Socio-economic Empowerment of Women by Developing Market Potential of Bamboo Products in Nepal

International Network of Bamboo and Rattan
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Socio-economic Empowerment of Women by Developing Market Potential of Bamboo Products in Nepal
(Case studies from Gundu, Bhaktapur and Badikhel, Lalitpur)

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Submitted to:
INBAR
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Executive summary

Bamboos are distributed from tropical region to alpine vegetation (4000 m average sea level) in Nepal. It is traditionally been being used as building materials and other bamboo products for domestic uses throughout the nation. Bamboo-based economic activities are an intrinsic part of both the rural as well as the urban socio-economic life of Nepal. The rural economy is highly dependent on bamboo resources. Although the bamboo craft-making significantly contributes to the livelihoods of poor ethnic and occupational castes, their income from bamboo crafts is lower as compared to medium and rich wealth categories of other occupations in the society because the bamboo and rattan products processed with traditional designs and technologies are based on limited know-how and skills. In order to improve their productivity, the existing traditional and local tools/implements need to be upgraded with modern, efficient and cost effective tools/implements. Therefore, Market Development of Bamboo and Rattan Products with Potential (MDBRPP) project was implemented at Department of Forest Research and Survey, Nepal under INBAR/CFC 01 project from June 2005 to June 2011. It was funded by the Common Fund (CFC) for Commodities. INBAR was the executing agency and ITTO was the supervisory body of the project. As the role of women in bamboo conservation as well as in bamboo craft-making is important, one of the aims of the MDBRPP project was to integrate women into the dissemination of new technology through training and networking. Women participation in the MDBRPP project provided them the opportunity to know about the techniques of planting and managing bamboo resources, and to get craft-making skills from trainings, study tour and exhibition. In this context, the general objective of the study was to make an impact assessment on women’s role to the market potential development of bamboo products in Asia. The specific objectives were i) to review women’s participation and their contribution in the project sites; ii) to evaluate women’s benefits from the production line of bamboo products; iii) to assess and analyze the interactions between women and bamboo production; and iv) to provide recommendations on gender issues related to this project. The study used holistic and women empowerment approach to understand the status of women in the society and how women were benefitted by the project intervention. Group discussion, household questionnaire survey, personal interview, and field observation were done to obtain the required information. Moreover, MDBRPP project records were also obtained to know about their involvement in the project. The study found that the knowledge and skills gained from different activities have enhanced women’s capacity to manufacture bamboo products which
in turn created self-employment. Their livelihood was improved through selling different bamboo products. They also reported that their confidence to attend different forums was enhanced. However, the level of women participation in different activities is still low. The enterprises also did not have equipments and tools that are properly designed for women. Working environment was not found to be gender sensitized. Hence, women still need an enabling working environment including trainings and encouragements so as they will be able to capture higher benefits from the bamboo product value chain. Marketing infrastructure is very poor, which have created problems in selling the bamboo products made by women in a smooth way.
1. Introduction:

Bamboos are found everywhere in Nepal and being used by men and women of all social groups. These are found from tropical region (about 60 m average sea level) to alpine vegetation (4000 m average sea level) in Nepal (Stapleton 1994). Within this large physiographic range, 12 genera and more than 50 species of bamboos have been recorded so far (TISC 2004). Bamboo has traditionally been used as building materials and other bamboo products for domestic uses throughout the nation.

Bamboo-based economic activities are an intrinsic part of both the rural as well as the urban socio-economic life of Nepal. The rural economy is highly dependent on bamboo resources (Karki and Karki 1996). Varieties of bamboo products such as mats, baskets and household items are manufactured by local artisans. These locally produced bamboo handicrafts, furniture, woven-products and shoots as vegetables are readily bought and sold in the local and national market. Sell of these bamboo products is a source of income for many rural households that include socially and economically disadvantaged groups (Das 2002). There are several ethnic communities who live by their traditional skills on bamboo craft-making. Some of the tribes such as Suri, Dom, Dushad, Tharu, Magar and Pahari are occupational castes who are mostly involved in bamboo weaving and/or craft-making for producing storage bins, baskets (dalo, nanglo, chalno) and rack. Although the bamboo craft-making significantly contributes to the livelihoods of poor ethnic and occupational castes, their income from bamboo crafts is lower as compared to medium and rich wealth categories of other occupations in the society. The reasons are small landholding size, lack of adequate knowledge and skills, lack of bamboo raw materials, poor access to market and not enough financial support to run the enterprise in a sustainable way (Ghimire 2008).

