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# Women, Environment and Local Initiatives: Factors Affecting the Degree of Successful Management of Forest Resources

Shanta Pandey

## Abstract

*Forest destruction is a threat to environmental stability and the equitable economic development of people in developing countries. This is particularly true in the Himalayan region, where rural people spend a large portion of their time collecting scarce forest resources. The efforts of the government and forestry professionals to increase forest resources are insufficient and inefficient. However, studies show that in spite of tenure problems and lack of policy support, rural people in the Himalayan region have planted, protected, and managed forest resources on their own land and on community land (Baral and Lamsal, 1991). Policies supporting local initiatives to plant, protect and manage trees may increase the supply of forest resources for the poor. Current knowledge about these local initiatives is, however, insufficient to make appropriate policy changes. In this paper, I emphasize the need to study the nature, scope and policy implications of rural peoples initiatives to plant, protect, and sustainably use trees on their own land and on community land in the Himalayan region.*

## Introduction

Population growth, rising demand for agricultural land, tourism, industrial use of fuelwood and the dependence of the rural poor on forest resources for their livelihood are major causes of forest depletion in the Himalayan region. Poor people, particularly women and children, collect fuelwood, fodder for livestock, nuts and other edible forest products, medicinal herbs, and poles to maintain their houses from the forest (Kaur, 1991; Pandey & Yadama, 1990). They collect other non-wood forest products for market sale. These products include honey, bamboo and grass to weave baskets and mattresses, hemp to make rope, and bark to make paper.

Fuelwood shortages are a major problem for Himalayan women. Between 1964 and 1974, the total area of forest in Nepal declined by approximately 5% (World Bank, August 1978). In Nepal, 85 to 90% of fuelwood collection is done by women, with 84% done by women and female children combined (Fortmann & Rocheleau, 1984). For women and children, shortages of forest resources require either traveling long distances or changing traditional habits. Such changes might include using valuable natural fertilizers such as cow dung cakes and agricultural residues as a substitute for fuelwood (Bogach, 1985; Pandey, 1989; World Bank, March, 1980; World Bank, September, 1980); or reducing the number of cooked meals and avoiding nutritional foods such as lentils that require more fuelwood to cook. Hoskins (1984) notes that in a village of Senegal, women often served uncooked millet flour mixed with water due to lack of firewood. Poor people now spend more time gathering forest products for basic needs, rather than putting that time and energy toward productive economic activities.

## Equity, Ownership and Gender Issues

The 1980 Copenhagen conference for the United Nations Decade for Women summarized the global situation of women as follows: Women comprise half of the world's population, perform two thirds of its work hours, yet officially account for only one third of the paid labor force world-wide. They receive only 10 percent of the world's income and own less than one percent of the world's property.

In 1985, 1.1 billion people in developing countries lived in poverty, 633 million of whom lived in extreme poverty (World Bank, 1990). Poverty is severe in rural areas of developing countries, even after compensating for the cost differences between urban and rural areas (World Bank, 1990). Africa and Asia account for about 85% of the world's rural women today; with about 94% of women in Nepal, 75% of women in India, 84% of women in Bangladesh and 72% of women in Pakistan living in rural areas (United Nations, 1991). In all Developing Countries women spend more time working than men; the widest gaps are in Africa, Asia and the Pacific, where women average 1-13 hours more work a week than men (United Nations, 1991). Very poor women in many developing countries are now working 60 or more hours a week just to maintain their meager living standards of a decade ago (United Nations, 1991)

Equity has two aspects: income distribution and the prevalence of poverty (World Bank, 1991). The alleviation of poverty among women and successful management of forest resources are inter-linked (Bajracharya, 1999). The reduction of poverty is impossible when people, particularly women, have to spend a large part of their productive time collecting forest resources to meet basic needs. We need policies and programs that reduce the time women must allocate to meeting basic needs so that they may devote more time to other economic activities.

