

**A Gender Assessment Study
on Bamboo-based Rural Development and Utilization Activities
– a Case Study in Yunnan, China**

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Abstract

As the main output of a gender-specific field case study conducted in Yunan, the southwest of China, this paper provides a preliminary review and analysis of bamboo as both a forest resource and a livelihood means for rural people from the perspective of gender. The major findings and results of a qualitative analysis/assessment on the gender situation on bamboo-based rural development and utilization activities in terms of gender division of labor, resource access and control as well as women's participation in the decision-making process in both the household and community are presented; then the existing bamboo-based forestry development policies/program activities and implementing agencies are analyzed and gender-related problems and constraints from policy aspects identified; finally based on survey findings and analytic results recommendations for establishing gender-sensitive bamboo-based field development activities and for advocating and implementing gender mainstreaming at INBAR are made.

Key words: bamboo resource, development and utilization, gender analysis, gender awareness, women

1. Introduction

Gender analysis - the starting point of bamboo-based socio-economic research and development project

Bamboo, as one important non-timber forest resource, with its wide varieties of uses and high economic values, plays very important roles in the socio-economic lives of million of people in bamboo-growing rural areas in China and other developing countries. Wherever there is bamboo, there are people who are, in whole or in part, dependent on it for their livelihood. It is a subsistence crop, and also a very important source of income to people with very limited opportunities to earn cash income. (Belcher 1996). Its significant value for socio-economic development of rural areas also lies in that it is the raw material basis for a wide range and large number of bamboo-based rural industries, creating many employment and income generation opportunities for rural farmers, especially for women and other disadvantaged poor groups.

In the past decades, research on bamboo, being a kind of scientifically natural forest resource, has been focusing on technical aspects such as propagation, reproduction, preservation, management and utilization etc. Funded by INBAR, a series of small projects and case studies were carried out to collect information on economic, policy, institutional and social aspects of bamboo sectors within

the specific production-to-consumption systems. These production-to-consumption case studies are designed to enhance the supply, processing, production and consumption lines to ensure the related productivity and employment. However, under the wide context that sustainable development has become a crucial concern, the development of bamboo sector can not be accomplished on a sustainable basis unless the needs, concerns and priorities of the main players and participants involved in various bamboo-based development activities are given due attention. Today, when we say sustainable development, it doesn't mean so much as pure economic development as all-out socio-economic development of the human welfare, i.e. people-oriented development. One of its basic principles and objectives is to achieve and promote equal rights and opportunities among men and women, especially for women through women's participation and empowerment. It was the concern for women, an disadvantaged group compared with men, resulted in the emergence and rising of the gender theory since 1950's, which quickly becomes a hot topic in international development field until now.

In the process of development and utilization of bamboo resources in rural industries, women are major participants. In Dehong Dai Nationality Autonomous Region in Yunan, it is estimated that there are 140,000 women among the total population involved in various kinds of bamboo-related activities. Women are highly employed in small and medium-sized rural factories and play a dominant role in labor work. A study on the Bamboo Shoot industry in Thailand indicates that the majority workforce of the bamboo shoot sector is women. (Thammincha 1996) and a recent unpublished study on the Potential of Bamboo Production for Poverty Reduction also shows that by 1998, among 18,914 workers engaged in bamboo sector in Anji County in the Southeast of China, over 60% are women, representing 50% of total industrial employment in the country (Kessler, Cleuren and Spijkerman 2004)

However, to a great extent, it is an undeniable fact that women's participation in bamboo-related works is more as labors, doing more of the repeated, tedious and low-technology-content works compared to the men. Not much attention is yet paid to their values, needs (from both the physical and strategic perspective), skills-improvement, training for new technology and involvement in decision-making process (scheduling and distributing incomes etc.). As a result, their economic independence, political status as well as social influence in family, community and the society as a whole are not much improved though the general economic conditions at household level has been improved significantly due to more cash income obtained through bamboo.

Given the unique and indispensable roles played by women in the development and utilization process of bamboo, their needs, strengths and potentials in bamboo development activities should be considered and addressed. To start the exploration of the people-oriented socio-economic research on bamboo, gender is an indispensable consideration. To design and carry out any bamboo-based development projects and activities, gender analysis should serve as the starting point.

In this context, jointly funded by INBAR and Winrock International, a US-based international NGO, a small trial project designed to make a basic gender situation assessment and analysis on bamboo-based rural industries was initiated. The main objective of the project is to find out the

gender blinds spots, i.e. gender-related problems and constraints in existing forestry policy including external interventions with components or highlights on bamboo, then make feasible recommendations for sustainable gender-sensitive solutions for the further bamboo-based development programs. The initiation of the Gender Assessment study (GAS) is the reflection of INBAR and other NGO's awareness and acknowledgement of the critical roles played by women in bamboo-based development activities and the need to integrate gender concern into the related projects and interventions. One additional point of the project is to introduce the gender perspective into the bamboo and rattan cultivation and development projects in Yunnan, to make them more suited to the needs of women's development and further promoting equality between men and women in rural areas. Another point is, through practices of this micro project, to improve sensitivity and awareness to gender concept among the group members, promoting the gender awareness to become mainstream consciousness in the implementation organizations.

Bamboo in Yunan

Yunnan, a province in the Southwest of China, is very abundant in bamboo resources, with an area estimated to 330,000 hectares, of which 90% are natural bamboo forests. The area of its natural bamboo forests (bamboo plantations are not included) ranks in the first place in China (Hui, 2002). There are 28 genus, 250 species of bamboo, accounting for 1/5 of the world bamboo species and half of the Chinese ones (Hui, 2002). Bamboo species growing in different bamboo climate zones, tropical species, warm temperate species to high-altitude cold temperate species can all be found in Yunnan. "In terms of the bamboo species diversity, there are no any other countries or regions in the world that can parallel with Yunnan" (Xue, 1995). The major tropical sympodial bamboo species in Yunnan are mainly distributed in the south-west, south and south-east part and few other temperate species are distributed in the middle, north and northeast part.

Moreover, bamboo has close associations with the daily lives and production activities of local minority people and has been an integral part of their religion, custom, culture and arts. Yunnan is one of the most ethnically diverse provinces in China and in Asia as well. There are 25 ethnic minority groups with a population around 15 million, constituting about 33% of the gross population of the province (Statistics of the 5th Demographic Census at provincial level in 2000 provided by the Economics Division of the Ethnic and Minority Commission of Yunnan). Among them, the Yi Nationality, Dai Nationality and Jingpo Nationality constitute the largest ethnic population and are mainly dwelling in bamboo-growing areas in the south and southwestern part of Yunnan. In 2002, of the 7.64 million people below poverty line (865 Yuan) and the 2.86 million in extreme poverty (below 625 yuan), the minority group account for the major part (Statistics provided by the Economics Division of the Ethnic and Minority Commission of Yunnan). People of different nationalities have been co-existing in this beautiful and fertile land for generations and bamboo has been widely used in their clothing, food, shelter and transportation activities since ancient times. The origin of the close relationship between bamboo and the local ethnic people can be traced by abundant records of stories, sayings and proverbs on bamboo in various kinds of literature, folklore, myths, rites and rituals of minorities groups of Yi, Dai and Jingpo, in which bamboo is featured and described as

a sacred totem worshipped by people from generation to generation. “Till today, people of Yi Nationality all believe that it (bamboo) is the incarnation of the soul of their ancestor and a revered divinity” (He & Liao, 1994). Bamboo has become a culture deeply integrated into local folk arts, customs and religions of Yunnan.

Although Yunnan has very rich bamboo resources, due to bottleneck constraints like transportation, technology and management, the development is still staying at a primitive level. With the social economic developments and implementation of “Western China Development Initiative”, development of bamboo and rattan resources is playing a more and more important roles in easing the forests depletion, improving the ecological environment, alleviating poverty and promoting all-out socio-economic development of the mountainous areas of Yunnan in a sustainable way.

