



**University of Natural Resources
and Life Sciences, Vienna**
Department of Economic and Social
Sciences

Improving the contribution of Community Forestry to poverty reduction in Bhutan

Tashi SAMDRUP

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Supervisor: Assoc. Prof. Dr. Ika Damhofer

Institute of Agricultural and Forestry Economics

Department of Economic and Social Sciences

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Abstract

Community forestry is an institutional approach for preserving forest resources while providing rural households with forest products. This study analyses the existing pro-poor activities in six community forests in Bhutan and assesses how they are perceived by the poor members of the community. It also identifies which activities the poor would like to implement to improve their livelihoods. Semi-standardized interviews with key informants, as well as focus group discussions (with committee members, poor women and poor men) were the main methods of data collection. Sticky dots were used to rank the importance of current and potential activities during the focus group discussions.

The most frequently mentioned current activities by poor men and women were: harvesting timber, poles and fencing posts for bonafide use. This was followed by loans services, and marketing of timber. Several problems were raised by the focus groups, especially the lack of skills (e.g. managerial skills), the lack of funds (e.g. to provide all those who needed with loans), and uncertain rules (e.g. regarding the use of a stone quarry). Potential activities suggested by the focus groups included: strengthening loan facilities as well as initiating enterprises to produce and market e.g. furniture, non timber forest products and stones. There were some differences between the priorities for men and for women. For example the poor women suggested activities such as weaving, collecting medicinal plants, ferns and wild asparagus. The poor men suggested activities such as planting and marketing bamboo, using a stone quarry, and starting a furniture enterprise. Overall, this indicates that the members of the community forestry groups would be interested in moving from using the forest for subsistence towards creating employment opportunities and commercializing forest products. The key obstacles to realizing these activities were lack of funds for the initial investments and lack of knowledge related to processing and marketing the products. The study shows that the poor members of the community benefited from the establishment of the community forests (esp. through easier access to forest resources to cover subsistence needs). New activities suggested by the focus groups require some investments, but they would allow to establish enterprises, thus creating employment for the youth and increasing the cash income of the community.

Key words: Community Forestry, Community Forest, Community Forest Management Group, Poor community members, Potential activities.

Kurzfassung

“Community forestry” (gemeinschaftliche Bewirtschaftung von Wäldern) zielt darauf ab natürliche Ressourcen zu schützen und gleichzeitig der lokalen Bevölkerung die Deckung ihrer Bedürfnisse zu ermöglichen. In dieser Studie wurden die Maßnahmen zur Unterstützung der ärmeren Haushalte in den sechs Community Forests in Bhutan erhoben. Auch wurde die Wahrnehmung der Maßnahmen durch die Ärmere erfasst sowie ihre Wünsche für weitere Maßnahmen. Dazu wurden semi-strukturierte Interviews mit Schlüsselpersonen geführt, sowie Gruppendiskussionen mit jeweils den Mitgliedern der Steuerungsgruppe, Frauen aus den ärmeren Haushalten und Männern aus den ärmeren Haushalten. Zur Reihung der angeführten Maßnahmen durch die TeilnehmerInnen an den Gruppendiskussionen wurden Klebepunkte verwendet.

Die laufenden Maßnahmen, die am häufigsten durch die ärmeren Haushalte genannt wurden waren: Zugang zu Bauholz, Pfosten und Stangen für den Haushaltsgebrauch. Weiters wurden in den meisten Community Forests Mikrokredite angeboten, die nicht zuletzt durch den Verkauf von Bauholz ermöglicht wurden. Mehrere Probleme wurden in den Gruppendiskussionen erwähnt, vor allem das mangelnde Fachwissen zur Führung der Gemeinschaftswälder sowie zur Verarbeitung und dem Verkauf von Produkten. Weiters steht häufig zu wenig Geld für die Mikrokredite zur Verfügung. Es wurden einige potenzielle neue Aktivitäten von den ärmeren Haushalten vorgeschlagen, z.B. faire Vergabe von Mikrokrediten (v.a. in jenen Gemeinschaften, in denen die Kredite bevorzugt an die reicheren Haushalte vergeben wurden, da deren Rückzahlung durch die Steuerungsgruppe als sicherer gewertet wurde), Gründung von neuen Unternehmen um Möbel zu zimmern und zu verkaufen, oder die Gründung von Unternehmen um Pflanzen aus Wildsammlung zu verarbeiten und zu vermarkten. Es gab Unterschiede in den Unternehmungen, die von Frauen bzw. von Männern vorgeschlagen wurden. Frauen schlugen Aktivitäten wie Weberei, Sammlung und Verarbeitung von Heilkräutern, Farnen und wilden Spargel vor. Männer präferierten Aktivitäten wie die Auspflanzung und Verarbeitung von Bambus, Eröffnung einer Tischlerei oder die kommerzielle Nutzung eines Steinbruchs.

Insgesamt zeigen diese Präferenzen, dass die ärmeren Haushalte es begrüßen würden, wenn der Gemeinschaftswald nicht nur zur Deckung der Haushaltsbedürfnisse dienen würde, sondern auch zur Arbeitsplatzschaffung und zur Erwirtschaftung von Bargeld. Wesentliche Herausforderungen zur Umsetzung der unterschiedlichen Aktivitäten sind mangelnde Fachkenntnis (Verarbeitung und Vermarktung der Produkte) sowie mangelndes Startkapital.

