

"Invisible" Farmers?: Hill and Mountain Women of the Himalaya

Jeannette Gurung

International Centre for Integrated Mountain Development, ICIMOD, Kathmandu, Nepal

1. INTRODUCTION

Since the advent of planned "development" which was conceived as a way for developed countries of the North to assist in the modernization of post-colonial societies of the South, we have witnessed a continual decline of resources in rural areas. The call for increased food production through the use of modern agriculture technology, such as in India's Green Revolution, resulted in the wealth of a few farmers and the further impoverishment of the poorer ones unable to afford the required inputs. As the push for "economic growth" desired by development planners became more acute it became clear that as countries which developed cash crop production for export became more dependent on western technology, investments and the international markets. The growth that has occurred has not made a dent in the accelerated process of impoverishment that has left the world with a greater percentage of poor people than ever before (Karl, 1991).

Many argue that the development process has contributed to the growth of poverty by increasing the economic and gender inequalities and the degradation of the environment, which further diminishes the means of livelihood of poor people. This is particularly the case for poor women who are more affected by these processes (Braidotti, 1994.). The growing recognition of the linkages between the environmental crisis and the development crisis broadened the intellectual discourse to include social aspects in the pursuit of sustainable development models. In the 1970s, women's role began to be considered, and a call was made for their integration into development in an attempt to rectify previous neglect by development planners.

Yet this move for integration ignores the general failure of development theories to bring about improvements in the lives of the Third World poor after four decades of trials. Despite the postulated crisis in development, the concept itself has remained intact. For mainstream development models, development has meant the integration of Third World countries into the international market systems whereby growth was to be manifested solely in increased economic production. Therefore, women's involvement in development has been measured by their employment in a market economy, making them "invisible" in rural subsistence-based societies. As women comprise 60-90% of the agricultural work force, and produce 44% of all food worldwide, why is it important to only speak of income-generating projects, as are often proposed by development agencies? (Anand, 1991). Is it not better to recognize women's current productivity and the value of their work in supporting subsistence production systems, which are now suffering because government and market pressures are focused on crops for markets, rather than home consumption? Has this development process, which is now being promoted for women, been beneficial to the majority of men?

The modernization of agriculture often leaves women producers worse off. With the best land under cultivation for cash crops, women must work harder as they produce cash crops on the better land and use the smaller plots on poorer land to produce the food for their own consumption needs. The already heavy work loads of women farmers increase commensurately with the addition of market-oriented farming ventures while their work is simultaneously devalued in an increasingly monetized economy. New information on inputs, techniques and machines is usually accessible only to men who generally are the targets of training and technologies for improved agricultural production. Even women of the same household often are unaware of the new knowledge provided to their menfolk, as it is not shared with them.

Due to their social and economic roles, poor rural women have a close association with natural resources from which they must provide water, food, fuel and income for their families. Yet despite their traditional roles as agricultural and natural resource managers, and the extensive knowledge they possess that enables them to shoulder these responsibilities, they have been almost completely marginalized from processes that seek to formulate strategies for the use and management of these resources. In the process, by losing access to resources and decision making, they have further lost status and power as well as control over their labour and knowledge.

The special difficulties that women face are the consequences of the sexual division of labour, double work burden, and unequal distribution of resources which stem from their inferior status and lack of control over productive resources (including land) and cash. Against this backdrop, women's lives are very much affected in ways different than men by the environmental degradation which is occurring in the Himalayas as well as other regions of the world (Venkateswaran, 1992).

2. WOMEN'S ROLES IN AGRICULTURAL AND NATURAL RESOURCE MANAGEMENT IN NEPAL

2.1. Agriculture

Farming in Nepal occupies 81% of its citizens. Primarily a subsistence-oriented system, it is labour intensive, relying on the inputs of 91 % of the country's females and 75% of the males. Women contribute between 50-80% of the total agricultural labour force, depending on socio-economic and geographical variations. Gender involvement in farm production activities does vary from the Terai to the Hill/Mountains, with hill women taking on more responsibilities. This can be attributed to three factors: higher migration of males from hills and mountains, socio-cultural restrictions of orthodox Hindu women mostly in the lowlands and traditional sharing of work amongst men and women in the highlands. Women in high income families are involved indirectly as managers of agricultural production, in middle income families as unpaid family labour, and in marginal and landless families as wage labourers. Ethnicity also affects the division of labour with members of the Tibeto-Burmese groups most involved time-wise and in decision-making. Education, family size and livestock holdings also affect the women's level of involvement (Bajracharya, 1994).