Given the above facts, Yunnan was selected to be the target area of conducting a gender assessment study (GAS) on the bamboo processing and production activities in Yunan. People, both men and women engaged in the bamboo activities and their social relationships are the focus of the study. The findings and analytical results of the GAS generated from the research will 1) have representative implications on understanding the overall gender situation in bamboo-based rural industries in China; 2) serve as a comparative example for the following gender case assessment studies in other areas of China and other countries. 3) to serve as a frame of reference for designing and formulation gender-sensitive bamboo-based development projects in this area in the future.

Survey/assessment Sites within Yunnan

In spite of the rich natural bamboo resources, the industrial development and utilization of bamboo in Yunnan are not sufficiently explored and lagging far behind those in southeastern coastal areas in China. The local bamboo-based rural industries are characterized by household-based rural industry. There are only few private-owned factories scattered all around with primitive technology and machines, small and medium in size and labor intensive in nature. The advantage in resources in Yunnan has not been turned into economic edges.

After careful analysis of the distribution of bamboo resources and bamboo-based industries, four sites in different parts of Yunnan were selected The basic information about the selected survey sites are summarized in the below table 1.

Table 1 Basic information about the selected survey sites

Surveyed village	County /district	Location	Main bamboo products	Feature of the bamboo industry
Laochang Village	Xinping County, Yu Xi Region	In the middle of Yunnan	Bamboo shoots and bamboo chopsticks	Household-based artisan workshop, few SMEs
San Jia Village	Longpeng Town, Shiping County,	In the southeast of Yunnan	Bamboo weaving products	Household-based artisan workshop,

	Honghe Hani Minority Autonomous Region			(bamboo is the sole livelihood means)
	Long Chuan County, Dehong Dai Minority Autonomous Region	In the southwest of Yunnan	Ma Bamboo cultivation and propagation and its fermented shoots processing and production	Household-based artisan workshop, few SMEs
	Along Ruili -Luxi city, Dehong Dai Minority Autonomous Region	In the southwest of Yunnan	Traditional utilization by Dai and Jinpo ethnic nationalities.	Mainly for self-use

Survey/Assessment methods

This project is the first trail effort made by INBAR to view and analyze bamboo as both a forest resource and a livelihood means for rural people from the perspective of gender. Since there are almost no existing statistics/data about bamboo and gender ever available so far, everything has to be done from Zero. Two field researches were conducted in the above selected villages within Yunnan in March and July 2003 separately.

The methodologies used in the field encompass observation and interview techniques generally applied in the field survey of the anthropologic research, incorporated with participatory approach, i.e. the use of a range of Participatory Rural Appraisal (PRA tools) and Gender Analysis Frameworks. The information and data are collected in a participatory way by holding semi-structured interviews with a mixed wide range of people in different social categories and at various levels: individual members of the household, separate or mixed groups of women and men villagers as well as forestry technical staff, government officials and policy makers working in the forestry sector. Interviews at household level form the core part of the entire field work.

2. Gender Situation Analysis on Bamboo-based Rural Development and Utilization Activities

2.1 Gender division of labor on bamboo-based rural utilization activities

Gender roles and division of labor at household level

All gender and development work is based on gender analysis. In order to gain an initial understanding about the gender situation on bamboo-based activities in rural areas in Yunnan, we should, first of all, look into the general characteristics of gender relations in this sector, in which the gender roles and division of labor at household level are particularly accounted and highlighted.

The roles and division of labor on the same bamboo activities between man and women vary from one ethnic culture to another.

According to the gender theory, in all societies, men and women are assigned tasks, activities and responsibilities according to their sex. The gender division of labor between men and women varies from one society and culture to another, and the gender relations vary according to time, place and between different groups of people (March, Smyth & Mukhopadhyay 1999). Our study results in Yunnan confirm the above statement.

As mentioned in the previous part, Yunnan is one of the most ethnically diverse provinces in China. There are 25 ethnic minority groups with a population around 15 million, constituting about 33% of the gross population of the province. Most of the ethnic people inhabit along the bordered mountainous areas, which are the main distribution areas of natural bamboo forests. Our surveyed areas are mainly populated by 3 minorities groups: Yi, Dai and Jinpo Nationality. Through the survey, we found that the gender roles and division of labor of different ethnic groups are different in carrying out the same bamboo activities. Taking the bamboo shoots processing and utilization activities as an example, in different ethnic areas, men and women are responsible for different things. In Han or Dai Nationality area, both men and women are involved in bamboo shooting harvesting and sales activities. It is women who harvest bamboo shoots while man carry them back home in a backpack or basket. However, in the area where the main population is Jinpo Nationality, it is usually women who do both the bamboo shoots harvesting and carrying job, because it is the ethnic tradition that men never lift things on their back or shoulder. The male members only do the carrying work under exceptional cases, for example, the women in the family are ill and there are no other laborers in the family who can do it. For sales activities, it is women in Jinpo Nationality who are responsible for selling bamboo products in the market because it is set in their culture that man can't access to market and trading activities; while in Yi Nationality-populated areas, men are mainly responsible for marketing and selling bamboo things because by tradition women are not encouraged to go outside to engage in activities dealing with people. In Dai Nationality-populated areas, in general, the trading and marketing activities are more or less equally shared by men and women and there are no obvious restrictions or taboos with regard to the division of labor on gender in this regard.

The basic gender roles and division of labor on bamboo utilization activities are modeled on the traditional gender value, i.e. men dominate the external activities outside home while women take care of household work.

All interviewed farmers in the surveyed villages, men or women, think this gender division model is an ideal one between men and women. They argued that the harmonious division of labor is the basis for a harmonious family. A farmer said "if it (division of labor) is not in concord, the family can't be managed well". Therefore, the work of concerned bamboo activities at household level are generally divided by gender in this way: It is men who do those "big and important" things outside home, such as attend various bamboo training workshops,

participate in and negotiate about the community political and management issues and in most cases go out to seek for clients or market for the bamboo products; while women spend most of their times staying at home, doing both reproductive work (the care and maintenance work of the household, such as cooking, washing, cleaning, nursing, bearing and looking after children and other no-income activities) and bamboo-related productive work that can generate cash income but are mainly done at home, such as cutting bamboo chopsticks, processing bamboo shoots or making bamboo weaving handicrafts etc.

The stereotyped traditional ideology on gender that men dominate the external important activities and women take care of household work inside home is the root of the formation of the gender division of labor on bamboo-based activities at household level in rural areas in Yunnan.

Analysis on gender division of labor on main bamboo-based processing and production activities

Bamboo chopsticks, bamboo shoots and bamboo weaving handicrafts are 3 main types of bamboo products closely connected with the local people's livelihood and household economic status. We compiled and analyzed the interview records with regard to the gender division labor in the processing and production process of the 3 main bamboo products at household level.

The following are the flow charts of the production chain of the above-mentioned 3 bamboo products at household level in terms of gender division of labor,

Charter 1 : Gender division of labor in the production process of bamboo chopsticks

Seedling preparation (Digging or purchasing) ♂ ----> carrying the seedling to the field ♂ ♀
 ----> *ponding ♂ ♀ ----> seedling plantation ♂ ----> watering ♂ ----> fertilizing ♀ ----> chopping bamboo culms ♂ ----> carrying bamboo culms back home ♂ ♀ ----> sawing ♀ ♂ ----> striping ♀ ♂*
 ----> *cutting chopsticks ♀ ♂ ----> drying ♀ ----> bounding ♀ ----> bargaining prices ♂ ----> selling ♀ ♂ ----> money keeping ♀ ♂ ----> purchasing living necessities ♀*

Charter 2: Gender division of labor in the production process of bamboo shoots

Harvesting ♂ ♀ ----> carrying (transporting) ♂ ♀ ----> peeling off ♀ ----> boiling ♀ ----> film-removing ♀ ----> stringing ♀ ----> water-condensing ♂ ♀ ----> drying ♂ ♀ ----> selling ♂ ♀

Charter 3: Gender division of labor in the production process of bamboo baskets

Seedling selection ♂ ----> ponding ♂ ♀ ----> seedling plantation ♂ ----> weeding ♂ ♀ ----> chopping bamboo culms ♂ ----> trimming ♂ ----> sawing ♂ ----> striping ♀ ----> cutting basket line

*and sheath ♂---→making bottom ♀---→weaving ♀----→selling ♀---→money keeping ♂ ♀---→
purchasing daily necessities ♂ ♀*

1) From the above production lines viewed from gender, we can find that the physical labor strength plays an important role in setting the division of labor of household bamboo-based activities. It is usually men who are mainly responsible for those physical work which need more human physical strength, such as seedling preparation and plantation (bamboo seedling is usually stuck with the mud and therefore very heavy), and chopping bamboo culms; and the women usually play a supportive role in assisting their husband in those laborious physical work such as ponding (digging the pond for planting bamboo seedling) and transporting work and they are mainly engaged in those work which need less physical strength such as splitting and cutting chopsticks, peeling, boiling and drying bamboo shoots and weaving bamboo baskets etc.

