



The Role of Women in Co-Management at Lawachara National Park

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Abstract

Collaborative management (co-management) is gaining recognition worldwide as a viable framework for participatory conservation planning that adheres to the needs and norms of local stakeholders. In Bangladesh, the government has embraced co-management through the Nishorgo Support Project, a partnership between the Forest Department and USAID. The co-management institutional structure includes a Co-management Council and a Co-management Committee, as well as more grassroots-level bodies, such as patrol groups and forest user groups. There are both men's and women's forest user groups comprised of members from numerous households within a single village or community. While women's forest user groups are a step in the right direction, they have not proven sufficient to gain the awareness and support of women on a broad scale. This paper draws on research conducted among three women's forest user groups surrounding Lawachara National Park. It reveals the low level and superficial nature of their awareness about, and involvement in, various co-management activities and decision-making forums; from training in alternative income-generating activities, to participation and holding of official positions in their forest user groups or the Co-management Committee. Findings suggest that increased involvement of women in a broad range of co-management activities is not only beneficial for their own socioeconomic well-being, but also imperative for sustaining the livelihoods of their communities, and for preserving the forests and biodiversity on which these communities depend.

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Introduction

Environmentalists and national conservation authorities worldwide have begun to emphasize the importance of local participation in decision-making for the management of protected areas (PAs) (Agrawal and Gibson 1999). Svarstad *et al.* (2006) argue that the involvement of local actors brings in local knowledge, which leads to better decision-making, planning and management for sustainable resource use. Brasell-Jones (1998) demonstrated that the involvement of women in natural resources management is crucial if there is to be balanced decision making. Women and men have different needs and priorities, as well as different perspectives and specialized skills. Therefore, adequate representation of the views of both men and women is crucial to realizing management decisions that incorporate the full range of local experiences and livelihood requirements. Moreover, the question of women's rights is viewed as a question of human rights, as they represent half of humanity. When the role of women is incorrectly assumed or overlooked, the achievement of development objectives can be adversely affected. Therefore, to ensure effective, inclusive policy development, women's needs and interests must be identified and addressed as a part of everyday planning practice (Little 1994). Furthermore, involvement of women in co-management, through skill-based and need-based development training, can help to alleviate forest dependence. Co-management efforts will succeed in this regard only when all local stakeholders perceive the value of conserving PAs.

Bangladesh has experienced significant loss of its natural resources over the last few decades. This can be attributed to the fact that the Forest Department (FD) – the only agency with the legal authority to manage forest resources – has failed to enlist the cooperation of local residents. As a result, there is a perceived need to develop a model for the involvement of local people in the management of PAs. To this end, five pilot sites were selected in 2004, under the Nishorgo Support Project (NSP), a collaborative co-management project implemented by the United States Agency for International Development (USAID) and the Government of Bangladesh (GOB).

Since NSP has been implementing this co-management approach for a few years now, it is an appropriate time to evaluate the experience and impacts of NSP activities with respect to women's participation. This paper assesses the extent and



quality of women's involvement in forest management activities and decision-making in Lawachara National Park (LNP). I based my research on the premise that local women should have an understanding of both the current co-management approach and the potential future impacts of the project on their livelihoods. I seek to influence policy-makers and site managers in order to increase the involvement of women in NSP activities, and thereby enhance conservation efforts and the quality of livelihoods for all people in LNP.

Background

I conducted my research at LNP, located within the West Bhanugach Reserve Forest in Kamalgonj Upazila, Moulavibazar District. LNP was created in 1996 according to the Wildlife (Preservation) (Amendment) Act of 1974. The park is now developing from a plantation forest to an ecological structure resembling a natural forest rich in floral and faunal diversity. It covers an area of 1,250 hectares, and there is a plan to extend this area to include 281 additional hectares of reserve forest. The topography is undulating, with slopes and hillocks (*tila*) ranging from 10m to 50m in elevation. LNP lies between the Dholai River on the east, the Manu River on the north, and the road from Moulavibazar to Srimongal on the west. A number of sandy-bedded streams and creeks (*nallahs*) pass through the park, so aquatic habitats associated with forest cover, riparian vegetation and animal species are an important part of the park's overall ecological composition. The park also forms the catchment area of a number of small streams. Most of the northeastern boundary of the park and the proposed extension, are bordered by FD lands under Kalachara Beat (NSP 2006).