Schlüsselbegriffe: Gemeinschaftswälder, Community Forestry, Nutzen für ärmere Haushalte, mögliche Aktivitäten, Gender

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Acronyms

ADFO	Assistant Dzongkhag Forest Officer
CF	Community Forest/Forestry
CFMG	Community Forest Management Group
CFMP	Community Forest Management Plan
DFO	Dzongkhag Forest Officer
GFEO	Geog Forest Extension Officer
NTFP	Non Timber Forest Product

Glossary

Dzongkhag	District
Geog	Block (Administrative level below District)
Nu	Bhutanese currency

1. Introduction

1.1. Over view of Community Forestry

Community Forestry (CF) seeks to reinforce the link between people and forests they can make a significant contribution to livelihood improvement, environmental conservation and sustainable use of forests (Temphel and Beukeboom, 2006). CF refers to handing over the rights and responsibilities of forest management to the local people, who have traditionally used the forests and are willing to accept management responsibilities (Niraula, 2003). Gilmour and Fisher (1991) define CF in terms of control and management of forest resources by the rural people who use them especially for domestic purposes. Indeed, forests are often significant for rural communities, as they supply products such as timber, fuel wood, grazing areas and vegetables.

Governments around the world are increasingly devolving authority for forest management to the local level through CF program and there are many success stories of CF (Buffum, 2007). For instance, Nepal is regarded as one of the leading countries to embrace CF in its national forestry policy (Acharaya and Oli, 2004). This program has received highest priority within the forestry sector in Nepal and is regarded as the most successful (Acharaya 2003; Nightingale, 2002)

Though CF was always linked to poor people, there have not necessarily been specific strategies to address poor people's needs. This is now changing, but practical examples are limited (Gilmour et al., 2004). This is partly because they may not be documented, and partly because where evidence exists, there are reasons for thinking that many of the claims about benefits are indecisive, as they ignore equity aspects and the opportunity costs of engaging in programs (Fisher, 2000).

In the macro-level poverty literature and policy making, generally little recognition is given to the role of forests. There remains great potential to improve the role of forestry in poverty reduction or prevention. It is often possible to integrate forest issues into poverty reduction strategies (Angelsen et al., 2003). In terms of strategic approaches and methodologies, there are few examples of strategic approaches that are designed specifically to address this issue.

In Bhutan, at the time of its initiation in 1993, community forestry was seen as a potential threat to the conservation-oriented National Forest Policy. This fear still exists. But as evidence of the positive impacts of CF emerges, policy is changing to further support the CF program (Temphel and Beukeboom, 2006).

The support for CF from the government, senior politicians and civil servants in Bhutan represents an important political opportunity for CF (Chhetri et al., 2009). Further if the CF program is fully developed, it could make a significant contribution to the National and Millennium Development Goals for poverty reduction (Tempel and Beukeboom, 2006).

It can be argued that many, if not most, members of CF Management Group (CFMG) in Bhutan are living beneath the poverty line (Gilmour, 2009). Consequently, many of the benefits generated from CF, particularly from the sale of Non Timber Forest Products (NTFP) contribute directly to poverty reduction. However, analyses in other countries suggest that there are many distributional issues, with many of the benefits flowing to local elites, and in some cases very poor people are made relatively, if not absolutely, worse off (Gilmour et al., 2004; Gilmour, 2010)

In this context, there is a need for research that explores the contribution of CF to poverty alleviation. Hence this study will examine the perception of the poor people in existing CF activities, its benefit and mechanism on how to improve the contribution of CF in household income.

1.2. Community Forestry in Bhutan

The kingdom of Bhutan lies in the Eastern Himalaya between China in the north and India in the south. It covers a total area of 38,394 km² (MOAF, 2011) most of which are rugged mountains. The country is gifted with affluent renewable natural resources. About 69% of Bhutan's population lives in rural areas, with agriculture and forests being a major source of their livelihoods. According to the Bhutan Living Standard Survey (National Statistics Bureau, 2007), about 23% of the population of Bhutan lives below poverty level. Bhutan has approximately 29,045 km² of forests (including scrub forest), i.e.72.5% of the land is under forest cover (MOA 2002). About 14% of the forest area is allocated to Forest Management Units, with a primary objective of commercial timber production (Chhetri, 2009). Around 50% of the country's forest area has been declared as Protected Areas and Biological Corridors (MOAF, 2011).

In 1952, recognizing the rapid growth of population and increasing pressure on the country's forests, the Government established the Department of Forests with a mandate to control and manage this natural resource. With the Forest Act of 1969, all forests, with the exception of land under shifting cultivation, were nationalized and declared to be Government Reserved Forests.

The concept of Participatory forest management program in Bhutan was started in 1979 through a royal Decree (MOA, 2009; MOA, 2004) with the initiation of the national social forestry program. The program was given a boost in May 1993 when the planning commission of Bhutan recommended that the Department of Forests decentralize some forestry activities to the Dzongkhag administrations, i.e. to the district level (Buffum, 2007). The legal basis for CF program was laid in 1995 with the Forest and Nature Conservation Act of Bhutan (Chhetri, 2009). It also acknowledged traditional rights of local people to access and use forest resources. In compliance with the 1995 Act, the Forest and Nature Conservation Rules were framed in 2003. In 2006 they were revised to include a chapter for social and CF programs (Chhetri 2009; Gilmour 2010; Chhetri, in press).

The CF program was piloted by several projects during the past decade such as through the Third Forestry Development Project, the Wang watershed Management Project, a GTZ supported Project and since 2002 the Participatory Forest Management Project (Gilmour, 2010). The actual CF program, in its current form, was started only in 2000 (Tempel and Beukeboom, 2006). It started with a pilot stage, and is now moving towards mainstreaming and institutionalizing, thus becoming a major part of the forest management landscape of Bhutan (Gilmour, 2009).