2) In addition, the locus of the activity is in some degree shaping the traditional gender division of labor on bamboo activities at household level: men usually do more of those off-home work such as digging and planting bamboo seedling, watering, weeding, trimming and chopping bamboo in bamboo-growing hills and uplands usually far away from home, while women's work centers on those which are mainly done at home or in the neighborhood, such as splitting and cutting chopsticks, peeling, boiling and drying bamboo shoots and weaving bamboo baskets etc. Although they also go out to assist their husband in doing some fieldwork, they seldom go to a place to work alone far away from home without the companion of the male members. Taking the sales activities of bamboo chopsticks and weaving baskets as an example, women can sell the bamboo chopsticks directly to the door-to-door middleman; but if the chopsticks have to be sold in a market which have certain distance from home, it is usually men or men with women together who go to the market.

3) Skill and technique-content is a very important criterion deciding who does what in bamboo-related activities. Generally speaking, bamboo processing and production activities at household level are very simple manual work without much complicated technologies involved, but it does involve some basic skill/techniques. Those key activities that require more skills and techniques in the production process are usually in the command of men, while women always do those repeating and trivial work without much skills or techniques involved.

4) The parts in direct connection with the generation of money are usually controlled by men. The more money can be made from the bamboo products, the more men are involved in related activities. Men's attitudes are different towards selling different bamboo products. Women can bargain with and sell the bamboo chopsticks or bamboo weaving baskets to the door-to-door middle salesman directly without consultation with men, partly because men look down upon bargaining prices and sales activities of these bamboo products sold at very cheap prices. One man said "one pair of bamboo baskets can sell at most 0.1 yuan, thus ten pairs can earn no more than 1 yuan. It is such a small amount of money that it is pointless for me to get involved in the sales activities." However, when dealing with selling bamboo shoots, especially dried bamboo strings, men's attitudes are entirely different. Men are actively involved and almost play a

dominant role in the price setting, bargaining with middlemen as well as direct selling activities in the market. Why is there such a difference? Because dried bamboo string is costly in comparison with other bamboo products. It is usually sold once a year and the market price can be as high as 20 yuan per kg. For those families having more bamboo forests, the money generated from bamboo shoots is quite something.

5) Generally perceived as scrupulous and patient in characteristics (based on the interview with farmers), women usually engaged in or are assigned to do more time-consuming, trivial and repeating activities in the processing process of a bamboo product; while men usually are engaged in one-off activities because of lack of patience. In the process of making bamboo weaving baskets, men are responsible for those parts which consume less time such as chopping, sawing and shaping bamboo mouth and bottom and long time-consuming weaving process are mainly conducted by women. The observation results of the bamboo chopsticks processing process is more or less the same: the most time-consuming and detailed part-splitting and cutting the chopsticks are mainly done by women by sitting at home all day long.

The gender roles and division of labor on bamboo-related activities are undergoing changes over time under the impact of the market economy.

It is apparent that in the surveyed areas in Yunnan, the traditional ethnic culture incorporated with a series of visible and invisible established criteria are of important factors affecting the gender roles and division of labor on bamboo activities at household level. However, with the traditional culture and value undergoing great changes due to the powerful influence of modern civilization and penetration of market economy, the current situation of the gender roles and division of labor is not static and invariable, but in a changing and dynamic process. The established gender division of labor has to change to adapt to the new economic surroundings.

The San Jia village in Shiping County is one of the survey sites in the southeast of Yunnan. Here bamboo has been almost the only livelihood means and the sole source of cash income for the villagers in the last half a century. Due to lack of the arable land, since 1950's the local farmers have been relying on selling bamboo culms and bamboo waving products such as bamboo baskets etc. to earn cash income for purchasing daily necessities to maintain livelihood. Almost every family in this village is engaged in making bamboo weaving products. This situation has been changing since 1990's when more income-generating opportunities occurred due to the establishment and further development of market economy in rural areas. Many villagers, mainly male, started to engage in transportation work or go out of villages to find temporary waged jobs.

The gender roles and division of labor at household level present different features according to the extent to which the family depend on bamboo for livelihood and/or cash income.

Table 2.1 Gender Grading Table indicating the importance level of different source of cash income in a household

	Bamboo weaving products	Raw bamboo culms	Waged work	Transportation (driving tractor)
Farmer A	2 ♀		1 ♂	
Farmer B	(Only means) ♂ ♀			
Farmer C	1 ♂ ♀			2 ♂
Farmer D	2 ♀	3 ♂	2 ♂	1 ♂
Farmer E	(only means) ♂ ♀			

Note 1: ♀ represents Female, ♂ represents male

Note 2: The importance of different source of cash income is classified by 3 levels: 1 means the most important, 2 means the second important and 3 means the least important

Note 3: The source is from the **female** villagers group interview records in San Jia village,

From the table 2.1, we can see that in the families (farmer B & E) dependent on bamboo as the sole source of cash income, both men and women are sharing bamboo weaving activities; However, in families having other sources of cash income than bamboo (farmer C & D), it is mainly women engaged in household weaving activities, which is considered by the interviewed women less important in terms of cash generation function than other activities, such as outside waged work and transportation work etc., mainly done by men; likewise, the importance level of those cash-generated activities mainly done by men are ranked as higher than that of the bamboo weaving activities mainly engaged by women.

The interview records of 31 households in the survey sites also show the same result: in those families dependent much on bamboo as the livelihood means and/or source income, although gender division of labor exists in specific harvesting, processing and production activities, men and women are engaged in the bamboo utilization processes on a relatively equal basis. Laochang Xiang (Xiang is an administrative unit at the lowest level in China, equal to Township) of Xinping County, for example, has a long tradition of producing one-off instant bamboo chopsticks. In 2002, about 2 million rows (1 row is 12 pairs) of chopsticks were produced and supplied to the surrounding regions and the total production value amounted to 2.2 million Yuan. In those families in this Xiang which don't have much arable land and have to rely on bamboo chopsticks as main livelihood means, men and women commonly busy themselves with the work of making chopsticks whenever they have spare time at home. However, in those families dependent on tobacco or sugarcane as the main source of income, men almost take all responsibilities for the tobacco or sugarcane work, while only women and children, sometimes old and invalid men are engaged in the chopsticks-cutting work at home all day long.