The park is also surrounded by a number of villages, towns, and cultivated fields, as well as four tea estates situated along the western border. LNP provides a number of important ecosystem services to both its non-human inhabitants and the surrounding human population, and performs a critical role in the conservation of biodiversity. A number of communities, including several ethnic minority groups, reside within and around the park and directly depend on it for ecological services and livelihood maintenance. There are approximately 18 villages in all, of which two, Lawachara and Magurchara, are located inside the park. The villagers of both

Lawachara (23 households) and Magurchara (40 households) are members of the Khasia ethnic group and grow betel leaf vines in forested areas earmarked for them by the FD. In exchange, they supply labor for forest protection and planting activities. They meet their subsistence consumption needs for fuelwood and derive timber for construction from these forests. There is also a Tripura ethnic minority settlement with 75 households located at the southwestern boundary of the park. The rest of the villages are located at the northeastern boundary and are inhabited by migrants from Comilla, Noakhali and the neighboring Indian states of Tripura and Assam. In the 18 villages, there are 2,255 households, including 138 tribal households (NSP 2004).

According to NSP site reports (NSP 2004), about 65% of the local people are poor or very poor – and earn their livelihoods as day laborers or fuelwood collectors. Of the remainder, 5% are rich and 30% are middle class. In contrast, among the tribal people, roughly 97% are poor or very poor, with the highest concentrations of poor found in Lawachara Punji (98%), Magurchara Punji (96%) and Dolubari (95%), followed by Baghmara (58%) (NSP 2004). Fifteen percent of the local population is unemployed. The primary occupations of the Khasia tribal people are betel leaf cultivation and various types of wage labor. People from the Tripura community rely mainly on pineapple and lemon cultivation, as well as wage labor. The major occupations of Bengalis include agriculture (65-70%), fuelwood collection (30%), wage labor (10-15%), and small business (3-5%) (NSP 2004). There are also many non-governmental organizations (NGOs) operating and providing microcredit in the area, including Bangladesh Rural Advancement Committee (BRAC), Association for Social Advancement (ASA), Health, Education and Economic Development (HEED) Bangladesh, Grameen Bank, and Bangladesh Rural Development Board (BRDB). NSP works in the area through a local NGO named Rangpur Dinajpur Rural Service (RDRS). Many government departments and services also operate in the area, such as the Thana Health Complex, the Thana Agriculture Office, the Thana Livestock Hospital, the Thana Fisheries Office, the Thana Social Welfare Office, Janata Bank, Sonali Bank, Agricultural Bank, and Agrani Bank.

Resource managers in the FD now consider the support, cooperation, and participation of the local population to be imperative for the protection and conservation of forests and biodiversity. NSP is trying to establish a partnership between people



from the local communities and the FD through collaborative management (co-management), in order to share responsibility and decision-making related to management of forests and bio-diversity conservation. Co-management also requires community empowerment. NSP is trying to make people understand the short-term and long-term environmental impacts of overexploiting forest resources by undertaking various awareness-building and social mobilization interventions.

Through its partner NGO, RDRS, NSP has formed a total of 53 forest user groups (FUGs) in 16 of the villages surrounding LNP. Among these groups, there are 21 male FUGs (where all members are male) and 32 female FUGs (where all members are female). The main objectives of these FUGs are to reduce forest dependence and to improve the financial situation among poor people living within 5 km of the forest. This is accomplished by providing training in various alternative income-generating activities (AIGAs), and through educational, awareness-raising programs addressing forest protection, future benefits from forests, health, education, and other topics of interest to members. FUG members are selected according to the following criteria: Men and women are both eligible, as long as they are between 18 and 50 years old, somewhat dependent on the forest, financially insolvent, and own less than 30 decimals of land, including their homesteads. FUG members should also have basic literacy skills, but not beyond the secondary school level. These criteria are set because NSP aims to work with the poor and disadvantaged, who do not have the skills and resources to gain good external employment on their own. They must also be permanent residents of their villages, and no more than one member, male or female, is permitted from each household.

According to Merchant (1995) and Steel (1996), women are more concerned about environmental issues and more likely to join environmental groups compared with men. Therefore, local women should be included in the current co-management approach and efforts should be made to teach them about potential impacts of the project on their livelihoods and decision-making.

Methods

The general goal of this study was to investigate the role of women in co-management under NSP in several villages near LNP. My specific objectives include:

1. Evaluating participation of women in NSP co-management activities and identifying indicators of women's empowerment through co-management;
2. Understanding the impact of co-management on women's income and livelihoods;
3. Assessing women's awareness of co-management activities that support forest resources and bio-diversity.