By the end of 2009, the government had approved some 200 Community Forest (CF), with approx. 9,700 households involved in managing a total area of around 24,000 ha and (Gilmour, 2010). This constitutes less than 2% of the national forest land. However, with the growing interest in CF among the rural population, the figure is expected to increase (Chhetri et al., 2009). Thus, it is projected (MOA, 2009; Tempel and Beukeboom, 2006; Gilmour, 2009) that the number of CFMG could rise to about 400 by 2013 (covering about 4% of the total forest area). In the long term about 20% of the Government Reserved Forest (about 238,000 ha) has the potential to become CF (Tempel and Beukeboom, 2006; Gilmour, 2009). In order to boost the contribution of the CF program to poverty alleviation, the CF program has been prioritized under the 10th Five Year Plan (2009).

The program is also supported by international donors, for example the *Participatory Forest Management Project*, which is a five-year Helvetas project (July 2002 to June 2012) financed by the Swiss Agency for Development and Co-operation and the Royal Government of Bhutan. The project is implemented by the Social Forestry Division of the Department of Forests and Park services (Tempel and Beukeboom, 2006). Ever since its inception in 2002, the project has helped in building the capacity of the extension staff and CFMGs for sustainable management of the forest resources and supported in establishing CF throughout the country.

Thus, overall the CF program is still relatively new to Bhutan. This gives the Bhutanese a unique opportunity to learn from the successes and difficulties that the neighbours have experienced and to create an approach suitable to the local context (Chhetri et al., 2009)

1.3. Problem statement

Considering that 69% of the population of Bhutan lives in rural areas and given that poverty is generally a rural phenomenon, it would be beneficial if CF had a potential to contribute towards reducing rural poverty (Chhetri et al., 2009). The donors who are engaged in building capacity of stakeholders, and government agencies have provided opportunities to innovate, experiment and learn to identify workable approaches, methods and tools to promote CF (Gilmour, 2009). Despite the enhancement of contribution from the CF in Bhutan, many challenges still remain. Although, CFMGs have been successful in organizing people and in building social capital at group level, there is as yet relatively little generation of financial capital for the members of the CF (Acharaya and Oli, 2004). While trends towards resource degradation have been arrested and in many cases forest cover within the CF is reported to improve, it is unclear to what extent the local forest dependent communities benefit or not (Gilmour 2004; Gilmour 2009). In this context, it is useful to identify approaches that could benefit poor member of the CFMGs.

Therefore, the aim of this study is to determine which approaches targeting poverty alleviation are currently implemented by CFMGs. The study will also assess the perception of the poor members of the community on the benefits they currently derive from the CF, and their suggestions for further measures.

The findings of this study may be useful in developing new strategies for the CF program to involve and benefit poor members of the community. The results will not only be useful for the CFMGs themselves but also for the policy makers, forestry professionals and planners who aim to implement pro-poor policies.

2. Literature review

2.1. Potential of Community Forestry to contribute to poverty reduction

In the framework of CF, poverty alleviation refers to the use of forest resources to help lift a household out of poverty, e.g. by acting as a source of savings, investment, capital growth, and well being improvement (Sunderlin et al., 2005). However, in practice, the poor are often restricted in their access to forest and tree resources, while the local elites and outsiders are able to harness these resources, either legitimately or illegally, in order to accrue wealth (Mahanty et al., 2006). While powerful elites in a society can dictate or influence the way natural resources are managed, the poor are often left only to respond to situations devised by and for others. This lack of control and attendant insecurity can make it almost impossible for the poor to plan, invest or improve their situation through forestry (Mahanty et al., 2006; Archarya 2004). These and other factors help explain why the contribution of forestry to poverty reduction has been limited to date (Mahanty et al., 2006; Garner 1997).

Other studies point out that the distribution of forest products from CF is not impinged by discrimination. The analysis of two CF groups in Nepal, concerning the use of forest products, failed to reveal a discrimination against poor and lower caste people (Sharma, 2002; Baral, 2008). Sharma (2002) and Baral (2008) reported that CF can contribute to poverty reduction because the poor and lower caste households have easy access to forest products. CFMGs operating mode by commercializing its forest products as well as supporting pro-poor program provides more benefit to poorer users (Baral, 2008).

Forests in rural areas of developing countries are culturally significant, are used for subsistence and commercial needs and provide important inputs to agriculture (Arnold, 2001). However, Mahanty et al. (2006) articulated that the understanding of the role of forests in the lives of poor rural communities has moved on from a simple view, based on the supply of goods and services, to recognizing the strategic role that forests play in helping the poor cope with poverty. In addition to helping the poor meet household subsistence needs, they also fulfill important "safety net" functions in times of difficulty, enabling families to avoid hardship (Sunderlin et al., 2005). For example, NTFP sold in small quantities for low prices are generally regarded as an "employment of last resort," and can be a critical source of cash for school fees or agricultural inputs in the absence of savings or credit (Sunderlin et al., 2005; Mahanty et al., 2006).

The success of CF in increasing the area and quality of forests, especially in countries such as Nepal, is now reasonably well documented (Gilmour, 2010). Reports of the financial and

other benefits that are being generated from CF in Bhutan during the past few years are also coming to light (Gilmour, 2010). For example, Tempel and Beukeboom (2007) report that “in the past few years a total of US\$12,150 have been accumulated in the savings groups of 24 CFMGs... Perhaps, might seem only a small amount but is significant in the context that in some communities the cash economy was only introduced recently.” Peldon (2009) suggests that there is a large untapped potential for substantial increase in the marketing of NTFP from the CF. Efforts are made throughout the country, supported by a variety of institutions and organizations, to promote NTFP to generate income (Peldon, 2009). There are some encouraging examples, such as the harvesting and sale of lemon grass for the extraction of lemon grass oil in Eastern Bhutan (Peldon, 2009). Income generation from NTFP also offers considerable potential for partnerships between CFMGs and private sector enterprises. In the longer run, there is also potential for income generation from payments for ecosystem services, an approach for which a framework is yet to be developed in Bhutan (Chhetri et al., 2009)

2.2. Key factors that enable Community Forestry to contribute to poverty reduction

2.2.1 Community Forestry Governance

The Millennium Declaration and the Johannesburg Plan of Implementation both affirm the importance of good governance at local, national and international level (Brown et al., 2002). Arnold (2001) highlights the need for forest governance to turn into more inclusive and pro-poor to ensure poor people’s right for their livelihoods.