Table 2.2 Gender Grading Table indicating the importance level of different source of cash income in a household

	Household-based bamboo processing	Small scale Private-owned	Animal Husbandry	Crop cultivation	Waged work	Other activities
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	activities	bamboo factories				
Farmer A	2 ♀		3 ♀	4 ♀		1 ♂
Farmer B		1 ♂	3 ♀	2 ♀		
Farmer C	1 ♂ ♀		3 ♂	4 ♀	2 ♂	
Farmer D	1 ♂ ♀		2 ♀	3 ♀		
Farmer E	1 ♂ ♀		3 ♀		2 ♀	

Note 1: ♀ represents Female, ♂ represents male

Note 2: the number of 1,2,3, 4 refers to the grading of the importance level of different source of cash income in the household: 1 means the most important, 2 means the second important... and 4 means the least important

Note 3: the source is from the **male** villagers group interview records in Mi Bai dai Village, Lao Chang Xiang of Xinping County

From the Table 2.2, we find in the families (Farmer, C, D, and E) which have sources of income other than bamboo, if the cash income generated from bamboo is higher than that generated from other sources, it is common that men are active players in bamboo activities, while in the case (Farmer A) that the cash income generated from bamboo is less than other sources, men usually engaged less on bamboo activities but more on those resources or activities which can bring more revenues for the family. In both of the cases, it is women who are mainly engaged in less income-generating activities, no matter whether it is concerned with bamboo or not.

It can be concluded, therefore, that one obvious change of the traditional gender value is that cash income becomes a more visible determinant affecting the gender roles and division of labor in a household. It is men who are mainly occupied with those works through which more cash can be earned and in a more direct and visible way and women mainly concentrate on non-cash-generating or less-cash-generating activities. As far as the bamboo-related activities concerned in particular, the gender roles and division of labor is in a greater degree affected by the extent to which the family depend on bamboo for livelihood and /or cash income. Here is another example: in the past, harvesting fresh bamboo shoots in rainy season were in general women's work and men were scarcely involved in this activity. At that time bamboo shoots were mainly for self-use and hardly for sale in the market, thus the money generated through bamboo shoots for each household was very small "extra petty cash" which was not a primary source for livelihood. But nowadays, with more and more fresh shoots produced due to the increased areas of bamboo cultivation, the income generated from selling bamboo shoots gradually becomes a very important part of the entire household income. As a result, it has been a trend that more and more men start to get involved in the harvesting work, which is not only the women's work at all. Moreover, because the dried bamboo shoots can be sold at a good price in the market, men have gradually been in control of the key trading and pricing activities by deciding where and to whom the bamboo shoots should be sold and at what price etc.

Gender situation analysis on small and medium-sized bamboo-based rural industries

At present, the development and utilization activities of bamboo in Yunnan are mainly conducted at two levels: household-based primary processing activities and private-owned micro enterprises (small and medium-sized industries). In the previous part, we made a general

analysis on the gender division labor of the bamboo-processing activities at household level, although there are not many small and medium-sized bamboo-based enterprises existing in Yunnan, it is worthwhile to view the gender roles and division of labor from this perspective.

Most of the small enterprises we visited are bamboo-chopsticks processing factories. It is no doubt that women are dominant working forces in small and medium-sized bamboo industries. The table below shows the situation of the gender division of the labor forces in 7 small bamboo-based factories we visited during the field research.

Name of the micro bamboo-based factories	Number of the total workers	Number of the female workers	Number of the male workers
Mingyuan Bamboo Chopsticks Processing Factory	10	10	0
Yinxin Bamboo Chopsticks Processing Factory	11	9	2
Jixing Bamboo Chopsticks Processing Factory	57	50	7
Longchuan Bamboo Shoot Processing Plant (on a trial production)	8	6	2
Zongge Bamboo tea-container Factory	10	8	2
Hongxing Bamboo Chopsticks Factory	7-8	4-5	2-3
Yongxing Bamboo Chopsticks Factory	14	6	8

Interviews were held with the labors (female and male) and owners separately. Not only the female and male workers at employee level are assigned to do different things and get corresponding salary according to their sex, but also the female and male owners (usually husband and wife) at employer level have clear division of responsibilities.

Gender division of labor between male and female workers

Charter 4: Gender division of labor in the production process of small and medium-sized bamboo chopsticks processing factory

Loading raw material ♂ ----> Slicing ♂ ----> shaping ♂ ----> sanitizing, drying and polishing ♂ ----> sealing and packaging ♀ ----> bagging ♀ ----> selling ♂

In small –sized bamboo chopsticks processing factories, there are some simple and primitive machines being used in the pre-packaging process such as materials loading, slicing, shaping and sanitizing etc. The gender division of labor is so clearly defined that the male workers are in charge of the operation of the machines, the only part in the production process that involves skills/technology and the female workers only do the packaging and bagging work. When asked why the labor is divided in this way, all interviewed people, both the employer and

workers (female and male) said “because men lack of patience and can not sit for a long time to do trivial and boring thing such as packaging”. As a matter of fact, some female workers also want to learn the machine operation work, but they hardly get the chance to be assigned to do so. The laborers recruitment requirements are clearly set in the owner’s mind from the very beginning: the female workers are required to be scrupulous and patient in characteristics and be able to sit for long and the male workers should have physical strength first; for those posts connected with operating machines or involving some skills and techniques, the recruitment is only targeted at males with certain education background (middle school graduate or above).

Gender division of labor at management level (male and female owners)

Take an example of a bamboo-chopstick factory we visited in Gasa Town of Xinping County, Tracing back to the beginning of the establishment of the factory, the division of labor between the owner couple (husband and wife) is:

Establishing the factory ♂ : It is decided by the male owner after have an inspection tour to 1-2 bamboo chopsticks factory nearby. Although at that time, the male owner was engaged in other business (restaurant) with relatively high profits, she followed her husband’s idea, stopped the engaged work and diverted her energy and time into the establishment and running of the factory.

Learning related technique ♂ : It is the male owner who first went to a town nearby to learn related techniques: what kind of equipment should be purchased, how to operate, maintain and fix the machines etc. The maintenance and repair techniques were taught to the male workers later, who are in charge of the machine operation work.

Formulate the management rules and regulations ♂ The basic rules are initiated by the male owner. Working briefing meetings are organized and presided by the male owner regularly each month with the attendance of all workers. The female owner also attends the regular meeting, but seldom expresses opinions in the meeting.

Job recruitment ♀ This process is mainly dealt with by the female owner. Most of the times, the female owner receives the applicants who often drop in to inquire related issue because the male owner is always out of the factory.

Training ♂ Initially, the male owner trained the female owner and all the male and female workers were trained by the male owner. Now it is the case that the old train the new, i.e. the old male workers teach the new male workers and the old female workers teach the new female workers.

Financial affair ♂ The male owner is responsible for the financial balance sheet and related accounting issue of the factory and the salary sheet was done by a part-time male, who is a high school graduate.

Sales activities ♂ Solely born by the male owner, who is outside home all the time.

Logistics ♀ The female owner, with a female assistance, is responsible for preparing for food and

cooking for all workers.

Household work and taking care of Children ♀: done by the female owner

Household money ♀: keeping by the female owner. The female owner decides household-related small expenses and the male owner decides the big expenses related to purchasing and replacement of factory equipment etc.

The above is the interview record of one small factory, but it is a representative example reflecting the gender roles and division of labor of the entrepreneurs of most of the small and medium-sized bamboo enterprises in Yunnan. It is obvious that it is usually men entrepreneurs who take control of the key management work and play a decisive role in the decision-making process of all the important affairs such as the finance, sales, technique training etc. concerning the running and operation of the factory; Although the female is also involved in part of the management work, it is always limited to those parts similar to the household work (logistics and cooking) and play a generally supportive and subordinative roles.

2.2 Gender Analysis on gender access to and control over resources

Besides gender division of labor, resources access and control is one important component of gender analysis. Resources include not only visible (natural) resources such as land, water, basic facilities, capital etc. but also invisible (social) resources such as skills, knowledge, social connections and services etc. As far as the resources related to bamboo activities and projects concerned in surveyed areas, much attention has been given to women's access to the two most relevant categories of resources: land resources (bamboo forests land based on which the bamboo raw materials are provided) and bamboo-related knowledge/information and techniques/skills.

Women's control, access and use rights to bamboo forests land are affiliated to their settlement place due to the change of their marriage status and have close connections with the existing gender-blind land policy.

In all rural areas, land is the resource basis for farmer's subsistence and development. Women's right to land is a very complicated issue and varies considerably in time and location. The land ownership, use and disposal rights are one part of the overall structure of the power relations of gender. In the surveyed bamboo-growing areas in particular, women's control, access and use rights to land are affiliated to their marriage status and have close connection with the existing land policy.