I chose two neighboring villages (Longurpar and Ballarpar) near LNP as the research sites for my study, with the basic aim of understanding the extent of women's involvement in NSP co-management activities. My main criteria for selecting these villages were: (1) co-management by NSP was active, (2) they were easily accessible, and (3) female FUGs were present. With a checklist and a draft questionnaire, I completed a pilot survey in LNP and the two selected villages in February 2007. At this time, I informed villagers about the purpose of the survey. Then, based on the information from the pilot study, I finalized the semi-structured questionnaire for the field survey. I collected primary information between February and June 2007. The final survey and two focus group discussions were completed with the participation of female FUG members (who were either directly or indirectly involved in co-management activities), and with a control group of women who did not belong to an FUG. A total of four focus group discussions were completed, of which two were in Ballarpar village and two were in Longurpar village. I also interviewed four people from each community with a high level of knowledge as key informants – including formal leaders, local elites, and local officials – all of whom were male. In addition, I gathered information about the historical background of the area, local communities, current forest conditions, local people's reliance on forests, and local involvement in NSP co-management activities.

The two villages selected for the study, Ballarpar and Longurpar, are located about 4 km and 3 km from LNP, respectively. The majority of people in these villages are Muslim, and they are directly dependent on the forest for their livelihoods. They



cut trees illegally – individually, in small groups, or by hiring gangs from outside. Women and children often collect smaller trees for firewood. NSP has formed two female FUGs in Ballarpar, and one in Longurpar. Both the *Ballarpar Shapla Mohila Dol* (Ballarpar Shapla Women’s Group), with 16 members, and the *Ballarpar Shefali Mohila Dol* (Ballarpar Shefali Women’s Group), with 11 members, were formed in 2005. The *Longurpar Doridro Mohila Dol* (Longurpar Poor Women’s Group), with 12 members, was also formed in 2005. The women of these groups share many of the same livelihood attributes and strategies. Every group consists of a president, a vice-president, a secretary, and a treasurer. The group members select these leaders from among themselves.

For the focus group discussions, I selected a random sample of 24 informants from the two villages. In Longurpar village, I randomly selected 12 women out of 92 households. Of these women, eight were FUG members and four were not members. In Ballarpar village, I randomly selected 12 women out of 61 households, including nine FUG members and three non-members. I conducted two focus group discussions in each village, meeting separately with the FUG members and non-members. I also collected information on a variety of demographic and socio-economic indicators: household composition, age, education, primary and secondary occupations, interactions with the forest, alternative sources of fuelwood, awareness of co-management and other NSP activities, sense of belonging to the FUG, constraints in attending meetings, roles in biodiversity and forest conservation, preferred AIGAs, NSP training experience, and expected benefits from NSP.

Results and discussion

Both villages in this study are located at about the same distance from LNP. I observed that the people of the two villages were very poor. Their livelihoods, basic socioeconomic indicators, education levels and other demographic indicators were very similar, according to the household profiles and the village profiles obtained from reports of NSP and the FD. Therefore, I considered both groups of women as one set in my analysis. This is justified because my study is focused on the needs and interests of all women living in villages around LNP, rather than on differences among them.

Women at home and at work

I identified literacy levels of the respondents from both villages. Among the 24 women I interviewed, 38% were illiterate, 54% were educated at the Grade 5 level or below, four percent were educated up to Grade 7, four percent attended school through Grade 10, and nobody had completed higher education. Most of the women (about 71%) were engaged only in household activities. Approximately 21% of the women were engaged in both household maintenance and income-generating activities (i.e., poultry rearing, vegetable cultivation, sewing), while only 8% were involved in household and co-management-related income-generating activities.

According to the villagers, agriculture was the main source of income for most households, while day labor (both agricultural and non-agricultural wage work, e.g. in brickworks or sawmills) and services were the next most important (Table 1). Secondary sources of household income include agriculture, poultry rearing and trade. I found that about a sixth of the households had only one source of income, and thus no secondary income source (Table 1).

Table 1: Primary and secondary sources of income for respondents' households

Source	Primary Income Sources		Secondary income sources	
	Number of households	Percentage of households	Number of households	Percentage of households
Subsistence agriculture	9	38%	8	33%
Wage labor	7	29%	1	4%
Agriculture and labor*	3	13%	--	--
Vegetable cultivation	--	--	1	4%
Poultry rearing	--	--	5	21%
Cattle rearing	--	--	1	4%
Service	5	21%	--	--
Business and small trade	0	0%	4	17%
Forest Resources	0	0%	--	--
No secondary income	--	--	4	17%
Totals	24	100%	24	100%

*Note: "Agriculture and labor" indicates that the household splits its time evenly between agricultural and non-agricultural work on an annual basis.