Forest governance is defined as the set of principle and rules under which power is exercised and practiced in all spheres from private to public in the management of forest resources, and the relationship between the state and its citizen, civil society and the private sector (Brown et al., 2000). Good governance in CF contributes to people’s livelihood, sustainable forest management, ensure broader participation and ownership feeling, equitable benefit sharing, and access and control to decision making process (Maharjan et al., 2004). For instance in Nepal the “Strengthened Actions for Governance in Utilization of Natural resources” (SAGUN) has been initiated to address governance issues (Maharjan et al., 2004). Some significant changes have been observed in the CFMG, which increased representation of women and marginalized people, increased transparency on financial transaction and programs activities, increased accountability of the executive committee to the general forestry users group (Maharjan et al., 2004).

In Bhutan, the 10th Plan and poverty reduction strategies have envisioned “good governance” as one of the pillars of development objectives (MOA, 2009). The issue of governance has become an important agenda in the forestry sector dependent rural communities. Among many factors, the shift in role of forestry staff from policing to advising resulted in the emergence of many CFMGs (Gilmour, 2004). In the last ten to twelve years, devolution and sharing of power, roles, responsibilities and authority among the actors have brought many changes (Temphel and Beukeboom 2009; Gilmour, 2010).

A study on equity and sustainability of CF (Buffum et al., 2005) in Bhutan found relatively high levels of equity, compared to reports from neighboring countries. This was mainly explained by four factors: ethnic homogeneity, active participation of women, supportive government policy and strong extension support. However, a subsequent study (Namgay and Sonam, 2006) identified inequity in benefit sharing as an emerging issue. By-laws often contain strict rules regarding membership, such as big hurdles to join an existing CFMG after its establishment, or penalties for leaving and eventually rejoining a CFMG. The communities usually set such rules to prevent local households from free riding by joining a CFMG only once the other households have invested considerable effort and labour in the CF and tangible benefits start to flow. While this is unquestionably a justifiable concern, it is important not to establish rules that could potentially discriminate local households, particularly poorer households. These households are often not able to provide for example the requested volume of labour or pay fines for non-attendance in meetings. All these points related to governance deserve attention (Namgay and Sonam, 2006).

2.2.2 Community Forestry Enterprises

There is considerable scope for local people to generate benefits from the sustainable management of CF, e.g. through the sale of timber, firewood, NTFP, as well as through enterprise development and marketing (Chhetri et al., 2009)

A growing concern about the contribution of CF to livelihood improvement and poverty reduction has led to a shift from subsistence to income generation (Magar, 2009). One of the strategies to generate income and stimulate the economy is the establishment of community based forest enterprises, such as micro cottage industries and small enterprises (Moktan, 2007). The strategy aims at enhancing rural income through the development of handicrafts, bamboo product, wood works and handmade paper making (Moktan, 2007).

Magar (2009) stressed that in Nepal there are different internal and external factors that affect the community based forestry enterprise to be pro-poor. He pointed out that there is no blue-print for pro-poor enterprises or development process, which should depend upon

the local context. Nevertheless, Baral (2008) reported that community based enterprise approach in CF is found beneficial to the poor users and stakeholders should promote such activities in other CFMGs.

Although, forest based enterprises are able to generate income to the poor, they do not provide dividend (Magar, 2009). In reality there are very few NTFP enterprises that have been successful in creating income and employment for the poor (Kunwar et al., 2009). There are various internal as well as external factors that influence the forestry enterprises to be pro-poor enterprises (Kunwar et al. 2009)

Tempel and Beukeboom (2006) reported that the CF program in Bhutan has as yet not focused much on NTFPs; however they will become increasingly important given their potential benefits, particularly through local value adding activities. They also expressed that NTFPs collection is presently based on conventional practices but with an additional focus on quality and product development it can generate income for communities.

3. Materials and Methods

3.1. Research aim and approach

The study aims at exploring what pro-poor measures were implemented (or not) and how they are perceived. The aim of the study is thus to:

1. provide a detailed image of the existing pro-poor activities in the CFMGs,
2. assess whether they are perceived by the poor members of the community as benefiting them, as well as
3. Identify activities the poor would like to implement to further improve their livelihoods.

To address these aims, an applied and evaluative research approach was selected, which included both descriptive and explanatory elements (Neuman, 2006). To address “how” and “why” questions, case studies are appropriate (Yin, 1994). To collect empirical data, six CFMGs were used as case-studies. Four days were spent in each study site to collect qualitative information through key informant interviews and focus group discussions.