The allocation of labour and responsibilities between men and women is affected by many factors with a high degree of variability even within a small region, but there is no activity in which women are not involved. Even ploughing, which is almost always performed by men, has been observed to be done by women on some farms where men are absent and hired labour is not available. Several studies carried out in Nepal indicate a domination of women's labour in such tasks as planting/sowing, compost and manure carrying, transplanting, weeding, harvesting and post-harvest activities for cereal crops, pulse, legume and oilseed crops and even vegetables (Bajracharya, 1994). Women also play the predominant role in animal husbandry, contributing more than 73% of the labour required for their care.

2.2. Forests and Pasturelands

The indispensable role of forests in the farming system makes any decrease in its resources a major concern for the women who are primarily responsible for the collection of its products to provide fuelwood, fodder, leaf litter, herbs for medicines and income sources. Households in the hills of Nepal contain an average of five goats and two cattle or buffalo for which 2-3 loads of fodder are required daily (Gurung, 1988). Studies indicate that an average of one extra hour of time is necessary for the collection of fodder in areas subject to severe deforestation. In the highlands, 66 % more time is required to collect a standard load of fuelwood in sites of greatest deforestation than in sites of lowest deforestation (Kumar, 1988). This extra labour requirement is

often met through the allocation of more work to children, usually girls. Collection of fodder leaves and grasses, as well as fuelwood, is largely done by women; they contribute 72% of this work, spending on an average 2.5 hours a day averaged over the year. It has been estimated that the increased hours required for collection in degraded areas has led to a reduction in women's input into agricultural production by one hour per day. The implications of deforestation are twofold: the workload is increased, and the labour input per hectare of agricultural lands is reduced which has probable adverse effects on yields (Kumar, 1988).

2.3. Water Management

Hill and mountain women's traditional roles in the collection and provision of water to household members and livestock is well-known; they are the principal carriers of water and also make decisions on its use and storage for which they hold knowledge related to its conservation and quality. It should be noted that women of the Terai spend only a fraction of the time spent in the hills in water collection due to more plentiful supplies and easier accessibility (Pradhan, 1990).

3. IMPACTS OF THE CHANGING SCENARIO ON WOMEN

Even the largely self-sufficient, independent and isolated communities of the mountains are gradually giving way to become members of the "global village". Externally-driven changes are more and more affecting even remote mountain societies through market forces, government development interventions, political movements, tourism - even internationally broadcast TV. Urban centres and international markets are increasingly consuming natural resources which require greater extraction from mountain regions. Commercial agriculture is being introduced to supplement subsistence systems, and local economies are becoming monetized. Out-migration of males is a well-recognized phenomenon that will only increase as farming becomes less sustainable and profitable. In-migration of lowlanders, unfamiliar with strategies for proper management of mountain farming and survival, is bound to cause environmental damage. Education and employment opportunities elsewhere are distancing youth from the land and setting in motion a process of "class differentiation" (Mehta, 1990).

3.1. Cropping Patterns

Increased pressures on natural resources, brought on by both internal demands of a larger population and exploitation pressures from outside, make it impossible for farmers to continue with the subsistence strategies which have worked in the past. Traditional agricultural practices that require long fallow periods and extensive support lands for supplies of biomass such as fodder will soon no longer be feasible. New marginal lands may be brought into production, but these will be distant and more fragile, requiring significant labour inputs to make them arable. The quest for cash brings new cash crops which place added labour demands on women's time without bringing them a fair share of the profits. At the same time, their primary role in subsistence agriculture is losing status and value (Gurung, 1994).

In India, where the commercialization of agriculture has moved at a faster pace than in Nepal, the shift from a subsistence to market economy has affected women in several ways. The Green Revolution, which focussed on technological interventions, greater mechanisation and higher capital investments, entailed a shift from human to technical inputs. This process has marginalized women's knowledge and inputs, resulting in a shift from them being agricultural managers to mere labourers. It has increased their workload by reducing the availability of crop fodders; high yielding varieties introduced by the Green Revolution have a low percentage of straw which can be used for feed. The availability of food for household consumption has been affected as grain is now directly transported to the market from the field, leaving women little control over its usage.

Previously, women could use the grain for exchange for other commodities. Women's opportunities to earn cash or barter from other activities, such as threshing grain, have been curtailed through the introduction of machines usually owned and operated by men.