Considering the abundance of human resources and the richness of traditional craftsmanship skills, bamboo and rattan sector is the one area where Nepal can gain a comparative advantage, provided the work-force (traditional and occupational people) could be trained to improve their skills and enterprises assisted in value-added and marketing for poverty reduction in Nepal. The traditional skills, handed down from generations, use hands with simple locally available knives such as khukuri, khurpa, or hasiya for cutting and splitting to design bamboo and rattan products. Bamboo and rattan products processed with traditional designs and technologies
are based on limited know-how and skills. In order to improve their productivity, the existing traditional and local tools/implements need to be upgraded with modern, efficient and cost effective tools/implements. Only 10% of traditionally processed products are competitive in the international market. Remaining 90% of the products face threats from other substitutes or international products (MDBRPP/DFRS 2011).

Market development of bamboo and rattan products with potential (MDBRPP) project was implemented at Department of Forest Research and Survey, Nepal under INBAR/CFC 01 project from June 2005 to June 2011. The project was implemented in Myanmar, Bangladesh, and Nepal with the technical support of Nanjing Forestry University, China. It was funded by the Common Fund for Commodities (CFC). International Network for Bamboo and Rattan (INBAR) was the executing agency and International Tropical Timber Organization (ITTO) was the supervisory body of the project. The project had three components. Component I dealt with creation of bamboo and rattan resources. Component II was mainly focused on improvement and development of bamboo and rattan products suited to national and international markets. Component III was concerned with the dissemination of proven technologies identified by components I & II. Since bamboo is a strategic raw material that provides multiple benefits to underprivileged rural areas and communities, especially, rural women and indigenous people, the activities of MDBRPP were interventions aimed at improving the lives of downtrodden social groups, the traditional rural artisans and the indigenous people, especially the women among them, in the hilly district of Nepal. Moreover, the aim of the project was to improve the quality, durability, market opportunities and resource base of bamboo-based commodities and their sustainable development in Nepal.

The project has provided training for artisans from different parts of Nepal. In the training, the participants learned how to manufacture different handicrafts, furniture, and utensils made from bamboo (eg: photo frame, dust bin, pin holder, bangle stand, file-box, chair and so on). Study tours were other activities that the project implemented. Study tours were organized to China and North-east India. In the study tour, participants visited different factories and companies where several kinds of bamboo products were manufactured by machine. The tours were useful to make participants aware about the value-added decorative and attractive finishing of machine-
manufactured bamboo products. There was another activity which helped people in plantation and management of bamboo resources. Moreover, a national level exhibition of bamboo and rattan products was organized to provide an opportunity for participants to display and sell their products. Bamboo artisan groups were also formed in each project implemented village development committee.

Although the role of women in bamboo conservation as well as in bamboo craft-making is important as they are available at home most of the time and are responsible for day to day activities, they are socio-economically under-privileged in Nepal. Therefore, one of the aims of the MDBRPP project was to integrate women into the dissemination of new technology through training and networking. Women were participated in all the activities of MDBRPP project. Their participation in the MDBRPP project provided them the opportunity to know about the techniques of planting and managing bamboo resources, and to get craft-making skills from trainings and exhibition. Women were also provided international study tour to expose them to the finishing quality of machine-manufactured bamboo products that are sold in international markets. It was, therefore, expected that the women should be capable of generating income from bamboo craft-making and support their livelihoods as an impact of the project.
2. Objectives:

The general objective of the study was to make an impact assessment on women’s role to the market potential development of bamboo products in Asia. The specific objectives were as follows:

Specific Objectives:

- To review women’s participation and their contribution in the project sites;
- To evaluate women’s benefits from the production line of bamboo products;
- To assess and analyze the interactions between women and bamboo production;
- To provide recommendations on gender issues related to this project.
3. Methodology

3.1 Holistic approach

Women participation and their contribution in the project was assessed applying a holistic perspective to gender relations implies looking at the totality of social organization, and economic and political life in order to understand the shaping of particular aspects of society. It was not concerned with women per se but with the social construction and structure of gender and the assignment of specific roles, responsibilities and expectations to women and men. A holistic approach to gender highlighted the family as a micro-system, recognizing the interrelation of roles between women and men.

3.2 Women empowerment approach

Women’s benefit from the production line and the interaction between women and bamboo production are more related to women empowerment. Therefore, the women empowerment approach developed by the Commission on Women and Development (2007) was used for this study. This approach attempted to predict at the outset of an intervention (MDBRPP project) precisely how it changed women’s lives, without some knowledge of ways of “being and doing” which were realizable and valued by women in that context, sometimes runs into the danger of possessing process of empowerment and thereby violating its essence which is to enhance women’s capacity of self-determination. The concept of empowerment were broken down and analyzed in terms of assets, knowledge, capacity and will. Breaking down the elements has proven to be useful when considering and assessing the results and impact of development programs.