3.2. Study site

Bhutan has six major agro-ecological zones (MOA, 2002): Alpine, Cool temperate, Warm Temperate, Dry Sub-tropical, Humid Subtropical and wet Sub-tropical. To cover a broad range of spatial and socio-economic conditions, CF in each of the five agro-ecological zones were included. This would help to analyze both differences and similarities between agro-ecological zones. To select the CF, following criteria were set:

1. The CF was handed over to the CFMG at least 2 (better 5) years ago.
2. The CF should have well-established natural forests, i.e. there should be at least some harvesting of forest resources taking place.
3. The forest area and number of member households should be similar for all the selected CFMG.
4. The six selected CFMG should be at similar distance from a motorable road head, thus giving them good access to markets.
5. The selected CFMG should have activities targeted specifically at poor members.
6. The selected CFMGs should have some forest-based enterprises.

The officials at the Social Forestry Division in Thimphu were consulted for information that allows to select adequate study sites. Following the discussion with the officials of the Social Forestry Division, it became clear that it would not be possible to identify six CF that fulfill all

the criteria. Thus, the criterion regarding similar size and equal number of households (criteria 3) was dropped. Based on the remaining five criteria, six CF were selected (Fig. 1)

The officials also supported the study by sending a letter to the District forestry officials and to the communities, informing them about the upcoming research visit and asking for assistance in organizing the field work.

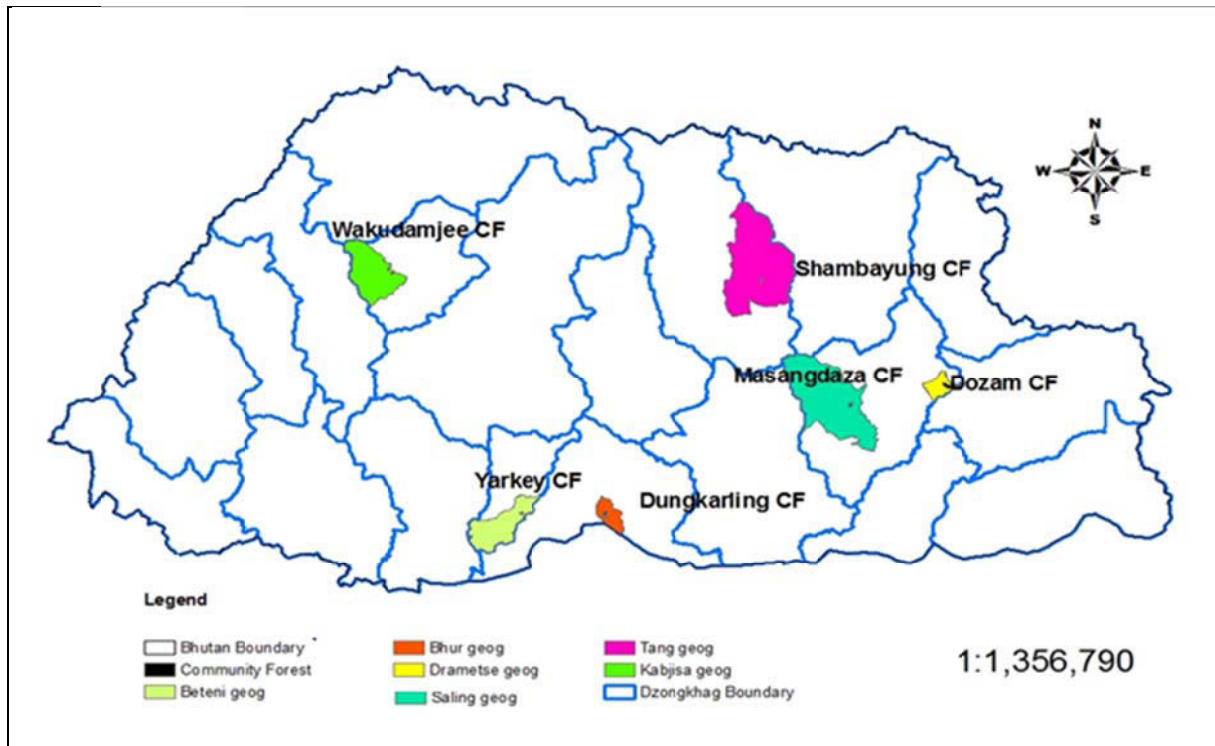


Figure 1: Location of the Community Forest included in the study

The six CF included three with mostly conifer forests and three with mostly broadleaved forests (Tab. 1)

Table 1: Key characteristics of the Community Forestry included in the study

Name of CF	Forest area (ha)	No of households	Forest type	Year of establishment
Shambayang CF	46	24	Blue pine	2003
Masangdaza CF	87	36	Chirpine with some broadleaf spp.	2002
Dozam CF	300	114	Chirpine	1997
Waku Damchi CF	75	42	Mixed broadleaf	2005
Yarkey CF	128	44	Mixed broadleaf	2008
Dungkarling CF	114	78	Mixed broadleaf	2004

3.3 Methods

3.3.1 Overview of data collection

Primary data were collected through semi-standardized interviews with 3 staff members of the Social Forestry Division in Thimphu. In each of the six CF, data was collected through semi-standardized interviews with 2-3 key informants (e.g. District Forest Officer, Geog (Block) Forestry Extension staff, etc) and through focus group discussions (Tab. 2). In each CF, three focus group discussions were held: one with the committee members, one with poor men and one with poor women. Review of available literatures on the subject for secondary data collection was also being carried out.