The allocation of bamboo forests land in bamboo-growing areas in Yunnan is based on the Land Policy (so called Land-Contracted Responsibility System) starting to be implemented in rural areas of China in early 1980's. In apparent women have equal right to get the bamboo forests land with men because according to the policy, the bamboo forests land, like the arable land were allocated to each household according to the number of household heads without distinction between men and women. However, in practice, it is not the case.

First, the land allocated to the women (especially unmarried girls) is usually not regarded as the girl's, but the "public asset of the household", just as the Deputy Head of the Zhuyuan Village of Xiping County said "the unmarried girl's land is belonging to her parent's family, not her own"; while the land allocated to the men (or boys) is undoubtedly under the name of the men (or boys). Therefore that the land under the name of the female members is allocated to other male members by the household head without justified reasons is very common. This means that from the very beginning, the women have been deprived of the ownership and control rights to the land legally allocated to them.

Furthermore, women's access and use rights to land are to a great extent affiliated to their marriage status and the resulted change of their settlement place.

Nowadays, most of the women in the rural areas of China still choose to settle in here husband's place after the marriage. Women are mobile due to the change of the marriage status but the land is fixed and can't move. It has become an established norm that once a women gets married and goes to live with her husband, the tract of land originally allocated to her will be automatically taken back by her parent family. Moreover, in most of the cases, the women can not get additional land from her husband's home after the relocation. Thus, women lose their own land after marriage and become entirely dependent on their husbands.

We visited a poor household with 4 people (husband, wife and 2 children) in Lagadi Village of Laochang Town in Xiping County. The total yearly income of this household is no more than 1000 yuan (around US\$120). The reason of the poverty is very simple: lack of land. The small tract of land owned by the husband is the sole livelihood source for the household. Before they got married, the wife had had her own land. But her land was re-allocated between her brothers immediately after her marriage and she dare not to reclaim it. The husband is very weak physically due to long-term chronic illness, and almost all household, production and cultivation work have to be born by the wife. Even so, the husband, when asked, still asserts that the wife knows nothing and he is the owner and decision-maker of the important affairs of the household.

The situation of another household we interviewed in Sanjia Village of Shiping County is: The female and male householder are from the same village before they got married. The female householder didn't want to give up her land when she got married, but this wish was firmly rejected by her brothers. She had ever made an appeal to the Village Committee for judging this case, but due to the obstruction of her parent family, her wish had never been fulfilled. Meanwhile, she was under great pressure from her husband, who said from time to time that he would divorce her if she couldn't claim back the land.

The situation of the divorced woman is even worse. The woman will usually lose the land and other family property once she gets divorced. It is partly the reason why the divorce cases are so rare in rural areas in Yunnan. There was ever one divorce case in Sanjia Village. The verdict of the court for the divorce case is, all the land, house, and family property went with the man and the women got 2300 yuan from her husband as compensation. The divorced woman didn't think the verdict was fair but she dared not to make an appeal against it. After divorce, she had to go back to live with her

parent, but was not entitled to reclaim any land. What she could hope for is to find another man to marry as soon as possible.

While if a man gets married with a woman in his home village and he chooses to settle in the woman's place, he can transfer his land to the new home much more easily. We interviewed a household showing an example of this: Due to lack of labor force of her wife's family, the husband named Li Cai chose to settle in her wife's home after marriage. He transferred the land under his name to the new home without much disputes and obstruction, so he went without saying to be the head of the new household.

The above are just a few instances selected from many, which graphically show that to what extent the household relationship between men and women is affected by the land right. The right to land is vital, not only because of its economic value but also primarily because it is the basis to conduct other economic activities. It gives people the right to settle or return to a place, gives access to other social relationships which can provide social security, and generally strengthen a women's bargaining position vis-à-vis her husband and relatives. (DGIS working paper 1997). The gender-blind land policy makes women in an unfavorable situation in claiming the rights to the land when their marriage status changes. The loss of the access to and control over the land resource directly leads to their political and economic subordination to the men.

Men are the direct recipients of new information/knowledge and techniques/skills on bamboo and control the direction of its flowing and transmission.

As mentioned in the previous part, skill and technique content is a very important criterion deciding who does what in bamboo-related activities, it itself is a very important category of resource. We found men are always the first and foremost in a household to get access to new information and knowledge or receive techniques or skills related to bamboo cultivation, processing or production activities. For example, the skills/techniques of bamboo cultivation and plantation are traditionally passed on from generation to another within the same family. Boys were usually given the priority to learn those skills/techniques rather than girls under the common perception that girls are too weak in physique to bear this laborious work. The technique transmission in one family usually takes place between males, only occasionally between male and female (Based on interview with farmers). As to the opportunities to access to the new information/training from outside, it is men who usually go to the local forestry station to purchase the bamboo seedlings, in this way, to be the first in the family to get access to and learn new information and technique on bamboo cultivation. After coming back home, they bear the main responsibility for bamboo cultivation or demonstrate the other family members on how to utilize the new techniques. It is often the head of the household, usually the man who goes to participate in the bamboo technology training workshops or get access to the technology extension services provided by the local forestry bureau and other government agencies. In June 2000, a Training workshop on establishing a Bamboo Production Cooperative was organized by the Township government of Lao Chang Xiang. All the 50 participants are male. In 2003, the forestry Bureau of Xinping County held a Bamboo Cultivation Techniques Orientation meeting, almost all attendees are male household heads. Women's direct participation and access rights of new information and technique on bamboo are generally ignored.

2.3 Women's Participation in decision making at household and community level

The "household head-centered system" makes women in an inferior position to the men in bargaining power and decision-making of important affairs at both household and community level.

The most important person in a rural household is the head. And the head of almost all household is men, except those single-parent divorced or widowed family. Representing the power and privilege, the household head holds a special position in a family and plays a central role in decision-making of important political and economic family affairs. In addition, he has privileges to get access to and control over various kinds of household resources. Although in one household, household members, male and female have shared common goals, benefits and resources, women are automatically placed in an inferior position to men under this "household head-centered" system.

The household cited before is a typical example: although the husband, also the household head named Zhu Xuexin is very weak physically due to long-term chronic illness, and almost all household, production and cultivation work have to be born by the wife, almost all important family affairs on purchasing and spending, selling bamboo and bargaining prices etc. are decided by the husband. The husband, when asked, assertively said that his wife knows nothing about earning and spending money and he is the owner and decision-maker of the household affairs. In an interview with another male household head called Pu Jiaming, when asked about who makes the decision on whether allows his daughter to take away their land to her husband's home when she gets married, he said "now it is decided by me. In the future after my son gets married, he will become the household head and will decide this kind of thing". When asked about the family financial distribution issues, he said "I decide how to spend and invest money and distribute benefits and she (referring to his wife) is and can only be the cash box (cash keeper) who is only keeping the money".

Since it is usually the household head, on behalf of the family, goes out to participate in and get involved in the negotiations and discussions about various community and public issues, important decisions at community level are usually men's will and view, women's concerns and voices can seldom be heard. A male villager in Lagadi Village said "it is me in most of the cases to go to attend the village meeting and discuss related issues. It is not convenient for women to go because they can't speak good mandarin". Another male villager said "I usually go out to deal with external relations things, women who can't speak mandarin can't do this kind of things".

Women's participate in decision making is affected by the educational level of female members at household level, but it's impact on the traditional gender value at community level is invisible.