3.3 Study Areas

The study areas are located at the areas where MDBRPP project was implemented. Two villages, Gundu and Badikhel Village Development Committees (VDCs) of Bhaktapur and Lalitpur Districts respectively were thus selected as the study areas. The areas are located 15-20 Km away from, Kathmandu Metropolitan City, a biggest domestic market for the bamboo products.
3.5 Types of Data and Methods of Data Collection

Qualitative as well as quantitative data were collected through household survey using semi-structured questionnaire and conducting interview with women entrepreneurs. Participatory survey and income and expenditure survey were carried out to get information about the socio-economic status of women. In addition, a workshop and focused group discussions were organized to discuss holistic perspective of gender relations in the society. Office records of the MDBRPP project were also obtained to get information about women’s participation on different MDBRPP project activities.
4. Results and Discussion

4.1 Holistic approach: socio-economic condition of women in the society

First, the social status of women in general was assessed through group discussion. The social condition was linked to the MDBRPP activities and bamboos to assess the contribution of MDBRPP skills and bamboo for women empowerment.

4.1.1 Time spent by men and women for different activities

The study found that mostly women were involved in household work such as cooking, cleaning, taking care of children, rearing animals and working on the farm. On the other hand, men were found to go for attending meetings, selling products, participating trainings and earning money for the family (Figure 1). This situation indicated that very few women go outside home to attend meetings and to take part in trainings in the studied village development committees. Women were also found to have less access to resources such as money and less power to household decision making.

![Figure 2. Time spent by men and women for different activities in the society in general](image)

4.1.2 MDBRPP activities

The MDBRPP project conducted several activities during the project period (2005-2011) across the nation. Bamboo identification, propagation, cultivation and management training; Bamboo
product design; market promotion of the bamboo products through exhibition; and international exposure to show mechanized and advanced way of bamboo product design and development were the key activities (Table 1).

<table>
<thead>
<tr>
<th>SN</th>
<th>Activity</th>
<th>Date</th>
<th>Place</th>
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<tbody>
<tr>
<td>1</td>
<td>Bamboo propagation, cultivation, management, utilization workshop</td>
<td>April 2009</td>
<td>Badikhel, Lalitpur</td>
</tr>
<tr>
<td>2</td>
<td>Bamboo management training</td>
<td>June 2011</td>
<td>Kathmandu</td>
</tr>
<tr>
<td>3</td>
<td>Bamboo management and product design</td>
<td>June 2009</td>
<td>Charikot, Dolakha</td>
</tr>
<tr>
<td>4</td>
<td>National design and trade fair of bamboo and rattan products</td>
<td>November 2010</td>
<td>Kathmandu</td>
</tr>
<tr>
<td>5</td>
<td>Skill development of artisans in making improved bamboo products</td>
<td>June 2011</td>
<td>Damauli, Tanahu</td>
</tr>
<tr>
<td>6</td>
<td>Bamboo weaving and furniture making training</td>
<td>August 2010</td>
<td>Hetauda, Makawanpur</td>
</tr>
<tr>
<td>7</td>
<td>Bamboo weaving and handicraft making training</td>
<td>January 2011</td>
<td>Janakpur, Dhanusha</td>
</tr>
<tr>
<td>8</td>
<td>Bamboo propagation, cultivation, management, utilization workshop</td>
<td>June 2009</td>
<td>Tarahara, Sunsari</td>
</tr>
<tr>
<td>9</td>
<td>Study tour to Tripura, India</td>
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<tr>
<td>10</td>
<td>Study tour to Nanjing, China</td>
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**Table 1 Different activities carried out by MDBRPP project**

4.1.3 Women participation in MDBRPP activities

MDBRPP project involved the people from different parts of the country in those activities (Table 1). Out of the 191 participants involved in different activities, about 25% (50) of the participants were women (Figure 2) and the remaining 75% were men. The name list of women who were participated in MDBRPP activities is presented in Annex 3. As most of the women have to take care of the family and be involved in household work, they might not have been able to attend the MDBRPP activities.
Out of the total women participants, more women were involved in bamboo management and product development trainings but they had less involvement in exposure and marketing. Conversely the men were involved more in exposure and marketing activities and relatively less involved in management and product development trainings (Figure 3).