Table 2: Number of respondents for each data collection method in each CF

Community Forest	Committee member	Poor Men	Poor women	Key informants
Shambayung CF	8	5	8	3
Masangdaza CF	6	6	5	3
Dozam CF	6	8	5	2
Waku Damchi CF	5	5	5	2
Yarkey CF	5	4	5	2
Dungkarling CF	7	5	5	2
Total	37	33	33	17

3.3.2 Semi-standardized Interviews

A semi-standardized interview was conducted with 2-3 key informants in each CF. The aim was to get an overview of the general situation of the CF, as well as in-depth information about the approaches to include poor members of the community in governance in the CF, as well as about the enterprises that were set up to benefit the poor members. Through the semi-standardized interview, the interviewer was permitted to explore beyond the answers to their guideline questions (Berg, 2006). The use of an interview guideline helped to ensure that comparable information was collected in each CF. Following six questions were included in the interview guideline:

1. What are the main benefits that you (i.e. the community) are currently deriving from the community forests?
2. Have you implemented any enterprises to market timber or non-timber forest products?
3. Have you implemented any activities in the CFMG to specifically help the poor members of the community?

4. What new activities would you like to implement?
5. What prevents you from implementing these activities?
6. What do you need to implement these new enterprises/activities?

A digital voice recorder was used for recording the interviews. After seeking permission from the interviewee, the recorder was set up prior to the interview and made visible to the interviewee.

3.3.3 Focus group Discussions

Focus group discussions were held to obtain in-depth information on perceptions and ideas of the participants. The aim of a group discussion was to overcome the limitations of a question-answer interaction (Lewis, 2000). The group members discuss the topic among themselves, with the researcher acting as a facilitator (fig 2). Each focus group discussion lasted between 1 and 3 hours. Following questions were discussed in each group:

- Current management and governance practices
- Income generating activities and enterprises implemented in the CF
- Distribution of the benefits
- Problems faced while implementing the activities
- Future potential activities and enterprises

To assess the relative importance of each current activity and of the proposed future activities, the 'sticky dot' technique was used. Each focus group was asked to assign sticky dots to their preferred current and potential activities (Fig 3).



Figure 2: Poor women's group discussion



Figure 3: Sticky dot assigned by Participants

Each participant received 5-7 Sticky dots depending on the number of participants and the number of alternatives. For instance, if there are seven participants with seven alternatives/activities, then five sticky dots for each person were given. If there are more alternatives/activities than participants, more than five sticky dots were given while less than five sticky dots were provided if there were fewer alternatives/activities. This method helps to ensure that there are clear distinctions between the selected alternatives (Freimuth, 2000).

In order to find out the key problems faced by the CFMGs, the participants were asked to present the important problems they have encountered whilst implementing the community forestry activities and the problems that impeded the execution of pro-poor activities. The problems were recorded/listed down and participants were asked to grade each of them as serious or not serious by expressing "Yes" or "No". This enabled to determine the focus groups' perception on the magnitude of problems and the measures they would like to adopt to deal with the problems in future.

Three group discussions were held separately with the following focus groups: (1) the management committee of the CF, (2) poor men and (3) poor women. The participants in the group discussions with marginalized groups were selected in consultation with the CFMG committee members. The group discussions with the marginalized groups were split into two, i.e. poor men and poor women discussed separately. This was done to assess whether the women and the men have different perceptions of the current activities in the CFMG and whether they have different preferences for future activities in the CFMG.

All group discussions were recorded using a digital voice recorder. The recorder was set up prior to the discussion and permission was sought from the participants to record the discussion. Also, the researcher took notes during the discussion, mainly to capture key statements made by the participants, so as to facilitate further discussion on these issues and to facilitate data analysis. Note taking was also done as 'back up', in the event the digital voice recorder stops working.

Following each group discussion, the researcher wrote a brief protocol on the most important topics discussed and the issues that can inform the analysis of the data (e.g. whether the group discussion was lively, whether some topics created unease in the group).

3.3.4 Secondary Data Collection

Data from CF management plan were used to verify the information collected from the key informants and focus group discussion. The following information were taken from the CF management plan (1) Location, total area and block wise specific objective (2) Role and

responsibilities of committee members and (3) Benefit sharing. Literature review was carried out on the related subject matter area and similar case studies from the neighboring countries were referred. Data were also gathered from published and unpublished reports of various organizations such as Social Forestry Division, Department of Forest and the Ministry of Agriculture.

3.4 Data analysis

The research followed a qualitative approach and the data was triangulated to ensure adequate interpretation. All key informant interviews and focus group discussions were analyzed as per the findings of the analysis and report of the focus group (Jayanthi and Nelson, 2002). This provided complete information of the discussion which helped in data analysis. It was followed by analysis of the main content of the discussion. The analysis looked at the trend and patterns that reappeared within either a single focus group or among various focus groups (Berg, 2006)

3.4.1 Analyzing key informant's interview

The key informants were interviewed using an audiotape and relevant information was gathered. The information was transcribed in written text based on the guideline questions. The transcripts were then summarized to ensure that they can be understood and interpreted (Jimenez, 1985). The sections of the note that relate to each question were highlighted and comments were quoted.

3.4.2 Analyzing each focus group

The audiotape recorded and notes taken from each focus group were analyzed according to the procedures proposed by Jayanthi and Nelson (2002). Each guide question used during the group discussions was written on a separate page. Researcher took note of all relevant information recorded in the audiotapes. Listening to the tapes allowed the researcher to capture major issues and themes that may have been missed out by the notes (Dudley and Phillips, 2005). The following main tasks suggested by Jayanthi and Nelson (2002) were followed for each focus group.

- Writing each question on a separate sheet
- Identification of relevant information for each question.
- Paraphrasing and condensing the gathered information.
- Writing quotes that best illustrated the main points in the findings.
- Checking information written for the first question against the end-of-the question summary

- Checking compiled information under each question against the post focus group summary to ensure that no key points were being missed out.

The numbers of sticky dots were converted into percentages that allowed for comparison of focus groups for each activity. The sticky dots percentage was calculated as follow:

$$\frac{\text{Total number of sticky dot assigned for each activity by group}}{\text{Total number of sticky dot allocated for each group}} \times 100$$

The raw data (sticky dots/activity) for current and potential activities is presented in Annex.