The introduction of cash crops in mid-western Nepal has decreased the amount of time men spend in agricultural activities and resulted in greater amounts of time being spent in training sessions and market activities. Meanwhile, their womenfolk have increased their time in agricultural activities and reduced the amount of time previously spent on child care and household work. Perhaps of greater loss than the time is that of the loss of status, decision-making power and control over the products of their labour (Paolisso, 1992).

The overall greater importance is attributed to men through wages and access to training and resources; the focus of modernisation affects the proportion of income for family maintenance as well. It is well-documented that where women control cash income, a larger percentage is spent on nutritional needs for the family (Venkateswaran, 1994).

3.2. Monetized Economy

Although in the past women were accorded lower status relative to men, there was greater parity in the sexual division of labour based on each sex's contribution to the domestic and agrarian economy. As the village has become increasingly interwoven into the cash economy; however, new sets of values and expectations have widened the gap. Since agriculture cannot ensure even a minimum subsistence in most areas of the hills and mountains, households are forced to use migration and other strategies to provide cash to cover an ever-growing array of "needs" and "wants". Men's seasonal or permanent withdrawal from agricultural work results in added burdens for women. The higher level of male participation in the market economy (a function of their greater mobility, education and socialisation) has increased women's dependence on men as earners of income and intermediaries to the "outside" world. Those who command access to remunerated activities are now accorded a value and prestige that far exceeds that attached to activities which appear to be unconnected to the market (and which are largely performed by women). Because of the obscured link between women's responsibilities and the market value of their work, women's roles as managers of agricultural production are undermined and invisible to both householders and development planners (Mehta, 1990).

3.3 Migration

Agriculture alone does not provide sufficient returns to support hill households; the great majority of households suffer from some months of food deficiency and must rely on remittances from outside to support even a basic level of survival. Many households have at least one male member who is employed outside of the community at least on a seasonal basis, but the current trend is for increased numbers and man-months of male migration leaving women as de-facto heads of households. However, this status has not brought them access to land titles, credit or even agricultural extension services from the governments of the region. With their menfolk absent, women are left to make important decisions themselves in areas where they may have little experience or exposure (i.e. in the public sphere) and must manage the farm under increasingly difficult conditions with fewer labour resources than before (Gurung, 1994). Female-headed households are known to be the poorest group in every country as was documented in a study of 74 developing countries (Bajracharya, 1994).

3.4. Environmental Degradation/Reduced Access to Common Property Resources

Common property resources, which are of particular importance to women as sources of water, fodder and fuelwood, are becoming degraded, privatized and made inaccessible through protection schemes of

government forestry programmes. Women's traditional rights to community lands have been lost as such lands have become privatized and land titles given to men.

Protection schemes or acts of forest officials under the guise of forest protection have bypassed local management systems that prevented their over-exploitation and may have allowed women a voice in their management (Venkateswaran, 1992). Even community managed schemes, such as those being widely promoted in India and Nepal, have not increased the accessibility of women to forest products. Because women are rarely truly represented on forest management committees, their rights to the benefits of forest protection and needs for forest products are usually overlooked by village men (Sarin, 1994). Simply closing off nearby forest lands, without allowing for management on a sustained harvest basis, has created additional hardships for women who are forced to walk the extra distance to more remote forests.

As distances to agricultural and forest lands increase and the daily business of searching for and carrying fuelwood, animal fodder and water becomes more difficult, women's workloads are significantly increased, leaving families no choice but to detain their children from attending school to assist with the chores. Most often, it is the female children who are held back, thereby missing out on an education and perpetuating the cycle of inequity.

3.5. Dairy Development

As farmers in the hills face deteriorating soil conditions, fragmented landholdings and a heavy reliance on chemical fertilizers no longer subsidized by the governments, many are increasingly turning to livestock raising as their primary source of income. In communities in Lalitpur District of Nepal, farmers are rapidly purchasing buffaloes whose milk can be sold for quick profits through the guaranteed markets established by the Dairy Cooperative. Since 1980, buffalo raising, encouraged by loans given by the Small Farmers Development Project, has resulted in significant cash generation plus increased crop yields due to manure inputs. However, there has been a high cost to women of the communities who are the main caretakers of the animals, and therefore, a negative impact on the gender roles and relations within households that cross class and ethnic lines. Besides the extra effort necessary for fodder collection, women and young girls must cook feed, clean stalls, milk and bathe the animals, consuming an average of three extra hours of work per day. These responsibilities have brought about restricted mobility, little or no leisure time, increased drop-out rates from school for girls and earlier marriages in households with too few daughters. While acknowledging the economic benefits gained by households as a whole, these women state that they have seen little or no personal gains, although their workloads have increased tremendously as families strive to keep six buffaloes (one buffalo consumes two loads weighing 160 lbs. of fodder per day). A frequent comment by the women was "I received two saris a year prior to raising buffaloes, and I receive two now."

