSD 1993). Production forests managed for commercially high value timber have yield higher than the others. Penonen (1994) reported that most of the forests in the Tarai are over mature and the share of mature and over mature forest is about 80-85%. Several reports have indicated that the Tarai forests, if they managed properly, have great potential for contributing national economy.

Participatory forest management activities include community forestry (CF), leasehold forestry, private forestry, agro-forestry, taungya system of land management, and road-side and canal-side plantations. Community forestry that involves a large number of local people from growing trees to enjoying benefit is a more participatory approach than the other forestry activities.

For the last two decades, community forestry has remained a major forestry programme of Nepal. About 47% of the total forestry budget is allocated for community and private forestry (MPFS 1988). Tamrakar and Nelson (1990) indicated that 61% of the total forests of Nepal are potential for community forests, in which 13% have so far been handed over to the communities (Baral 1998). The programme has largely been concentrated in the hills where most of the forest areas have been handed over to communities. And, its considerable success in the hills (Joshi 1997) has earned a lot of recognition internationally.

But, the picture of the Terai is different. The reason

for not gaining momentum of CF in the Terai could be due to different socio-economic and resource use conditions. Similarly, large scale encroachment on government forest lands and smuggling of forest products across the boarder with India, treeless and landless people at some areas, are major problems in the Tarai (Subedi *et al* 1991) Further argument is that a portion is deprived of resource use as against the other for being no access to the forests. Most of the settlements around Tarai forests are of new origin with heterogeneous society which may caused difficulties to bring them under one agreement. This may be the reason why users group forestry is having hard time to get full momentum in the Tarai (Upadhyay *et al* 1997). For such complexities existing in participatory forest management in the Terai, the present paper attempts to document and assess the forest management practices of the region which may help the authorities to develop a management strategy for such forests.

Community and participatory forestry

Participatory forestry is an umbrella for different forms of forest management system. It offers solutions to the problems of decreased access to forest products at the local level and also focuses on improving the socio-economic conditions of the people. As said earlier, a number of participatory forest management and development activities have been launched to manage and protect the Tarai forests. Among them, user group forestry is found at some Tarai districts is at advanced stage than the others. By advanced stage we mean the extraction of timber by FUGs, where a number of people are employed as full time staff for managing the forest resources. Enhancement of participatory forest

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management activities at a given district depends on the perception of the District Forest Officer (DFO)-in-charge of district.

Community forestry

Community forestry development activities in terms of resource creation and management was initiated in the mid 1980s by the Tarai Community Forestry Development Project (TCDFP). Substantial plantation activities at road-side, canal-side and also in private farmland were carried-out during this programme. Shrestha *et al.* (1993) reported that 1,563.5 ha. of community plantations were established till June 1991 through TCDFP. Such activities made the people aware about community forestry.

At most of the Tarai districts, except for Bara, forest-either natural or plantation is handed over to communities (Joshi 1997). This is supported by Pokharel *et al.* (1997) and Upadhyaya *et al.* (1997). A number of FUGs have been formed for developing and managing forest resources in different part of the Tarai region (Table). Joshi (1997) reported that the number of FUGs in the districts vary from 1 to 153. It is noticed that the DFOs in the Tarai are hesitating to hand-over community forest due to lack of clear guidance from the government. In fact, the government seems giving less emphasis on community forestry in the Terai. There are also very few forestry projects working in the Terai as compared to the hills. This could be a reason why there is less number of FUGs

in the Terai.

Table shows that Dang is one of the leading districts having more community forestry programme in the inner Tarai region of Nepal. So far, there are 195 forest user groups (FUGs) who have been controlling and managing the total forest area of 25,267.89 ha involving 32,279 households (Thakur 1997). This covers the total population of 217,849 (62%) of the district. The rate of handing-over community forests in Udayapur District is also high compared to other districts. The table reflects that the community forestry activities in the inner-Tarai are more pronounced than in the Terai.

Leasehold forestry

Leasehold forest is a national forest, which is leased to an individual, a group of individuals or an organisation for a maximum period of 40 years, and is renewable for the same number of years. As per the government policy, priority of leasing forests shall be given to those individuals who are below poverty line. The programme was started in 1993 at Makwanpur District with the support of FAO and the total forest land of 329 ha has been leased out to 68 groups, group of poor farmers (Pokharel *et al.* 1997).

Similarly, about 166 ha of forest land has been leased out to Butwal Plywood Factory (BPF) of Rupandehi District to produce fast growing timber species in 60 ha with 10 years rotation. Also about 92 ha of sal forest is being managed with 40 years rotation.