The educational level of the female members in a family has direct impact on the extent to which they access to and control over bamboo resources as well as her status and roles in the family. In the families in which the female member is more educated than her husband, she usually plays a more decisive role in the decision-making process of the important family affairs. But the change of the

gender relations in power roles and decision-making only takes place in the interior of the family and it is always claimed to the outside by both men and women that it is the man who makes the final decision. During an interview with the head of XiangGun Xiang, when we asked him why he said that he preferred calling men to attend the village affair meeting instead of women, his answer is “ the females can not make the decision in the meeting. Even if they can make the decision, they always pretend to say that they have to go back home to ask for the opinions of their husband first. This slows down the working efficiency”. There are not many households of all the interviewed in which women play a dominant role in deciding important family affairs. In these families, generally speaking, the educational level of the women who keep the house is higher than that of the other family members. However, this type of families are not valued highly by the community. One comment given by the villagers on this type of family is “the man in the family can’t get along very well”. Both the women and the men, especially the men are under certain public pressure from the neighborhood and community under this condition.

3. Gender analysis on existing bamboo-related forestry Policy/ program activities

Since bamboo is a kind of non-timber forestry resource, there are generally no specific bamboo projects/programs in surveyed areas. In most of the cases, bamboo is only a component of a comprehensive forestry policy/program initiated by the government forestry bureau at national or provincial level and directly implemented by the forestry bureau at county level in specific counties or villages. For instance, a series of favorable government forestry policies/programs has been implemented in Xiping County since the mid of 1990s, such as the World Bank Loan Program (Phase II) spanning from 1995-1998, the Fast-growing and High-yielding Plantation Program starting from 1996-1999 as well as the Conversion Program (converting the farm land to forests) starting from 2002 etc. The focus of these forestry programs is on forestry reforestation, plantation and conservation. Bamboo cultivation and plantation is an important part of these program activities, so we mainly focus our attention on the bamboo-related activities constituted in these forestry programs.

Bamboo-related programs are purely technical programs formulated and implemented in a top-down approach without the participation and empowerment of the grassroots people - both men and women

All policies/programs have direct or indirect impacts upon the gender interests and relations. (Li, 2002). The forestry-related programs, characterized by high involvement of rural households, have more direct impacts on the participating people, women and men. However, many bamboo-related programs and activities are implemented in a top-down approach without considering the needs and priorities of the major actors.

For instance, under the World Bank Loan Program (Phase II) spanning from 1995-1998, 30,000 mu forests were newly planted, of which bamboo forests only accounted for 1/5 and all of the rest are Si Mao Pine (a local pine species) forests. The local farmers are the main participants and target group of this program, but they were not consulted and asked for opinions as to which tree species is in their favor beforehand. Due to the favorable natural conditions (climate, soil etc.) of Xiping County as well as a long tradition of growing and utilizing bamboo, the local farmers prefer growing bamboo to other tree species such as pine. Compared with bamboo, pine has many disadvantages such as long growing cycle, less distinctive economic value in a short period of time etc. These made the farmers difficult to pay back the bank loans very quickly. For these reasons, the farmers were not very enthusiastic about this program though the program was completed in the end as planned and scheduled. The chief responsible person of this program admitted during the interview that if bamboo had been selected as the main planting tree species in light of the farmers' favor and needs, they would have been more motivated to participate in the program and the impact would have been much better. This is one example showing how the external bamboo program was implemented in a top-down approach without catering to the actual needs and preferences of the major actors.

From 1996-1998, a Fast-growing and High-yielding Plantation Program had been implemented across all major regions and areas in Yunnan. It was a forestry program jointly sponsored by government forestry agencies at various levels in Yunnan and executed by specific forestry bureau at county level. The main activity of this program in Xiping County is to establish a fast-growing and high-yielding bamboo plantation base with good ecological and economic benefits. In Zhuyuan Village, the program was implemented in a top-down way without any extension and mobilization work among the villagers. The 300-mu bamboo plantation was planned in the village communal land and all planting work was done by the program staff (mainly from government forestry bureau) without the participation of the farmers and villagers. In order to finish the task within the schedule, the bamboo seedlings for the 300-mu land were planted in a lump way in dry and non-planting season hastily. The local villagers almost knew nothing about this program from the beginning to the end and didn't have any interest in it either. They thought it was a government initiative and had nothing to do with their own interests. The program failed to pass the evaluation in the end with the survival rate of the bamboo seedling less than 10%.

The same program implemented in another village, Lagadi village, on the contrary, generated a quite good result. In the time of the implementation of the Fast-growing and High-yielding Plantation Program, the bamboo shoots were sold very well in the market at a price as high as 40-50 yuan per kg. The farmers were very enthusiastic about growing bamboo. Noticing and in response to the actual needs of the farmers, the program implementing agencies targeted the local farmers and villagers as the main participants and beneficiaries of the program. A series of mobilization work had been done to make the villagers fully aware of the objective and importance of the program before the start of the program. In order to guarantee the survival rate of the bamboo seedlings, a series of training and extension work had been carried out aiming at enhancing the farmer's technical skills of planting and managing bamboo. Through the efforts of all parties, the program passed the final evaluation and achieved a big success. The remarkable increase of the average per capita yearly income of Lagadi Villagers from 400 yuan before 1995 to 1200 yuan after that is

greatly attributed to the successful implementation of this program.

From the two contrary examples shown above, we can see that the identification of the main actors is the key to the success of the bamboo-related forestry program. Many bamboo programs are still implemented in a top-down way without taking into much consideration of the views and attitudes of the people towards the program. People-oriented mind is the prerequisite for the success of any development program in rural areas. Gender consciousness/awareness/sensitivities can only be developed and established on the basis of people-oriented mind and approach in project planning and implementation.

The policy/program implementing staff lack of basic gender consciousness and sensitivity in program planning and implementation.

In the course of making the gender assessment, we not only visited and interviewed the female and male farmers and villagers at grassroots level, who are the main actors of bamboo-related development programs, but also interviewed the local forestry officials and technical staff at county or village level, who are the direct executors of these policies/programs. It is quite obvious that the program staff at all levels lack of gender consciousness and sensitivity in project/ program formulation and implementation.

Although almost all the interviewed program staff, ranging from the chief responsible person to the ordinary technical staff, admitted that women are highly involved participants and contributors playing an indispensable role in bamboo development activities and programs, they had had no consciousness that “gender” is an issue needs to be given a special consideration. The Deputy Director of the Forestry Bureau of Xiping County (male) said that “I didn’t pay much attention to the discrepancies between men and women in carrying out programs”; and the chief of the forestry station (male also) said that “we only attach importance to the effect of the programs and don’t think the participation process of people (male and female) is that important.” Thus, it turned out to be that all bamboo-related forestry policies/programs are designed, formulated and implemented under the presumption that “Men and Women involved in the programs are equal in sharing the benefits and resources”. This seemingly gender-neutral policy recognizing no distinction between sexes and actually a kind of gender-blind policy, tending to exclude women from the main-streaming development activities.

Taking the Conversion Program as an example. In the areas such as Xiping County where the natural conditions are suitable for growing bamboo, the main activity of this program is to converse the farming land to bamboo forests/plantation. To make the farmers and villagers fully aware of the objective and importance of the program and enhance their technical skills of planting and managing bamboo, a series of mobilization and extension/training work were conducted by the local forestry bureau, the implementing agency of this program. The target group unit of these program activities is usually the individual household with no special sex requirements for the participants, so it is usually the head of the household, i.e. the man who comes to attend these important program meetings and training workshops on behalf of the family. Thus men, not women are always the first and foremost beneficiaries of the new information, knowledge as well as

techniques and skills. (Related information has been given in detail in previous part) A male villager in Lagadi Village said that “ it is me in most of the cases to go to attend the village meeting and discuss related issues. It is not convenient for women to go because they can’t speak good mandarin”; another male villager said “I usually go out to deal with external relations things, women who can’t speak mandarin can’t do this kind of things.” In a society/community under which the traditional gender ideology is still prevailing, the kind of gender-neutral/insensitive policy is actually a kind of gender-blindness and exclusion in favor of existing biased gender relations. Women’s direct participation and access rights of new information and technique are ignored and women’s voices and concerns are hardly heard. It, as a matter of fact, invisibly consolidates the man-dominant rural society, and weakens women’s position and competence in the family and the community as well.

The program implementing organizations are purely government technical agencies and have no experience and capacity in addressing and integrate gender concerns in project formulation and implementation.