Men's involvement has been peripheral, except in the buffalo purchasing and carrying and selling of milk. Gambling and alcoholism have become community concerns. However, now that the financial stakes are high, some men, particularly younger ones, are slowly becoming involved in fodder collection (Bhatt, 1994).

3.6. Reduced Energy Availability

It is clear that the impact of decreasing availability of biomass from the forests is borne disproportionately by women who are responsible for its collection and use. The drudgery and increased workload of fuelwood and fodder collection are only one aspect of the impact; another very important one is that the health and nutrition of the family, and particularly the females, are affected. Reduced energy supplies have been shown to affect

the number of meals cooked per day and even changes in diet from traditional grains to cereal staples which require less cooking but have a lower nutritional value (Venkateswaran, 1992).

In societies where women are the last to eat from the pot, reduced caloric intakes by the household members who carry the largest part of the workload could result in long term health deficiencies which endanger the welfare of the entire family. The frequency of pregnancies and length of lactation cycles also affect women's health status.

3.7. Irrigation

Irrigation schemes have brought previously marginal lands into crop cultivation, affecting sources of fodder and fuelwood for women of landless or small landholding households. These lands were also relied on for grazing by livestock. Irrigation can affect family nutrition as subsistence crops are substituted by cash crops, and the derived income is not necessarily invested in better food (Venkateswaran, 1992).

3.8. Cooperative Arrangements/Organisations

In the wake of these changes in hill and mountain communities, local people have not been able to organize themselves to adequately manage their own resources and to make their voices heard in order to orient development initiatives to their own advantage. Their resiliency to outside forces has broken down as old traditions, local institutions and culture are challenged by the new religion of materialism and consumerism (Mehta, 1990). Traditional forms of organization are breaking down in the face of new forms promoted by development organizations, banks and governments. Women's roles in informal institutions controlling water and forest resources, for example, may be undermined by new forms of more formalized and centralized organizations where representatives of government agencies may attend meetings and insist on a hierarchial structure which effectively renders women's participation infeasible (Gurung, 1994).

Shared labour arrangements have traditionally been an important coping strategy for hill farmers, particularly women. Labour-intensive tasks that must be completed in a timely manner are undertaken by groups of women taking turns on each others' fields. However, this form of reciprocal exchange is no longer as common in India where farmers want to maximize time on their own cash crop land. A shortage of time has placed those with insufficient labour resources in the difficult position of not being able to reciprocate if they request assistance from their neighbours. The erosion of this type of social network has resulted in a loss of an important forum for women to share knowledge and concerns and provide a support system (Mehta, 1990).

4. ACCESS TO AND CONTROL OVER RESOURCES

Despite the predominant roles that women play in managing the agricultural, forest and water resources required by rural households throughout the hills and mountains, they have been almost completely marginalised from extension, training and access to productive resources related to their responsibilities.

4.1. Land

By far, the most important resource is land. Under most traditional patterns of property ownership and inheritance, women exercise limited or no control in their own right. Most farm women throughout the world do not own the land they till. A study done in Nepal, India and Thailand showed that less than 10% of female farmers now own land (Jacobson, 1992). Without ownership of land to offer as collateral, farmers cannot access credit, improved inputs, market incentives, etc which are necessary to increase production, diversify

crops, and participate in cash crop operations. Land reforms and the breakup of communal lands have invariably rewarded land titles to men, thus robbing women of the customary rights they had to manage common lands.

4.2. Markets

Although there is some variation, women's access to markets outside of those in the village itself (such as haat bazaars) is limited. Many women complain that they never see the money that is earned from the fruits of their labour as the market transactions are conducted by household males, such as in the case of the men who carry milk to the depot. A set of unspoken rules also bars women who do go into markets from sitting at teashops or lingering after their work is completed thus denying them access to information about the outside world (Mehta, 1990).