The study further revealed that only 11 women out of the 24 interviewed earned some money through wages, while more than half of the women did not earn money independently of their husbands and families. Among those women who did earn money, the majority of them earned it from poultry rearing, with vegetable cultivation and cattle rearing forming the next most important activities (Figure 1).

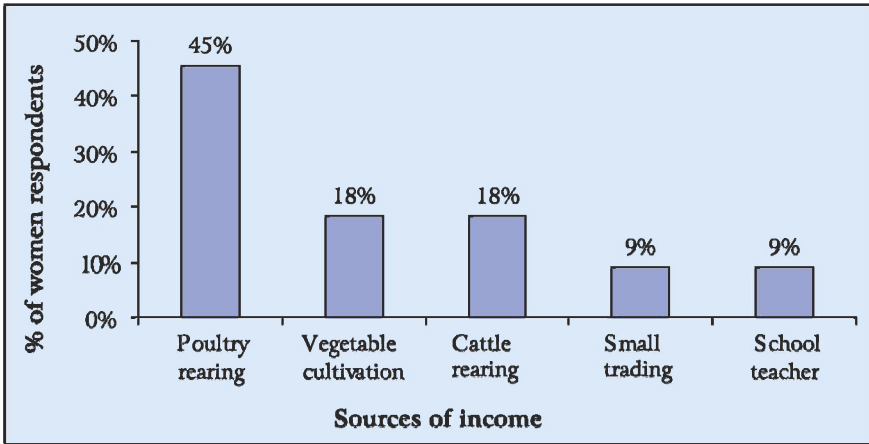


Figure 1: Main income sources for female respondents who earn wages (n=11)

Women in the forest

When I asked the women about the roles of men and women in collecting fuelwood, they responded that women and men were the primary collectors of fuelwood in an almost equal number of households (Figure 2), and that both men and women were the primary fuelwood collectors in two of the households. Only one respondent said that nobody in her family collected fuelwood from the forest. I also found that most of the households used tree leaves, paddy straw, bamboo, cow dung, paddy husk, and paddy roots as alternative sources of fuel.

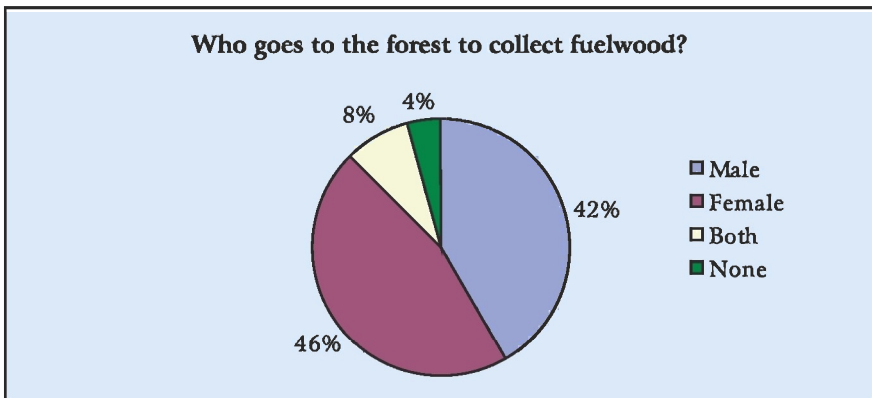


Figure 2: Primary household fuelwood collector by gender (n=24)

Women and co-management

In my sample design, I randomly selected 24 women, including both those who are members of NSP-supported female FUGs (71% or 17 women) and women who do not belong to these groups (29% or 7 women) (Table 2). None of the 24 women were members of the Co-management Council or the Co-management Committee. My results also reveal that 58% of the respondents' husbands did not belong to a FUG, while 38% of their husbands did (despite rules dictating that no more than one member from each household may join a FUG). Furthermore, four percent of the women's husbands were members of the local Co-management Committee, and none of the women or their husbands belonged to the Co-management Council. Table 2 shows the FUG membership status of the women interviewed. I also asked whether the women received encouragement from their husbands to attend co-management meetings and found that 63% of respondents' husbands did not encourage them to attend meetings, while 37% did.