4. Results

4.1. Shambayung Community Forest

The Shambayung CF is located near Ugyencholing village of Tang *geog* of Bumthang *Dzongkhag*. The CF falls within the buffer zone of Thrumshingla National Park and has an area of 46 hectares. The 23 households of Ugyencholing village are the members of the CFMG. According to the Shambayung Community Forest Management Plan (CFMP, 2003) the CFMG has divided the CF into two management blocks (Yumgang and Braja) to enhance its management. Yumgang Block has an area of 24 hectares. This block has substantial amounts of timber, pole and post that could be used for construction purposes. The block's main specific objective was to improve the young forest stand and enhance income generation by selling timber, pole and post. Braja block has an area of 22 hectares and its main specific objective was to have a sustainable harvesting of timber (timber for house construction) and to protect their drinking water source.

The main forest type is conifer forest dominated by Bluepine (*Pinus wallichiana*) associated with spruce (*Picea spinulosa*) and other species (fig 4).



Figure 4: Overview of Shambayung Community Forest

The undergrowth is mostly dwarf bamboo that does not have economic value. Regeneration is abundant especially in open areas and forest areas where the canopy density is less than 50%. The overall forest condition is good with uneven-aged stands that have good potential for harvesting.

The Geog Forestry Extension Officer (Key Informant) stated that the residents of Ugyencholing have

realized that unless they undertake some proper management measures, the forest would become degraded, which could have long term effect on their livelihoods. In addition, they feared that without protection, their drinking water source area will be disturbed. Considering the above facts, the residents of Ugyencholing had proposed to establish the CF. Their goal is to manage the CF to meet their own daily requirement of forest products such as timber for house construction, firewood, fencing posts etc. Additionally, they could still need to

harvest several other products from the national forests, such as shingles for roofing and bamboos that are not found in the CF area.

According to the Dzongkhag Forest Officer (Key Informant) the CFMG with the assistance of Dzongkhag Forest Office prepared the by-laws and Community Forest Management plan (CFMP) that is used as a guiding document for CF management. Further, the CFMG committee was formed as an executive body responsible for the smooth implementation of CFMP. The committee is composed of eight members and their tenure is based on their capability and commitment toward CF activities. As per the Shambayung CFMP (2003) the committee comprised of a Chairman who served for a management plan period (10 yrs) unless faced with unavoidable circumstances. The Secretary, Accountant and other Committee Members served for three years. Any committee members could resign without completing his/her tenure under unavoidable circumstance. The elections of the committee were done through a general CFMG meeting. The main roles and responsibilities of the committee were to implement the CFMP such as coordinating meetings and implementing plan activities, planning and monitoring of the day to day activities, and managing the CFMG fund etc. The CFMG committees were also responsible for distribution of forest products based on their CFMP (2003).

The CFMG meet twice a year (half-yearly) mainly to review and plan activities, discuss constraint and issues pertaining to the implementation of management plan and to present the financial information to the CFMG members (CFMP, 2003). However, the meetings for the committee members were held on monthly basis to discuss the plan activities and its related problems in the process of implementation and find out possible solutions to overcome issues.

Concerning benefit sharing (CFMP, 2003) any kind of forest products (timber, pole, post, etc) are to be distributed on need basis, to the individual household as per their entitlement prescribed in the CF plan, irrespective of small or large household members. The CFMG also collect fire wood and litter for cattle bedding for free of cost throughout the year.

However, individual members do not have right to sell forest products (timber, pole, post and firewood) to the outsiders that were provided for their bonafide use. Only the CFMG have the right to sell and in case the price needs to be revised, it will be set up by the CFMG based on prevailing market rate. The CFMG fund were generated from various sources such as sale of forest products, membership fee, donations from tourists and other visitors and fines collected from rule violators.

4.1.1 Current activities and benefits

All three focus groups indicated harvesting of timber, pole & post as the most important activity for the CFMG (Table 3) because they were widely used for house construction/maintenance, as fencing materials for their agricultural fields and for other essential domestic purposes.

Table 3: Current Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting of timber, pole and post for CFMG member	61	58	67	58
Loan to CFMG members	39	42	33	42
Fire wood and litter for cattle bedding	0	0	0	0
No of Participants	–	8	5	8
No of sticky dots per participant	–	3	3	3

The poor men's group assigned high sticky dots to the harvesting of timber, pole and posts (Table 3) which indicates that the men are mostly engaged in harvesting of timber, pole and post for their household needs and had felt the benefits of having CF. They claimed that with the establishment of a CF, long and cumbersome administrative procedures for obtaining approval from the Forest Department for timber, pole and post were shortened, which means the members could get the timber approval from the CFMG committee within short period and saved cost and time. The poor men's group expressed:

“Earlier, we have to run here and there to seek help to obtain permit”, “now within few days without travelling outside of our village we are getting permit, which is a boon for us.”

For the collection of timber, pole and post, the members were required to pay a nominal fee (royalty) fixed by the CFMG, which was lower than the royalty they paid prior to the establishment of the CF.

One of the important activities articulated by the focus groups was to generate fund and provide loan services to the members. The loan service for the CFMG was established through the CFMG fund. All the three focus groups claimed that although the fund was limited, the members benefited from the loan facilities as they could acquire loan at low interest rate and was simpler in terms of official procedures (e.g. no security/guarantee required) and travelling distances.