Figure 3. Sex-wise classification of participants involved in MDRPP activities

Figure 4. Gender-wise participation on different activities
4.1.4 Women involvement in bamboo management, product design and marketing

Women were mostly found to be involved in bamboo management such as bamboo weeding and cleaning. In the bamboo workshop, they were mostly asked to cut bamboo into desired length, smoothening the bamboo splits and painting the final products. However, women were found to be involved in other activities in a small proportion. On the other hand, men were found to be mostly involved in physically hard (bamboo cutting, transportation and splitting), technically sophisticated design (product design, drilling and nailing and machine operating), and major marketing decisions such as transportation to market, dealing with customers, collecting money and financial decisions (Figure 4). The figure indicates that women are less involved than men in bamboo sector and they are weaker on major decision making than men.

![Figure 5 Women involvement in bamboo activities](image)

4.1.5 Financial situation of women and the bamboo contribution

The study (in both the VDCs) found that the average income of a family was 20,000 NRs (equivalent to 205 US$) per month. The sixty percent of the total income (equivalent to 123
US$) was found to be earned by men and the remaining 40% (82 US$) was found to be earned by women (Figure 5).

![Figure 6. Average family income per month (NRs.)](image)

Out of the average total income earned by women (8000 NRs/month; equivalent to 82 US$), bamboo product contributed only about the 30% (equivalent to 25 US$) (Figure 6). Even though, the share of bamboo product contribution on women’s income was low, it was found to be very important for women because they were mostly using their spare time for making bamboo products. The bamboo product development activities helped them to increase their level of income even if women were found to have low income per month.

![Figure 7. Contribution of bamboo on income generation of women](image)
The income generated by women (25 US$/month) is similar to the findings of Shakya Bajracharya et al. (2007). They found the cash income generated from the sales of woven bamboo products and crafts were an important livelihood of the Pahari community and their average income per month was 23 US$ (NRs 2250).

4.2 Case studies

Two case studies were conducted in these socio-economic conditions. The respondents of the case study were selected based on their active participation in the MDRRPP activities. One case study was taken from Badikhel VDC, Lalitpur and the other was taken from Gundu VDC, Bhaktapur Districts of Nepal, respectively.

A. Case study from Badikhel:

Badikhel VDC lies in the northern part of Lalitpur district between 27°36’04.88”N latitude and 85°20’48.96”E longitude, occupying approximately 5.8 square kilometers with an elevation of 1290-1710m above sea level. It is bordered with Godavari in the east and the north, Jharuwarasi and Chapagaon in the west and Lele and Chapagaon in the south (Figure 1). According to the CBS (2011), the total population of Badikhel VDC was 3576 with the population density of 617 per square kilometer. It has a predominant of an ethnic group, the Paharis occupying approximately 55% of the total population. Besides, Brahmins and Chettries cover about 40% while the rest 10% of the population comprises of the minor caste groups like Newar, Gurung, Rai, Magar, Kami, Damai and others (CBS 2011). Bamboos are one of the very important sources of livelihood for the Paharis. The traditional craftsmen had used all the existing bamboo species in one or the other ways. Various bamboo artifacts like Nanglo (flat and rounded plate), Chalno (Sieve), Doko (Basket for carrying loads), Dalo (Basket for storage purpose), racks, dustbins, and few other products like photo frames, flower vase, hand bags, decorative items. Among them Mrs. Bipana Pahari is one of the women from Pahari community who actively involved in MDRRPP activities and make bamboo crafts in the VDC. Her involvement in MDRRPP activities and current activities are summarized as follows:

Mrs. Bipana Pahari:

Mrs. Bipana Pahari is a bamboo artisan who lives in Badikhel, Lalitpur District, Nepal. She was born 30 years ago in a bamboo craft-maker family. She got married with a person who
also belongs to the bamboo craft-maker family. Now, there are four members in her family. Among them, two are male and the remaining two are female. She is a literate (basic level education) person and she does job in a local level company. Besides that she produces bamboo crafts at home and sells them in a local market. Her husband also works for a local level company. They jointly contribute for their family expenses. Bipana alone earns about 40% of her total family income (10,000 NPR/month, equivalent to 102 US$), out of which, 10% of her income (about 10 US$/month) is generated by selling the bamboo products. She crafts bamboo products (such as winnow, basket, etc.) that are consumed in the local market. She inherited the bamboo craft-making skills from her parents. Her family mostly uses the bamboo resources that come from their farm, local forests and buying from the other farmers in the neighborhood. She has felt that there are certain discriminations towards women by the society regarding the bamboo work. One hand, it is biologically difficult to cut and take out bamboo from the clump for a woman, and there is a social instinct that women should not cut and plant bamboos on the other hand. Moreover, certain tasks (such as making winnow frame and splitting bamboos) require physical power and thus such tasks are difficult for a woman to perform.