Table: Number of groups formed and community forest handed over in the Tarai region

S No	Districts	FUGs formed	CF handed over	Areas (ha)
1	Jhapa	22	11	4,863
2	Saptari	73	16	Not available
3	Siraha	60	38	2,793.9
4	Udayapur	Not available	79	14,997.5
5	Dhanusha	16	3	173
6	Sarlahi	Not available	1	18.60
7	Mahottari	Not available	18	Not available
8	Rautahat	13	3	Not available
9	Makwanpur	Not available	45	Not available
10	Chitwan	17	7	3,713.8
11	Rupandehi	26	18	5,074.36
12	Nawalparasi	31	20	927.37
13	Dang	Not available	195	25,267.89
14	Kapilbistu	5	3	115
15	Surkhet	90	73	15,131.85
16	Banke	Not available	5	200
17	Bardia	Not available	7	Not available
18	Kanchanpur	Not available	2	61
19	Kailali	Not available	5	616.66

Source: Pokharel (1998)

More Tarai districts such as Chitwan, Siraha, Saptari and Udayapur are also in the process of implementing Leasehold forestry programme in the near future (DFOs, pers. comm., 1997).

Agro-forestry

Some efforts have been made by individuals to practice agro-forestry in different forms such as home garden, taungya, and other forms such as silvi-fishery and silvi-horticulture deigns in the Tarai (Pokharel *et al* 1997). For the last ten to fifteen years the home garden has become very common in most districts where people cultivate trees in the marginal land with cash crops such as fruit trees and vegetables. A good example of benefit from agro-horticulture as designed by an innovative farmer Mr Parsuram Kurmi of Ashurena VDC at Rupandehi District is presented in Box 1.

BOX 1

Mr Kurmi who used to cultivate peanut and pigeon pea in his 1.5 *katha* of land found this practice costly and more labour intensive. Being motivated from his neighbour, he started inter-cropping in 1995 by planting sissou, 360 suckers of banana, 13 mango seedlings and 15 jack-fruits.

He found that the net profit of Rs 1,270 from peanut and pigeon pea is far below from his agro-horticultural model from which his earning is Rs. 3,000 from only banana. The profit from the rest is yet to come. It showed that agro-horticulture is more profitable and also viable to this area.

Adopted from Pokharel *et al* 1998

Taungya system

To carry out forest development activities in the degraded areas Taungya system was introduced by the Department of Forest (DoF) in 1980 by the name of Tamagadhi Project. In this system, plantation is carried out by the DoF and the planted area is handed over to the landless or poor farmers for the period of 3 years. The farmers are allowed to cultivate cereal crops. The project began with no clear rules and regulations, no detailed plan for reforestation, no criteria for selection of farmers and no scheduling of technical activities (Karki *et al* 1992). After being replicated at Morang District of the eastern Tarai, this practice was found considerably effective to reforest degraded forest areas.

The silvo-horti-fishery system is common at Rupandehi, Mahottari, Siraha, and Saptari for the last decade (Pokharel *et al*. 1997). In this system, sissou, banana and papaya are planted on the ridges of ponds along with fish farming.

Religious forestry

A part of the national forest which is being used on a traditional basis or since ancient times, is given to associates of a religious organisation for managing and developing, is termed as a religious forest. The main purpose is to provide a sacred landscape dedicated to a deity. An individual or organisation has to submit an application to DFO along with an operational plan. The DFO may conduct necessary inquiries into the application before handing over the forest as religious forest. Such forests are being managed at Mahottarai, Dhanusha, Morang and Rupandehi districts. However, its management does not seem much effective. The people in this area do not look to be interested in managing religious forests. This may be due to the forest by-laws, which has clearly expressed that the revenue earned from such forest is used only for religious purposes. At Rupandehi District, people have developed future plan for developing forest as religious as well as recreation area.

Private forestry

A number of private forests have been emerging in the Tarai. Many farmers, mostly wealthier have converted their farmland into private plantation Pokharel *et al* (1997) stated that majority of such activities were initiated during the implementation of TCFDP. The commitment of the individual farmer to develop greenery in the district has also played a role for enhancing private forestry in the Tarai (Box 2). Churia Project and Butwal Plywood Factory have also a great contribution in developing private forestry in the respective areas. Pokharel (1997) stated that Churia Project in the eastern Tarai has started new approach to develop private plantation by providing a grant of Rs 6,000 to establish private nursery with a guarantee of buying the seedlings. The BPF provided technical support to the farmers who were willing to plant poplar. The BPF made an arrangement to provide loan to the farmers through Agricultural Development Bank (ADB/N) at the rate of 14%. The BPF has also offered a buy-back guarantee for mature trees having a minimum of 30 cm diameter at breast height and 20 meter in height. Such systems encouraged for private forestry.