Table 2: FUG membership status of women respondents

Status	Number of respondents	Percentage or respondents
President	1	4%
Secretary	4	17%
Member	12	50%
NonMember	7	29%
TOTAL	24	100%

In addition, I asked those respondents who said they do participate in the FUG meetings about how they participate (Table 3). Four of these respondents said they were passive participants who attended but remained silent; six of the women said they spoke up and gave their opinions; six claimed they took on meeting-related responsibilities (including organizing of the meeting and agenda, invitation of participants and facilitating discussions); and one reported that she raised questions in the meetings. Overall, more than half of all respondents said they were active participants in female FUG meetings and only four out of the 17 women who were FUG members admitted they were passive participants. Therefore, it appears that many women FUG members exhibit a high level of interest in their user group and actively participate. However, I also found that none of the FUG members that I interviewed had ever attended any meetings of the Co-Management Council or the



Co-Management Committee. Moreover, there is no designated post for the representation of female forest users within the Council or the Committee. Consequently, the needs and concerns of female FUG members do not reach the upper-level management institutions where important decisions are typically made.

Table 3: How women participate in forest user group meetings

Role (lowest to highest participation level)	Number of respondents	Percentage of respondents
Not a member	7	29%
Attend and remain quiet	4	17%
Give opinions	6	25%
Take on meeting responsibilities	6	25%
Raise questions	1	4%
Total	24	100%

My results suggest that almost all of the women face problems in attending FUG meetings and training programs arranged by NSP, although they reported that they are interested in joining these activities. Through interviews with respondents (women) and key informants (men), I tried to identify both women's and men's constraints in participating in such activities. I found that the main constraints faced by women were household work, childcare, duties for their husbands, and social attitudes, in that order. On the other hand, the main problems that men faced were loss in business/income, time limitations, household work, and agricultural work (Table 4).

Table 4: Constraints faced by women and men in attending NSP meetings

Constraints	Women		Men	
	Number	Percentage*	Number	Percentage*
Household work	22	92%	12	50%
Childcare	16	67%	0	0%
Duties for husband	11	46%	--	--
Loss in business and/or income	1	4%	17	71%
Time limitations	1	4%	13	54%
Agricultural work	0	0%	11	46%
Social attitudes	6	25%	0	0%
No constraints	2	8%	2	8%

*Note: Due to multiple responses, percentages do not add up to 100%.

Generally, awareness about NSP-related activities was quite low. I found that just under half of the women knew that NSP promotes forest protection; a third of the women knew that NSP organized meetings; and less than one third of the women were aware of any NSP training programs. I also found that none of the seven women who did not belong to a FUG were aware of NSP activities, and only one FUG member was aware of all of NSP activities (Table 5).

Table 5: Respondents’ awareness of major NSP-related activities

Activities named by respondents as NSP work	Number of respondents	Percentage of respondents*
Forest protection	11	46%
Organized meetings	8	33%
Organized trainings	7	29%
Tree plantings	4	17%
All of these	1	4%
Did not know (not a FUG member)	7	29%

*Note: Due to multiple responses, percentages do not add up to 100%.

NSP is undertaking various awareness-raising and social mobilization interventions by forming men’s and women’s forest users groups (FUGs) and patrolling groups to help people understand the short-term and long-term environmental impacts of poor forest management. Table 6 shows that, among respondents of this study, most women discouraged both their neighbors and their husbands from degrading the forest. About a third would encourage their neighboring villagers and women who were not members of the group to conserve the forest. In addition, one woman motivated her brothers, and another motivated her other group members, not to degrade the forest. However, despite their efforts to encourage conservation among their friends and relatives, just under half of the women admitted to degrading the forest themselves.

Table 6: Role of women in motivating others to conserve forests

Women’s motivational activities	Number of respondents	Percentage of respondents*
Motivate neighbors	21	88%
Motivate husband	19	79%
Do not use forest resources themselves	10	42%
Motivate neighboring villagers	8	33%
Motivate other women	7	29%
Motivate children	2	8%
Motivate brother	1	4%
Motivate other group members	1	4%

*Note: Due to multiple responses, percentages do not add up to 100%.



Approximately 46% of the women interviewed believe that women play a larger role than men in forest conservation, while 38% believe that men played a larger role than women, and 13% believe that men and women play equal roles. I also tried to find out why women were interested in joining FUGs. I found that nearly all of the women were interested because they thought the FUG could help them to earn and save money. However, many were also interested in preserving biodiversity (75%) and protecting the forest (38%), and some (21%) wanted to be in the group because they thought it would help them to organize a women's collective (Table 7).