MDBRPP project provided her the opportunities to take part on trainings (Bamboo Handicrafts making and Weaving Training at damauli, Tanahu District and Five days Bamboo Plantation and Management Training) a study tour (within the country). She visited Gundu, Bhaktapur District and Dhaneshwar, Kavrepalanchok District in Nepal during her study tour. She found the study tour very useful because she had an opportunity to interact with other people who have long experience on fine and advanced level bamboo craft-making (e.g. Photo frame). She learnt bamboo planting techniques, thinning of bamboo culms in clump, and the ways of providing fertilizer to the bamboo clump in the bamboo planting and management training. She found it very useful for maintaining bamboo resource base for a longer term. She has also learned the possibility of introducing other bamboo species in her area that are useful for bamboo craft-making. In addition, she is also a member of ‘Bandevi Bamboo Grower and Artisan Group’ formed in October 2010 with the help of MDBRPP project. She has found the group useful for sharing knowledge, designing new products and haunting the market.
Despite of her long experience on bamboo craft-making, she still wants to upgrade her skills so that she can craft varieties of bamboo products. She is quite unhappy on her bamboo craft-making skills because she only can produce traditional and local products. The way of producing those things is also very labor intensive and the market price of these items in the local market is too little. Therefore, she is looking for opportunities of introducing advanced machines to process and design sophisticated bamboo items, establishing co-operative approach to access market, and knowing the bamboo product value chain for marketing the products and optimizing the benefits.

**B. Case study from Gundu:**

Gundu VDC lies in the southern part of Bhaktapur district between 27°38’ N latitude and 85°25’ E longitude, occupying approximately 9 square kilometers at an altitude of 1523 metres above sea level. It is bordered with Sipadol VDC in the east, Katunje VDC in the north, Dadhikot VDC in the west and Kabhre district in the south (Figure 1). According to the CBS (2011), the total population of Badikhel VDC was 5689 with the population density of 633 per square kilometer. The VDC has diverse ethnic group, but Newars comprise the larger proportion of the VDC population. Chhetri, Brahmin, Tamang, Magar are the other major ethnic groups (CBS 2011). About 70% of the population is literate however female literacy rate in the VDC is only about 60%. Agriculture is the predominant occupation because about 65% of the economically active population is depends on it. As this VDC has larger proportion of forest compared to other VDCs in Bhaktapur, some of the people are involved in small-scale forest based industries. People get training and government support to run this small business. For example: there are some enterprises that produce and sell various bamboo artifacts like Nanglo (flat and rounded plate), Chalno (Sieve), Doko (Basket for carrying loads), Dalo (Basket for storage purpose), racks, dustbins, and few other products like photo frames, flower vase, hand bags, decorative items in the local market. Among them Mrs. Anita Basnet is one of the women who actively involved in MDBRPP activities and running bamboo craft-making workshop in the VDC. Her involvement in MDBRPP activities and current activities are summarized as follows:
**Mrs. Anita Basnet**

Mrs. Anita Basnet is a bamboo artisan who lives in Gundu, Bhaktapur District, Nepal. She is a literate person. She is thirty five years old. She lives in a family of five members. Among them, two are female and three are male. She has begun to work on bamboo crafting once she got bamboo products development training in 2008 from the “Department of Cottage and Small-scale Industries, Nepal”. Later on, she has got opportunity to take part in a study tour to Nanjing University, China; study tour inside Nepal and a bamboo management training organized by the MDBRPP project. She had also participated in a bamboo production exhibition in Kathmandu. Because of her bamboo craft-making skills and the national and international exposure bamboo product design, develop and marketing encouraged her to be constantly involved in bamboo craft-making. Besides this, she works in her farm to produce cereal and vegetable crops. Now, she earns 40% of her family income (NRs. 10500/month, equivalent to 108 US$) out of which she makes NRs 2100(equivalent to 21US$) / month from the bamboo products.

She is also a social leader. She has been being involved in Balkumari Women’s Forest User Group. She gives training to other people in the society on bamboo craft-making. She is also involved in Gundu Women Bamboo Grower and Artisan Group, Gundu, Bhaktapur. The group is operating a bamboo craft-making workshop. They have a bamboo treatment and storage place inside the workshop. They design and produce Sofa, Arm-chair, Chair Photo frame, Table, Clothe-stand, Wall-clock, and Rack etc. in the workshop. Mostly men cut bamboos in a required size and operate machine whereas women make bamboo surface smooth, join the pieces and paint the products. It indicates that there is an understanding the physically powerful jobs are done by men and less physical but artistic works are done by women. Even though they are relatively skillful and design attractive products, they are still facing marketing problems because the local consumers still prefer timber products than bamboo.