Box 2: A farmer's dedication

Mr. Semai Chaudhary (73 years of age) who lives at *Madheli* VDC of *Sunsari* District, has been planting trees for the last 2 decades in a commitment to make the district green.

Mr. Chaudhary has a interesting story of initiating tree planting. One day, while listening to the radio in 1979 during the referendum period, he heard the slogan "*Shree Panch Birendra Amar Rahun, Panchayati Byabastha Amar Rahos*" (Long Live the King and Long Live the *Panchayat* System). The word "*Amar*" (immortal) got so deep inside him that he decided to do something which will make him immortal. He took on oath for not taking bath unless he makes *Sunsari* green. Since then he is planting trees wherever he finds suitable. He is very much confident to complete his work.

He developed his small farmland into nursery for producing tree seedlings and started transplanting seedlings from the nursery to road-side, canal-side and also in private lands wherever possible. For such dedication shown to restore greenery, Mr. Chaudhary has been decorated with *Gorkha Dakchinbahu* Medal by HM King and awarded Rs. 25,000.00 by the then Ministry of Forest and Environment. Various organisations have recognised him for his contributions.

Adopted from Pokharel 1997

With varying number and size the private forestry is observed at almost all Tarai districts. More than 80% of the farmers have planted *sissoo*. The other species were found to be *khair*, *masala*, *poplar*, *simal*, etc. Number of private forests are yet to be registered with DFO.

Discussions

A number of participatory forest development activities such as Leasehold Forestry, Religious Forestry, Private Forestry, Agro-forestry and User Group Forestry are existing at most of the Tarai districts. Majority of them were initiated during 1980s when TCFDP was implemented in the region.

The Forest User Groups (FUGs) in some districts are more advanced in terms of management and developing infrastructure such as office building, road and culvert construction from their own income. Besides, a number of people are hired as labours and also employed as forest watchers as well as office assistants. This has attracted people to involve in managing the nearby forest resources as community forests. As a result, a number of people visit the DFO asking for community forests.

The DFOs in the districts are also encouraging to see the success made by the FUGs in community forests in terms of controlling encroachment, developing trust with the people, developing greenery in the area, minimising illegal felling and forest fire. Such success in community forestry has been observed where the committee's member are active, especially the Chairman who is dynamic, and influential.

Some conflicts have been arising in community forests in the Tarai region, related to user identification, availability of high value timber, and accessible market which has created problems in management. The feeling of 'our forests' by some distant users has created problems in the Tarai (Pokharel *et al* 1997). They also feel that the nearer users have had no contribution to bring the existing forest into its high value timber stage. Sometimes, the distant people come in a group with arms and take high value timber from the forests.

The leasehold forestry programme is not seen popular in the Tarai except at the BPF. This could be due to the existing policy (first priority is given to FUG for managing forests) of leasing the forestland to a group or individuals. And the leasehold also needs a high investment for benefits.

Agro-forestry is emerging as acceptable and viable technology in the Tarai. Some FUGs have even started practicing agro-forestry in community forests as an income generating activity (Pokharel *et al* 1997). Farmers also started to switch over from their regular crop cultivation practice to agro-forestry. This is due to less input and more return.

The ownership of trees on private holdings has been increasing gradually in the Tarai. Farmers have planted trees as an investment for profit. This could be seen as an indicator of wealth. Pokharel *et al* (1998) reported that a total amount of 126,975 cft. of timber and 369 *chatta* (1 *chatta* is about 8.7 tons. The weight may vary from one species to another) of firewood was supplied by private sectors in one year at Rupandehi District. This indicates that a large number of trees are being managed by private sectors, which is a good symptom in reducing pressure on public forests.

Conclusion

Although, started earlier, the participatory forest development activities, especially community forestry, in the Tarai region is yet to gain momentum as in the hills. The programme seems successful at some of the Tarai districts. There is a great interest of the people in taking community

forest due to its readily available high value timber for generating income, providing job opportunity and also carrying out rural development works at their locality.

The FUG concept that we see in the hills may not work in the Tarai region due to different socio-economic and resource use conditions, tendency to acquire well stocked forests, and depriving direct access to forests for some groups of people. Conflict between the nearer and distant users exist in the Tarai which could be minimised by handing over degraded and scattered patches of forests.

The DoF needs to show its serious concern in increasing productivity of the Tarai forest with a sustainable management system for the production forest. Such system can be achieved through the joint efforts with community and the Department. This could be done by sharing the revenue between two parties. A new model different from the hill is necessary for the Tarai forest.

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