Even though some mobilization and awareness-raising work has been done targeted at the grassroots farmers and villagers in the implementation process of some of the bamboo programs, there are no community-based (social) forestry program ever been conceived and established. The local farmers and villagers by no means got the opportunities to participate in any forms of the decision-making (site and species selection etc.) in the program designing and formulation process and no attempts have even been made to enable them to voice their concerns and opinions before the implementation.

Through reading and reviewing related program files and documentation, we further found that the program implementing agencies are purely government technical bureau with expertise and capacity only on technical details of forestry. They didn’t have had experience in collaboration with other agencies or NGOs to jointly carry out any community-based/oriented programs. We didn’t find any gender-related policy or strategy that has been formulated regarding equal rights and opportunities for women in bamboo or other forestry development activities either. No gender-specific analysis had been ever done before or after each program/project and no special measures had ever been taken to identifying the interests and needs as well as to promote the participation and empowerment of women. It is quite obvious that the implementing organizations have no experience and capacity in addressing gender concerns as well as promoting the equal participation and empowerment of women in carrying out bamboo development activities.

4. Conclusions of the field findings and recommendations for the future bamboo development field activities

Conclusions of the field findings

In the previous parts of this paper, the gender situation of bamboo-based rural development and utilization activities in Yunnan has been described and analyzed from two perspectives: one is from the perspective of the grassroots rural farmers, the main participants in the bamboo-related processing and production activities, and also the target group and assumed beneficiaries of any bamboo-based development and intervention activities; the other is from the perspective of those policy-makers and programs/projects implementing agencies (mainly government forestry agencies) and their staff who are responsible for the formulation and implementation of various kinds of bamboo-related forestry programs at county and village level.

A general picture of the gender situation in the bamboo sector in rural areas in Yunnan is: while the gender roles and division of labor on specific bamboo processing and production activities are different from one ethnic group to another due to diverse ethnic tradition and culture, they are basically modeled on the traditional gender ideology: men dominate the external activities and women take care of indoor work (at both small factory and household level). Based on this, there are a series of visible and invisible criteria on which the gender division of labor is established with relation to the physical labor strength, locus of activities, skills/techniques content, cash value/content as well as working nature etc. With the establishment of the market economy and the quick economic development in rural areas, the gender roles and division of labor based on the traditional gender ideology has been challenged and undergoing gradual changes. Economic factors stands out among others as the most visible determinant affecting the gender division of labor at house-based bamboo processing activities. Despite the changes on ways of thinking and behavior on who does what, men are mainly occupied with those bamboo works through which more cash can be earned and in a more direct and visible way and women mainly concentrate on non-cash-generating or less-cash-generating bamboo activities.

In the small and medium-sized bamboo-based enterprises, the gender division of labor is very clearly defined in that the male workers are in charge of the processing process with more skills/techniques content, while female workers are assigned to do the repeating and trivial work with no much techniques involved. At entrepreneur's level, it is a common case that men take control of the key management work and play a decisive role in the decision-making process of all the important affairs concerning the running and operation of the factory. Although the female is also involved in part of the management work, it is always limited to those parts of the similar nature to the household work (logistics and cooking) and plays a supportive and subordinative role generally.

As far as the resources related to bamboo activities, land resources (bamboo forests land based on which the bamboo raw materials are provided) and bamboo related knowledge/information and techniques/skills are two categories of resource most relevant to women in bamboo-based development context. Women's control, access and use rights to bamboo forest land are insecure and unstable because they are to a great extent affiliated to their marriage status and the resulted change of their settlement place. The insecurity of the women's independent land rights is due to the gender-blind land allocation policy practised in rural areas of China since the early 1980's. The insufficient legal system/support also prevents women from retaining, claiming and securing their land rights when impaired caused by the change of their marriage status. The loss of the land

resource directly leads to their political and economic subordination to the men in the household. As to the access to new information/skill related to bamboo cultivation, processing and production, men are always the direct recipients in a household and exercise the control over their flowing and transmission. Women's interest in direct participation and access to the new information and technique on bamboo are generally ignored.

It is no exception in the surveyed areas that the "household-centred system" holds a dominant place and places women in an inferior position to the men in bargaining power and decision-making of important affairs at both household and community level. It is usually the household head, on behalf of the family, who goes out to participate in and get involved in the negotiations and discussions about various community and public issues. Important decisions at community level are usually men's will and view, women's concerns and voices can seldom be heard. Women's participation in household decision-making is to some extent affected by the education level of the female members, but its impact on the traditional gender value at community level is invisible.

When viewing the existing bamboo-related forestry policies/programs from the perspective of gender, we found that gender was not afforded great importance in policies/program formulation and implementation. Bamboo-related forestry policies/programs are primarily technical programs focusing on bamboo cultivation and plantations but lacking a mechanism for involving the local stakeholders in decision-making processes. The program implementing agencies are mainly government forestry agencies with expertise and capacity in the technical aspects of forestry. They have not been trained on gender or community-based development ideas and methodologies and social forestry programmes have not, as yet, been developed. Opportunities therefore exist to develop a more participatory decision-making approach in bamboo development that includes gender as a key component.

Recommendations for future bamboo and rattan development field activities

Based on the field research findings and analytical results, the following recommendations are made for the future bamboo and rattan based field activities aiming at achieving a gender-sensitive sustainable bamboo and rattan development. The use of participatory methods is assumed.

Appropriate training program combining forestry and gender should be designed and developed targeting at the forestry workers to enhance their gender awareness and sensitivity and practical skills of integrating gender into forestry development work.

The study has illustrated that gender awareness is lower than expected amongst government forestry workers in surveyed areas. This is on one hand because of lack of awareness of its importance among forestry workers, and on the other hand because most forestry workers don't have opportunity to gain access to the necessary information and training on gender. Gender awareness training is a practical tool to raise the forestry practitioners' awareness about what gender is, how gender differences manifest themselves in local context and how gender roles are associated with forestry development (in which bamboo is a component or not). Through the gender training workshops, forestry workers at all levels will not only be trained to understand

the community diversity by gender and other important social characteristics such as age, class, race or ethnicity, but also acquire practical skills to assess the implications of this diversity for specific forestry activities. They will also learn how to apply gender to their own work as planners, foresters, extensionists and rangers etc. In the meantime, the institutional capacity of the forestry agency, equipped with personnel with good training on gender concepts and practical methodologies, will be strengthened. Thus, the local forestry implementing agencies will be in a better position to come up with gender-sensitive strategies and actions for sustainable bamboo development programs.

The focus of bamboo-related forestry policies/programs should be shifted from pure technical programs centered on bamboo cultivation and plantation to people-oriented community-based bamboo development programs.

As illustrated before, all bamboo-related programs in the surveyed areas are technical programs focusing on bamboo cultivation and plantation. Although some mobilization and extension work have been done among local farmers and villagers, no community-based bamboo project/programs designed to meet the overall community needs by promoting local people as the agents and beneficiaries of the program activities has even been conceived and established. Planting more bamboo, in itself, did not address the needs and concerns of people, therefore can not meet the sustainable bamboo development objectives in the long run. There are close links between bamboo and people in bamboo-growing developing countries or regions in terms of environment, subsistence, energy, employment, income etc. The Community/Social/Participatory Forestry Programs advocated since 1980's aiming to establish the links between forestry and people and promote people as the centre of the forestry development activities instead of tree plantation itself. It is based on the assumption that what people do, what they have and what their priorities and needs are the starting point for development. Bamboo sector is a newly emerging sector in China and other developing countries. Given its diversified uses, high environmental and socio-economic potentials for millions of rural farmers in whole or in part depending on it for livelihood, the bamboo-based development efforts should be, at the very beginning, follow this people-oriented community-based trend, of which gender is an integral element.