Table 7: Reasons why women are interested in joining FUGs

Reasons	Number of respondents	Percentage of respondents*
Save money	21	88%
Preserve biodiversity	18	75%
Protect forest	9	38%
Organize themselves (women's collective)	5	21%
Source of alternative income	3	13%
Ensure progress of their family	3	13%
Save animals	2	8%
Social prestige	1	4%

*Note: Due to multiple responses, percentages do not add up to 100%.

I also found that a majority of respondents (54%) did not receive any training in AIGA from NSP. However, the remaining women (46%) were able to avail of different types of training. I tried to identify whether the training from NSP was able to meet their needs and interests by asking what kinds of training each respondent wanted, and what training she had actually received. I found that there was a considerable gap between their interests and the training received, especially for the three most popular AIGAs. Most of the women (92%) were interested in receiving training in poultry rearing, but only 8% of all women got such training from NSP. Similarly, 92% were interested in vegetable cultivation training, but only 25% got this training from NSP. Finally, approximately 63% of the women were interested in cattle rearing training, but only 4% received any NSP training for it. Therefore, women's needs and interests were not adequately reflected in NSP training activities (Table 8) as the amount of AIGA training provided by NSP was insufficient to meet local demands. NSP should increase the number of AIGA training sessions on

poultry rearing, vegetable cultivation, cattle rearing, sewing or tailoring work, fish cultivation, nursery raising, preparation of puffed rice, small businesses, handi-crafts, and bamboo-cane products, according to the expectation of local leaders and community members.

Table 8: Differences in training interests and training received by female FUG members

Activities	Training topics of interest		Training received from NSP		
	Number of respondent	% of all respondent	Number of respondents	% of all respondents	% of trained respondents
Poultry rearing	22	92%	2	8%	18%
Vegetable	22	92%	6	25%	55%
Cattle rearing	15	63%	1	4%	9%
Sewing /tailoring	6	25%	0	0%	0%
Fish cultivation	6	25%	0	0%	0%
Raising nursery	5	21%	2	8%	18%
Puffed rice	3	13%	0	0%	0%
Small business	3	13%	0	0%	0%
TOTALS			11	45%	100%

*Note: Due to multiple responses, percentages do not add up to 100%.

Conclusion

Without active involvement of women in co-management activities, NSP cannot achieve its goals of promoting conservation and improved livelihoods. In my assessment of women’s awareness of co-management activities supporting the conservation of forest resources and biodiversity, I found that there is a general lack of knowledge about NSP activities among the women of both study villages. On the other hand, the results also reveal that women can play a significant role in forest conservation by motivating or influencing others to reduce their use of forest resources.

Two primary aims of this study were to evaluate the participation of women in NSP co-management initiatives and to identify the indicators of women’s empowerment through co-management. My main finding was that, although a large number of women are participating in the women’s group meetings and availing of the training provided by NSP, in many cases these women did not receive training according to



their needs and priorities. This is partly because women's group members are not actively represented in the Co-management Council or Committee meetings, so these needs and interests are not reflected properly at higher levels. I also found that women face many constraints in attending group meetings and NSP training programs. The research shows that some women lack confidence in voicing their opinions because they believe their views and opinions might be ignored. All of these factors contribute to a communication gap between the members of forest user groups and the decision-making forums of the Co-Management Council and Co-Management Committee. Such a gap jeopardizes all NSP efforts to provide effective AIGA support to local stakeholders, especially women.

In terms of the impact of co-management on women's income and livelihoods, I found that most of the women living in Ballarpar and Longurpar villages are very poor and have many expectations from NSP. For instance, women expect to receive useful and need-based training. They hope that AIGAs will improve their livelihoods and reduce their dependency on the forest. According to the study, women also hope that NSP activities will help them to increase their savings and their decision-making powers within their own households. I found that the amount of AIGA training provided by NSP was insufficient to meet local demand and, for the most part, did not match local needs and priorities. This inconsistency must be addressed.

In summary, this study reveals that for NSP to be effective in reducing women's dependence on forest resources – by promoting their empowerment and enhancing their income-earning opportunities – it is crucial that women become active participants in important decisions that affect their livelihoods and well-being. In other words, women must be more involved in both the Co-Management Council and the Co-Management Committee at LNP. Unless and until this happens, the process of co-management will be constrained and unable to realize its dual aims of promoting biodiversity conservation and enhancing local livelihoods.

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