### **Forest management policies and local initiatives**

Until recently, forest management systems in the Himalayan region were developed to halt the indiscriminate destruction of forest resources "by local people." Forest legislations were enacted designating local forest land as government land and delegating forest management responsibility to forestry departments. This is reflected in the *Private Forest Nationalization Act of 1957* in Nepal, under which all private forest land became the property of the Nepalese government. Several experts argue that these policies have contributed to increased forest destruction because local people no longer have an incentive to manage their forest resources (Bajracharya, 1983; Chambers, 1987; Repetto, 1988).

The connection between rural poverty and forest depletion was first acknowledged at the Eighth World Forestry Congress in 1978 in Jakarta. This congress seriously discussed forestry as a means for rural development and advocated a departure from traditional approaches of forest management which separated foresters from rural people, and people from rural development. In the same year (1978), the World Bank issued a new forest related policy statement emphasizing rural development forestry (Pardo, 1985). In addition, the Food and Agriculture Organization (FAO), in 1980, recommended that: a) forestry strategies be based on the active and voluntary participation of the rural poor; b) forests and forest industries hold a significant potential for the alleviation of poverty and promotion of social change in rural areas; and c) forestry policies be oriented and designed to support rural development on a permanent basis (Rao, 1987a; 1987b).

In Nepal since 1976, the emphasis has been on involving local people in the management of forest resources. In most forestry projects initiated by the government or international organizations, poor people are encouraged to participate but are not thought of as responsible users of forest products. Therefore, their use of forest products is generally closely monitored. Rural people require permits to fell most trees that they plant and protect on community land and to fell certain tree species planted on their own land. In these projects, the rules are complex and policy decisions are often made by professionals from outside the project area. The nature of local participation and the benefits accrued vary depending upon the participant's social and economic position. These projects employ poor people, including women, at the implementation level. However, women and the poor are often excluded from decision making because it is assumed that they lack the knowledge required to understand the policies and processes of such projects.

Rural populations in Nepal have a long history of managing (planting, protecting, and sustainably using) forest resources on their own land or on community land (Adhikari, 1990; Baral & Lamsal, 1991; Carson, 1985; Chambers, 1987; Chowdhry, 1983; Hoskins, 1979; Messerschmidt, 1987, 1988; Pandey & Yadama, 1990). Rural households that own land have always managed various species of grass, shrubs, and trees on their own land. Managing forest resources on family land provides the household with the flexibility to plant and protect the species of interest to them and to harvest products

whenever they are needed. Until the 1960s, Nepalese rulers gave the authority to a group of people or to the headmen to manage sections of forest through *lalmohar* (Adhikari, 1990). The people or the headmen would follow locally developed rules in managing these forests. Some of these management systems (in revised form) are still practiced in Nepal. Others have been rediscovered and discussed by researchers and policy makers in recent years.

In one district of Nepal, Baral and Lamsal (1991) noted 55 sites where local people are managing forest resources on community land. Fisher (1991) reviewed different studies and came across 3 different locations in Nepal where local people are planting, protecting, and managing forest resources on their own initiative. Because of their recent discovery, most of these local initiatives have no legal or political support. The legal owner of these community lands is often the national government. Often people who participate in local initiatives to manage forest are unaware of the government policies and may be doing so even when policies are not supportive of their efforts. This can result in a conflict between rural people and the forestry department.