Quantitative gender-disaggregated baseline information on bamboo should be collected before the designing and formulation any bamboo development activities in the intended project area

Planning for "people-centred" development requires more precise information about who the "people" are. They are not a homogeneous group but comprised of women and men. (FAO 1995) It is widely acknowledged by all stakeholders that women are major participants in and contributors to bamboo-based rural development activities, however, during the whole research process, we found it was hard to find any existing quantitative statistics/data on the relationship between women and bamboo, e.g. to what extent women are involved in bamboo-based activities, what benefits they get and how much contribution they have made to the family as well as the community by carrying out these activities etc. Due to physical and financial

constraints, we were not able to conduct a large- scale and time-consuming quantitative survey, but only aimed at making a qualitative case assessment on the general gender situation on bamboo-based rural activities in Yunnan. Our findings and conclusions are mainly drawn from field interviews, observations and general feelings and impressions and lack of the support of adequate quantitative information disaggregated by gender. To gain a more thorough understanding about the gender issues so as to establish appropriate strategies to integrate gender concern into bamboo development activities, it is essential to collect a comprehensive and detailed range of gender-specific data covering various aspects of bamboo activities. These data can be obtained by conducting a quantitative gender survey/analysis in the intended project area and used to provide a statistical background for portraying gender roles and highlight possible gender issues in bamboo activities. They are not only useful for identifying gender problems and issues before the formulation of development projects, but also needed during and after the implementation for the purpose of monitoring and evaluating the progress and impact of the project or interventions from a gender perspective. Without such information, bamboo-related forestry development efforts may risk failure and negative impacts.

Gender perspective should be taken into serious account and gender-differentiated participatory approach should be widely used in the project cycle of various kinds of bamboo development initiatives.

The household without distinction between men and women is usually the unit of target of bamboo and other development activities in rural areas. Due to the prevalence of “household-head Centered” system, it is usually the men, the head of the household to be able to get access to and directly benefit from various external development activities. To change this situation, gender-differentiated participatory orientation and consultation meetings, training and extension services should be held to ensure that women’s needs and priorities are voiced and women be the direct beneficiaries.

Self-initiated community organizations and women’s groups (NGOs) should be encouraged to be established to mobilize and empower the grassroots farmers, especially women to play more important roles in decision-making process in all phrases of the project.

Women are highly involved in bamboo-based development and utilization activities. But it can’t be denied that women’s participation is more as laborers, doing more of the repeated, tedious and low-technology-content works compared to the men. While families undeniably benefited economically from the income generated from bamboo, women’s roles are not necessarily enhanced and their economic independence, bargaining and decision-making power, political status and social influence in family, community and the society as a whole are not much improved. To a great extent, women are passive participants and beneficiaries of bamboo development projects and activities. No specific attention is yet paid to their values, needs, skills-improvement, training for new technology and involvement in decision-making process, and they themselves lack of the consciousness and motivation to promote their rights and enhance their roles in various aspects of the bamboo development activities (industries). One obvious evidence of this is that NGOs or women’s organization of any kind initiated and

established by the village and community farmers themselves are hardly found. Where and if possible, enabling environment should be provided by any development initiatives for the establishment of self-initiated community organization/associations and women self-help groups designed to defend women's interests and promote the equal distribution of bamboo resources and benefits.

5. Recommendations for achieving gender mainstreaming in INBAR

One of the objectives of this micro-gender project has been to improve sensitivity and awareness of the gender concept among the study group members through field practice, and at the same time to bring gender awareness into mainstream consciousness of the implementing organization itself.

INBAR is a non-profit international organization whose mission is to improve the well being of producers and users of bamboo and rattan within the context of a sustainable bamboo and rattan base. Since its establishment, INBAR has carried out diversified projects and activities on bamboo and rattan aiming at poverty alleviation, enhancement of the people's livelihood, environmental protection and other development goals. Gender is an important perspective in relation to the mandate and goals of INBAR.

It is clear from the foregoing that the mainstreaming of gender into bamboo and rattan development programs would create opportunities for greater equality between men and women in the bamboo and rattan sectors throughout the world. As the globally mandated organization with responsibility for bamboo and rattan development INBAR has the responsibility and the constitution to contribute to the greater inclusion of gender related issues in bamboo and rattan development programs throughout the world.

To this end, INBAR recognizes that 1) gender inequalities exist in bamboo and rattan based livelihood development activities in all communities in which they occur; 2) inequalities are not necessarily perceived as such by all stakeholders; 3) the opinions of women are less likely to be heard and acted upon. However, it is also clear that men's and women's roles in bamboo based activities are the products of many generations of social evolution, and that all development activities exist and are influenced by the gender perceptions and roles that are present in the society as a whole. As a result, changes must be driven by the stakeholders themselves, and opportunities and frameworks within which this can occur should be provided.

With this in mind, INBAR proposes to take steps to improve the consideration of gender issues in bamboo and rattan project planning, formulation, implementation, monitoring and evaluation by commencing a project to mainstream gender within the organization of INBAR, its worldwide regional offices, projects sites and our national constituents. Activities would be aimed at three levels:

1. *Mainstreaming gender in INBAR*

- Appointment of a gender resource person(s)/focal point(s) to develop, implement and coordinate INBAR's gender mainstreaming activities, whose main responsibilities include:
 - Conduct gender training and awareness raising for INBAR staff.
 - Develop an organization-wide policy and strategy for mainstreaming gender in INBAR.
 - Develop practical methods for gender mainstreaming in INBAR and its projects.
 - Develop a database of gender-bamboo and gender-rattan information and technologies.
 - Offer advice outside INBAR on gender related issues in bamboo and rattan development.
 - Develop and promote women-specific bamboo and rattan based development activities.

INBAR has not hitherto considered gender as a key integral component of its projects, and there is relatively limited understanding of the concepts and practices amongst senior INBAR staff. Issues and problems are not well understood, and so recommendations and action plans cannot be formulated. However, INBAR runs many bamboo and rattan based development projects, and some of those in India are evolving to include a significant gender element. Project appraisals that include evaluating gender differences are being conducted in these locations, and should provide some basic information on the effectiveness of certain bamboo or rattan development options at reducing gender inequalities. These could then be used as basis for providing a menu of relevant gender options that could be offered to communities during project development activities. This could then form the basis for a bamboo and rattan gender knowledge base. Further studies and information gathering would add to the database.

2. Awareness raising and dialogue with member country representatives

The national bamboo and rattan sectors' stakeholders are governments, banks and financing institutions, NGOs, communities and individuals. INBAR will:

- Investigate the roles of men and women in bamboo and rattan based development in national sector.
- Promotion of dialogues with stakeholders in member countries on gender based issues in bamboo and rattan development.
- Development of action plans for mainstreaming gender in national bamboo and rattan development.
- Integration of bamboo-gender and rattan-gender into national forestry development policies.

Experiences collated in the study above from China illustrate that gender issues are not considered by many of the key implementers in that country, many of whom are government organisations. These organisations maintain considerable clout, and policy changes by them can influence the way all other organisations do development in their countries. Targeting these key stakeholders for awareness raising and dialogue is therefore a key first step in mainstreaming gender into national bamboo and rattan development policies. INBAR will subsequently offer supports to enable gender mainstreaming into national policy.

3. Implementation and use of gender mainstreaming in INBAR projects

- Training and awareness raising among all project staff of gender issues in the project.
- Full background evaluation of gender status in each project area before project formulation.
- Full incorporation of gender within the PRA framework.
- Integration of gender as a key component of project planning, implementation, monitoring and evaluation.
- Development of project models for equitable gender-based development.

Practical mainstreaming of gender in INBARs projects have not yet occurred, and the difficulties of doing this have been illustrated by the Chishui project. In the projects, INBAR would commence by conducting awareness raising and then capacity building of all project staff as an essential first step, coupled with implementation of simple practices to enable women stakeholders to have equal influences during project development and implementation as men. Full involvement of gender issues in PRA activities and stakeholder decision-making will help to ensure greater equality of development options chosen, and monitoring and evaluation will ensure its sustainability. Such projects can then be utilised as models for gender-based bamboo or rattan development.

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