Anita found her involvement in MDBRPP project very encouraging and fruitful. It empowered her to overcome all the prevailing barriers that keep a woman within the four walls of a house. She said that she has gained know-how on bambo resource management, improved bamboo craft-making skills, and developed leadership in the society. She,
therefore, says that women can work equally as men if they get chance. Now Anita is thinking of specializing her working skill on a single product and making it internationally competitive. She also needs very efficient high-tech bamboo splitting machine along with other simple machines. She believes that bamboo is the most important sector that can improve the economic condition of rural poor women if they get skills and ensured market to sell their products.

4.3 Empowerment status
The status of women empowerment was assessed through the women empowerment approach proposed by Commission on Women and Development (CWD: 2007). The approach mainly focuses on the change made by the intervention on the access and ownership to assets, knowledge base, capacity, and will to do work. In addition, the economic empowerment approach put forwarded by the Royal Tropical Institute (RTI: 2006) was also used to assess the women empowerment status. This approach uses a matrix (Annex 1&2) for classifying the integration of poor rural producers into not-timber forest product value chains. This matrix is an important form of analysis because it not only concentrates on raising income of the poor but also focuses on increasing ownership and empowerment. In the matrix, there are four types of involvement:

1. actors – women who simply gather and handle bamboo resources, with no involvement in processing the product or in managing the value chain
2. integrators – women who do some processing of their products, but still have no say in management of the chain and rely on intermediaries to reach markets
3. partners – women who do no processing of their products, but do have a say in management of the chain
4. co-owners – women who both add value and have a say in management – thus increasing both returns and power

The case studies (Case study 1&2) and the bamboo production value chain matrices (Annex 1&2) showed that the status of women somehow suppressed by the men. However, the status of women in Gundu was better than the status of women in Badikhel (Table 2). According to CWD (2007) approach, women in Badikhel village were found to have good knowledge, moderate level of access to assets and will to do work but they lack of enough capacity to do work themselves. On the other hand, although the women in Gundu village were found to have strong will power, full access to asset and enough knowledge to work; they were still lacking on their capacity to do
work. As bamboo work needs physical power and there were very few modern machines being used for bamboo work, women might have felt that they were not capable enough to do all the bamboo work. According to RTI (2006) criteria, women in Badikhel village were more actor and integrator than the partner and co-owner. However, women condition in Gundu village was far better on all those four criteria. They were found to be partner and co-owner as well. The women in Gundu village were found to have enough confidence to go away and seek for the market.

<table>
<thead>
<tr>
<th>Table 2 Status of women empowerment in the study sites</th>
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<tbody>
<tr>
<td>Criteria</td>
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<td>CWD 2007</td>
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<tr>
<td>Asset</td>
</tr>
<tr>
<td>Knowledge</td>
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<tr>
<td>Capacity</td>
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<td>Will</td>
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<td>RTI 2006</td>
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<tr>
<td>Actor</td>
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<tr>
<td>Integrator</td>
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<tr>
<td>Partner</td>
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<tr>
<td>Co-owner</td>
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</table>

The values in the table are on the rating scale from 0-10 and 0 is the lowest and 10 is the highest. The women chosen from case study 1 & 2 were asked to rate on above mentioned criteria once the criteria were explained to them.

5. Findings, conclusion and recommendations

5.1 Findings

Knowledge and skills gained from different activities have enhanced their capacity to manufacture bamboo products which in turn created self-employment. Their livelihood was improved through selling different bamboo products. They also reported that their confidence to attend different forums was improved.

1. Women found bamboo (activities) attractive because of the low technical and financial entry requirements, freely available resource base and instant cash in times of need.

2. The formation and strengthening their organization enabled them to access market.
3. Conservation and management of bamboos offered wages to women.

4. Women were mostly involved as actor and integrator than the partner and co-owner indicating that status of women empowerment is still weak.

5. Women collect bamboo shoots while men collect higher value bamboo culms. Similarly, at the processing level, women tend to engage in low technology activities. Such as: bamboo chopstick cutting, processing bamboo shoots and rolling incense sticks, which they can do at home. Men tend to engage in capital intensive tasks such as factory level manufacture of furniture for national and international markets.