The greatest difficulty lies in understanding the important factors in the initiation and continuation of management systems that are locally sustainable and adaptable to the current ecological, political, economic and social situations. There are regional variations in forest resource scarcity and in the nature and organization of indigenous management systems. In some regions of Nepal, the management of trees has been more successful on family owned land than on community lands. In other parts of the country, local initiatives to manage trees on both family owned and community lands have been successful (Gilmour, 1988; Pandey & Yadama, 1990). A case study of the Hattisunde Forest Management System in Central Nepal outlines a successful management system that combines community resource management with the management of trees on family owned land (Pandey & Yadama, 1990). In the Hattisunde forest, the forest boundary was clearly demarcated and the forest is located in very close proximity to the users' residence. The users were clearly identified and include four villages and 53 households in Dhading District. These people are ethnically diverse (4 Brahmin, 5 Chhetri, 6 Newar, 15 Magar, Kami, and 1 Damai household), yet socio-economically and educationally homogenous. Both men and women were actively involved in managing forest resources on their family owned land and on community lands, and the initiative to manage forest resources on community lands came from within the community. The indigenous character of the effort is reflected in the simplicity of the protection system, the nature of the tree species that are being protected, and the familiarity of the users with the rules of management. The members expressed trust in other participants and felt that the reward of community management of Hattisunde Forest is greater than the costs that they had to incur.

Indigenous management practices are site specific and dynamic. They evolve along with changes in external factors such as mountain ecology. The challenge before us is to understand what makes an indigenous forest management system work and in what way these practices are changing over time. What are the underlying causes for their success or failure?

Multiple factors affect the degree of successful management of forest resources on community lands. The following factors are important in the initiation and the degree of successful continuation of locally initiated community forest management systems.

1. Increased scarcity of forest resources leads to more private tree planting and increased participation in community management systems (Gilmour, 1988; 1989). However, the perception of resource scarcity may vary from one region to another.
2. The smaller and more clearly defined the boundaries of common lands, the greater the possibility for the initiation and continuation of management practices (Ostrom, 1990; Pandey & Yadama, 1990; Wade, 1987 in Bajracharya, 1992).
3. The fewer the number of households (users) involved in forest management practices, the greater the degree of successful management (Wade, 1987 in Bajracharya, 1992). However, we must question whether there is a minimum or maximum number of households for successful management of communal forest lands.

4. The more clearly identified the authorized users, the higher the degree of successful management (Ostrom, 1990; Pandey & Yadama, 1990; Wade, 1987 in Bajracharya, 1992).
5. The closer the proximity between the location of the community forest and the residence of the users, the greater the chances of initiation and continuation of its management (Pandey & Yadama, 1990; Wade, 1987 in Bajracharya, 1992).
6. The closer the users are in ethnic, social and economic background, the greater the degree of successful management (Jodha, 1990; Pandey & Yadama, 1990; Wade, 1987 in Bajracharya, 1992).
7. The more vital the resource for survival, the greater the success in continued management (Jodha, 1990; Pandey & Yadama, 1990; Wade, 1987 in Bajracharya, 1992). Indigenous species that the villagers use for multiple purposes are also more likely to be successfully managed.
8. The more restricted the access to an alternative resource, the greater the chances of rule violation and lower chances of continued successful management.
9. The higher the expectations of rewards vs. costs from managed forests, the greater the local participation in forest management (Jodha, 1990; Pandey & Yadama, 1990). An expectation that rule violators will be sanctioned also tends to increase forest user participation in forest management (Pandey & Yadama, 1990).
10. The lower the degree of government intervention, the greater the extent of successful indigenous management (Fisher, 1988; Jodha, 1990; Wade, 1987 in Bajracharya, 1992).

### Conclusions

There is a need to further investigate conditions under which local people organize around community forest land, formulate rules, and abide by these rules resulting to create a sustainable forest management system. Some of the factors influencing the degree of successful management of forest resources are identified in this presentation. Researchers should look into the relative importance of these and other factors in successful management of forest resources. In addition, ownership of land and trees are critical to the success of local initiatives to plant, protect, and manage forest resources. Restricted land and tree tenure systems encourage irresponsible use of forest products (Chambers & Leach, 1987) and rural families are more likely to protect and make better use of forest resources when they know that they own the trees they plant (Chambers, 1987; Chambers & Leach, 1987).

We must now identify the policy changes necessary to promote local initiatives and improve women's access to forest resources. Other unanswered questions include identifying the specific roles of developed and developing countries, including local and international non-governmental organizations in promoting local initiatives to protect and manage forest resources.

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