4.3. Extension and Training

Women are seldom the targets of agricultural training and extension services. In Nepal, a mere 5.1% of all trainees in eastern Nepal were female (Bajracharya, 1994). The inherent assumption in not targeting women as trainees is that the new information would filter down to them from training provided to men of the households. In fact, this rarely happens (Venkateswaran, 1992), so those to whom the information would be most relevant are left unaware of its existence. Most rural women are reluctant to interact with male extension workers due to socio-cultural constraints and low levels of confidence. Male workers usually choose to interact with the males out of habit and sense of ease.

Even where government directives have attempted to establish female leader farmers in India, achievements have been poor. This is partially due to socio-cultural factors that make it hard to formally recognize women leader farmers in households that have men farming as well. More importantly, however, is the extremely low percentage of female extension workers. Nepal has a total of 45 female Junior Technicians/Junior Technical Assistants working for the Department of Agriculture (Bajracharya, 1994); across India, although varying according to state, the overall figure is .025% of the extension staff are women. This is partially due to the low numbers of females who enter the agricultural schools and universities. Many of those women who are hired as extension workers do not focus on female farmers (Venkateswaran, 1992).

There are even fewer females working in the very male-dominated field of forestry. In India, there are almost no female range officers, block officers or forest guards in the territorial divisions of forest departments. A few women have entered into the Forest Service but at officer levels where they do not interact with village women (Sarin, 1992 b). The enrollment of women in Nepal's Institute of Forestry has been raised to 15%, but even many of those few graduates are unable to find employment that allows them to work with village women; some are unemployed, while others are kept in headquarter offices by their bosses. Female foresters are not always accepted by their male colleagues and face the difficulties of opposition from their families for joining a field-based profession.

Extension services for women must take into account the various limitations of women and adjust their training services accordingly by scheduling sessions and meetings in places near their homes and fields at times suitable to them. The illiteracy of most women requires that all new information be demonstrated and reinforced through diagrams and other forms of communication without the use of the written word. Government extension schemes are usually without the flexibility and resources to adjust to the special needs of women.

4.4. Technical Inputs

Most technological improvements, whether they be "advanced" or "appropriate", are introduced almost exclusively to men. Men are the recipients of training and access to machines, tractors, harvesters, improved ploughs and irrigation systems in spite of the fact that women are the major food producers. In water supply, men are trained to construct and use pumps, pipes and faucets in spite of the fact that women have traditionally been in charge of supplying water needs. Small technologies could do much to decrease women's workloads, but most planners tend to overlook these possibilities because they do not consider these tasks to be work and undervalue the contributions women make to the household, community and country (Karl, 1991).

5. CONCLUSION

Given the high inputs of time, knowledge and labour, it is difficult to understand how women can be considered "invisible" actors in agriculture and natural resource management in the hills and mountains of the Himalayan region (one study in Nepal in 1984 showed that Agricultural Development Officers were of the opinion that women make a limited contribution to agriculture). It seems that in the last two decades planners have recently "discovered" women and now speak of them as some "vast, untapped resource" to be integrated into, or maximized for rural development. In fact, women are already managing, or "holding up the sky" for the subsistence-based and cash crop-oriented farming systems of the region. Rather, it is the biases and attitudes of development planners which have caused the distortion of the data which then makes women's work and value obscured. Women are invisible only to those who have been trained not to see.

As the access of women to resources continues to dwindle, their responsibilities and the demands on their time and energy will increase while their status and decision-making roles decline. What choice do they have in this scenario but to rely more and more on the labour of their children over whom they have some degree of control? The increasing tendency to keep female children out of school assures the continuation of the poverty cycle for another generation. The only viable strategy at the household level is to produce more children as a source of status and security.

Rapid population growth within subsistence economies compounds environmental degradation and poverty, leading to the unsustainable escalation of soil fertility losses, deforestation, water shortages, etc. The state of health of women and girls most affected by the decline worsens. What is called the "population trap" is population growth triggered by misguided government policies which have contributed to environmental neglect or abuse. However, rather than confront the gender bias that has led to population growth, planners focus on women's reproductive capacity to the exclusion of their roles as producers. They encourage women to control their family size as the best way to solve economic and social problems, pouring more money into family planning schemes than those to improve their health and productivity. But without dramatic changes in the theory and practice of "development", these programmes cannot reduce poverty or remedy the growing conflicts between human populations and the environment (Jacobson, 1992).

The slogan of "sustainable development" has become commonplace since the advent of Our Common Future and the Rio Earth summit. But given the failure of conventional development strategies to address poverty, equity and the environment, it is imperative to ask "development for whom? With resources from whom?" Improving the status of women (and therefore the prospects for humanity) requires a drastic reorientation that increases women's control over resources, improves their productivity and increases their social and economic choices.