6. Women were failing to benefit equally with men because staff lacked gender training and sensitivity.

5.2 Conclusion

Bamboo sector development has potentiality to provide income generation and skill development opportunities to the rural poor. Increase in the use of local bamboo resources encourages sustainable bamboo management for long-term benefits. All the family members of artisan family work on craft-making e.g: men prepare the bamboo slips and the women weave mats. The bamboo management and product development activities are gender sensitive and has potentiality to empower women through the capacity building of women. Especially for women, bamboo cultivation and craft-making are the two areas where there is tremendous potential for employment generation. Training women in the rural communities on bamboo handcraft making skills produce extra-income and decreases poverty because women mostly use their extra time for bamboo handcraft making. Although bamboo sector has huge potentiality of enhancing women capacity in the society, bamboo craft micro-entrepreneurs did not have proper equipments and tools which are properly designed for women.

5.3 Recommendations

Bamboo is one of the most preferred NTFP species for income generation of local poor in Nepal. However, the growers, traders and craft-makers are still unaware about the various aspects of
marketing in Nepal. At first, it is very necessary to explore national and international market of bamboo products. Then, craft-makers need to be trained and equipped for designing bamboo products that meet the national and international market requirements. In this process, women need to be involved equally with men in each step of bamboo craft-making and marketing value chain. The enterprises also need to be equipped with the equipments and tools that are properly designed for women. In a team work environment, all the members of the team need to be sensitized about the gender. Women still need an enabling working environment so as they will be able to capture higher benefits from the value chain.

References


Annex 1: Gender value chain of bamboo art craft production

Name: Bipana Pahari, Badikhel, Lalitpur

<table>
<thead>
<tr>
<th>Preproduction phase</th>
<th>Male</th>
<th>Female</th>
<th>Production phase</th>
<th>Male</th>
<th>Female</th>
<th>Marketing phase</th>
<th>Male</th>
<th>Female</th>
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<tbody>
<tr>
<td>1. Bamboo cutting</td>
<td>✓</td>
<td></td>
<td>1. Cutting of bamboo into desired length and size</td>
<td>✓</td>
<td>✓</td>
<td>1. Display</td>
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<td>5. Treatment with borax or acid if necessary</td>
<td>✓</td>
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<td>5. Fitting the joints of the bamboo poles</td>
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<tr>
<td>7. Other bamboo mgmt (weeding, cleaning, use of fertilizer)</td>
<td>✓</td>
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<td>7. Polish (sanding and smoothing)</td>
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<td>✓</td>
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</tbody>
</table>

Others:
1. Who takes credit for products?          | Who uses income? | Who makes the other major decisions?
   b. Female                                 | b. Female        | b. Female
   ✓ c. Joint                                | ✓ c. Joint       | c. Joint
### Annex 2: Gender value chain of bamboo art craft production

**Name:** Anita Basnet, Gundu, Bhaktapur

<table>
<thead>
<tr>
<th>Preproduction phase</th>
<th>Male</th>
<th>Female</th>
<th>Production phase</th>
<th>Male</th>
<th>Female</th>
<th>Marketing phase</th>
<th>Male</th>
<th>Female</th>
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<td>1. Bamboo cutting</td>
<td>√</td>
<td>√</td>
<td>1. Cutting of bamboo into desired length and size</td>
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<td></td>
<td></td>
<td></td>
<td>4. Air drying/Seasoning</td>
<td>√</td>
<td>√</td>
<td>4. Exhibition</td>
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<td>√</td>
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<tr>
<td>5. Treatment with borax or acid if necessary</td>
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<td>√</td>
<td>5. Fitting the joints of the bamboo poles</td>
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<td>5. Getting into touch with buyers</td>
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</tr>
<tr>
<td>7. Other bamboo mgmt (weeding, cleaning, use of fertilizer)</td>
<td>√</td>
<td>√</td>
<td>7. Polish (sanding and smoothing)</td>
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</tbody>
</table>

**Others:**

1. Who takes credit for products?  
   a. Male  
   b. Female  
   √c. Joint  

Who uses income?  
   a. Male  
   b. Female  
   √c. Joint  

Who makes the other major decisions?  
   a. Male  
   b. Female  
   √c. Joint
### Annex 3: Women participants involved in MDRPP activities

<table>
<thead>
<tr>
<th>Name</th>
<th>Training</th>
<th>Date</th>
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<tbody>
<tr>
<td>Sita Nagarkoti</td>
<td>Bamboo propagation, cultivation, management, utilization workshop, Badikhel</td>
<td>April 2009</td>
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<tr>
<td>Sarita Kunawar</td>
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<td></td>
</tr>
<tr>
<td>Bhawani Bhujel</td>
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<td></td>
</tr>
<tr>
<td>Kamala Pahari</td>
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<td></td>
</tr>
<tr>
<td>Lalu Maya Pahari</td>
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</tr>
<tr>
<td>Bipana Pahari</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sita Nagarkoti</td>
<td>Bamboo management training, Kathmandu</td>
<td>June 2011</td>
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<tr>
<td>Anita Basnet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bipana Pahari</td>
<td></td>
<td></td>
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<tr>
<td>Juna Karki</td>
<td>Bamboo management and product design training, Charikot, Dolakha</td>
<td>June 2009</td>
</tr>
<tr>
<td>Mallika Bhandari</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Kumari</td>
<td></td>
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<tr>
<td>Bishwokarma</td>
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<td></td>
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<tr>
<td>Ram Kumari Gurung</td>
<td>Skill development of artisans in making improved bamboo products training, Damauli, Tanahu</td>
<td>June 2011</td>
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<tr>
<td>Nirmala Bhattarai</td>
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<tr>
<td>Til Kumari Thapa</td>
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</tr>
<tr>
<td>Bipana Pahari</td>
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</tr>
<tr>
<td>Basanti Thapa</td>
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<td>Sani Maya Thapa</td>
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<tr>
<td>Deu Maya Ranabhat</td>
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<tr>
<td>Rita Lamicchhane</td>
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<td></td>
</tr>
<tr>
<td>Sita Nagarkoti</td>
<td>Bamboo weaving and furniture making training, Hetauda, Makawanpur</td>
<td>August 2010</td>
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<td>Anita Basnet</td>
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<tr>
<td>Sharmila Lama</td>
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<tr>
<td>Laxmi Adhikari</td>
<td></td>
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<tr>
<td>Indra Kumari Rai</td>
<td>Bamboo weaving and handicraft making training, Janakpur, Dhanusha</td>
<td>January 2011</td>
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<tr>
<td>Rojina Thapa Magar</td>
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<tr>
<td>Sandhiya Marik</td>
<td>Janaki Marik</td>
<td>Bamboo propagation, cultivation, management, utilisation workshop, Tarahara, Sunsari</td>
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<tr>
<td>Durga Chapagain</td>
<td>Kamala Chaudhary</td>
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<td>Bhuli Devi Mukhiya</td>
<td>Devaki Limbu</td>
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<td>Janaki Limbu</td>
<td>Somphi Mukhiya</td>
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<td>Binita Dewan</td>
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<td>Anita Basnet</td>
<td>Prerana Rana</td>
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<tr>
<td>Laxmi Rai</td>
<td>Kathmandu</td>
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<td>Rohini Rana</td>
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<td>Mallika Shrestha</td>
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<tr>
<td>Sita Nagarkoti</td>
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<tr>
<td>Anita Basnet</td>
<td>Study tour, Nanjing University, China</td>
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</tbody>
</table>
Annex 4: Questionnaire

1. Introduction
   a. Name:
   b. Address:
   c. Age:
   d. Occupation:
   e. Education:

2. Family description
   a. Family size:
   i. Male:  
   ii) Female:
   b. Monthly Income:
   c. Income sources:
   d. Occupation of the family members

<table>
<thead>
<tr>
<th>SN</th>
<th>Relation</th>
<th>Sex</th>
<th>Occupation</th>
<th>Income</th>
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</tbody>
</table>

3. Which MDBRPP conducted activities have you been involved?
   a. Study tour
   b. Bamboo planting and management training
   c. Bamboo product development training
   d. Bamboo product marketing training
   e. Bamboo products exhibition

4. Were those activities beneficial to you? If yes, in what sense?
   a. Learning skills
   b. To interact with other people
   c. Developing network
   d. Build social confidence
   e. Explore economic opportunities

5. Did you find those activities useful for empowering women? If yes, how?
   a. Building social confidence
   b. Making clear about the superstitions
   c. Increasing the level of income
   d. Upgrading skills
   e. Bamboo workers network/organization
   f. Exposure to international market
   g. Exposure to mechanized equipments
   h. Access to local market
   i. Providing value chain know-how

6. Have you ever faced any problem on bamboo planting, management, product development and marketing as a woman? If yes, what are they?
   a. .................................................................................. 
   b. ..................................................................................
   c. ..................................................................................
7. Have you found any MDBRPP conducted activities useful to solve the problems (question 6)? If yes, how?

8. Is it possible to improve the socio-economic condition of women from the bamboo sector? If yes, how?
Annex 5: Some Photographs collected during fieldwork

Bamboo workshop at Gundu Bamboo store for off-season

Bamboo products manufactured in the workshop

Machine used for bamboo cutting

Group discussion at Gundu, Bhaktapur

Drinking tea after group discussion