Women of hill and mountain areas are themselves asking for literacy classes and information on technologies and practices that can reduce their workloads, improve productivity of subsistence crops and bring them cash income. Women themselves must identify their critical economic, social, cultural and psychological needs, but for this they must have opportunities to organize and attend meetings, increase awareness, achieve literacy and gain financial security. In most cases, these opportunities will not become available until workloads are diminished and women are exposed to new knowledge from the outside which points to possibilities for change. Experience in the region has indicated that once women are organized and empowered to take collective actions, they can articulate their common problems and themselves determine and voice their demands so that modernization and development will be adapted to meet their needs for production and not women be adapted for the purposes of modernization as is happening today. Only then will truly sustainable development be a possibility for humankind.

6. RECOMMENDATIONS

- Develop gender sensitive data bases on women's knowledge and experiences of management and conservation of natural resources, the impact of environmental degradation and impact of commercialisation on women, and analyze linkages between gender relations, environment and development.
- Undertake programmes to reduce the workload of women and promote provision of environmentally sound technologies designed and developed in consultation with rural women.
- Facilitate access to all forms of resources: credit, property, training and information.
- Establish and promote women's groups for collective action.

7. REFERENCES

- Anand, A. 1991. Rethinking Women and Development. In: Women in Development: A Resource Guide for Organization and Action, ISIS Women's Information and Communication Service. London: Intermediate Technology Publications.
- Bajracharya, B. 1994. Gender Issues in Nepali Agriculture: A Review. Winrock Research Report Series, No. 25. Kathmandu: HMG Ministry of Agriculture/Winrock International.
- Bhatt, N., Thomas-Slayter, B., Shrestha, L. and I. Koirala. 1994. Managing Resources in a Nepalese Village: Changing Dynamics of Gender, Caste and Ethnicity. ECOGEN and the Institute for Integrated Development Studies. Kathmandu: UDS.
- Braidotti, R., E. Charkiewicz, S. Hausler, and S. Wieringa. 1994. Women, the Environment and Sustainable Development: Towards a Theoretical Synthesis. London: Zed Books in association with INSTRAW.
- Gurung, J. D. 1994. Organising Mountain Women. Paper presented at Regional Conference on Sustainable Development of Fragile Mountain Areas of Asia, ICIMOD, December 1994.
- Gurung, S. 1988. Beyond the Myth of Eco-Crisis in Nepal: Local Response to Pressure on Land in the Middle Hills. PhD Dissertation, University of Hawaii.

- Jacobson, J. 1992. Gender Bias: Roadblock to Sustainable Development. WorldWatch Paper 110. Washington, DC: Worldwatch Institute.
- Karl, M. 1991. Women and Rural Development and Appropriate Technology in Women in Development: A Resource Guide for Organization and Action, ISIS Women's International Information and Communication Service. London: Intermediate Technology Publications.
- Kumar, S. and D. Hotchkiss. 1988. Consequences of Deforestation for Women's Time Allocation, Agricultural Production and Nutrition in Hill Areas of Nepal. Research Report No. 69, International Food Policy Research Institute, Washington. 1988
- Mehta, M. 1990. Cash Crops and the Changing Context of Women's Work and Status: A Case Study from Tehri Garhwal, India. Mountain Population and Employment Discussion Paper Series No.2, ICIMOD. Kathmandu: ICIMOD.
- Paolisso, M. and S. C. Regmi. 1992. Gender and the Commercialization of Subsistence Agriculture in Nepal. Kathmandu: New Era.
- Pradhan, B. and K. Rankin. 1990. Conceptual Perspectives on Women's Role in Mountain Resource Management. In: Perspectives on the Role of Women in Mountain Development :Two Papers, MPE Series No. 1. Kathmandu: ICIMOD.
- Sarin, M. 1994. Leaving the Women in the Woods. Down to Earth, Sept. 30, 1994.
- Sarin, M. 1992. Only Males Need Apply. Down to Earth, Nov. 15, 1992.
- Sarin, M. 1992. Rural Women's Organizations in Natural Resource Management in Veer, C. and J. Chamberlain, eds, Local Organizations in Community Forestry Extension in Asia. Bangkok: FAO, 1992.
- Venkateswaran, S. 1992. Living on the Edge: Women, Environment and Development. New Delhi: Friedrich Ebert Stiftung, 1992.