The poor women's group indicated loan services as important activity by assigning more sticky dots (Table 3). They revealed that through this services the poor members were able

to improve cash income generating activity such as procuring good quality seed on time to enhance potato production, and was able to buy necessary household needs (food items), school uniform/books for the school children etc. Further, the women's group also claimed that the loan helped to sustain the poor members during emergencies. The poor women's group expressed:

"We can avail loan without interest for two months during emergencies like death or treatment of family members", and said "This has benefited us when we are in need."

The loan was provided to the CFMG members both poor and rich. When there were fewer members interested to avail loan, the opportunity was given to the outsiders to avail loan at higher interest rate to maximize profit.

Although the collection of firewood and litter for cattle bedding were considered essential for their living, none of the groups assigned any sticky dots (Table 3). It was due to the fact that, the firewood and litters were in abundant and easily available from any forests around their village (either from govt. reserved forests or from the CF).

4.1.2 Current problems

There were several problems that hindered the effective implementation of the community forestry program (Table 4).

Table 4: Assessment whether problems encountered while implementing the Community Forestry Program is serious or not

Problem encountered	Committee	Men	Women
Lack of road for transportation of forest resources	yes	yes	yes
Non-delivery of marking and passing hammer for timber extraction from the government.	yes	yes	yes
Limited fund	yes	yes	yes
Limited knowledge on processing and marketing of forest products	yes	yes	yes
Lack of incentive for the CFMG committee members	yes	no	no

Although the CFMG was permitted to market timber as specified in the management plan, they were not able to sell due to the lack of road infrastructure within the community forests for transporting timber and other administrative lapses from the government such as non-issuance of timber marking and passing hammer. The CFMG were not able to construct road due to lack of fund for construction. All the focus groups had clear consensus (Table 4) that the CF is located 2 km away from the existing feeder road which made it difficult for the CFMG to extract and transport forest product for commercial purpose, as the extraction and transportation cost would be very high. Consequently, the poor men's group expressed:

“Even we couldn’t harvest 10 big standing trees annually for sale although we are eligible as per the CF plan, because there is no road in the area”. “Transportation cost will be very high”. and said “non receipt of marking and passing hammer from the government has further delayed our extraction.”

One common problem raised by the three focus groups (Table 4) was that due to lack of financial capital the CFMG could not initiate new activities such as support to disadvantaged group and scholarship for students. Therefore, they felt it necessary to enhance income generation through marketing of timber and other forest resources. The Geog Forestry Extension officer stated that although the non availability of marking hammer and transits permit was a problem till now, the Department of Forest is already in the process of delivering the same to the CFMG members. He, however added that no cost benefit analysis was carried out considering the extraction and transportation cost. This, he said should be studied thoroughly to have a sustainable harvesting of forest products.

According to the committee and men’s group, (Table 4) the limited skills and knowledge on processing and marketing of forest products from the CF was a problem because the CF program was new to them and many of them were illiterate and not trained in such activities. The questions on the issue of “no incentives” for the committee members while performing the duties were raised by the committee members. They expressed that despite shouldering heavy responsibilities, the committee members were working without any incentives thus resulting in frequent resignation of the members prior to the expiry of their actual term. The committee expressed: *“we feel that is the reason for resigning”*. Therefore, the committee members felt the need to have a sensible incentive either in terms of cash or in kind to the CFMG committee members which could accelerate the progress of CF program. Although the problem was not categorized as serious, at least for the time being, their concern was acknowledged by poor men and women’s group expressing that the committee members were devoting more time on CF related works as compared with other CFMG members.

4.1.3 Potential new activities

The potential pro-poor activities listed by the different focus groups were much more than the current community forestry activities. The focus groups highlighted their preference for potential activities based on the capacity and availability of resources from the CF. Beside the current activities, several new activities were prioritized to improve the contribution of CF to income generation for the CFMG (Table 5).

Table 5: Potential Community Forestry activities and preference for each focus group (% of sticky dot)

Activity	Average	Committee	Men	Women
Timber harvesting for marketing	22	19	17	31
Construction of road in the CF area	22	21	20	25
Loan to CFMG members	19	15	17	25
Harvesting of timber, pole and post for household consumption	18	17	17	19
Furniture enterprises	10	14	16	--
Purchase of truck for transportation	9	14	13	--
No of participants	–	8	5	8
No of sticky dots per participant	–	6	6	4

Note: -- Activity not mentioned by that focus group

The committee members and poor men's group highlighted all the six major potential activities for the CFMG whereas women's group highlighted only four major activities as their preference (Table 5). The poor women's group assigned high sticky dots for timber marketing, road construction and strengthening loan facilities. This revealed that women's group was keen in marketing the forest resources (timber) and aspired to increase revenue for the CFMG to strengthen loan services. The poor women's group revealed: *"In future we like to sell timber for cash income"*. The road construction was considered important by all focus groups as it was the main link between extraction and marketing of timber for income generation. The Committee and poor men's group expressed their desire to request the government for a farm road connecting their village and passing through their CF area, which if approved, would mean a windfall for the CFMG members.

Since the CF had high potential for harvesting and marketing of timber, both committee and poor men's group expressed their intention to buy a portable sawmill for processing the timber to semi-finish good that would be cost effective as compared with transporting in log form. The poor men's group emphasized the need to establish furniture enterprises and to start a transport business by assigning more sticky dots as compared with the committee's and the women's group (Table 5). They emphasized the need for forming a sub group within the CFMG for implementation of such enterprises that would generate income and provide employment especially to the school dropout youths. The poor men's group expressed:

"We want to make profit and provide employment to the school leavers by establishing a furniture house", and said "even transport business."

In addition, the Dzongkhag Forest Officer has also articulated that there is a potential to start furniture enterprises as the CF can produce good quality timber for furniture making, which would enhance the CFMGs income and render employment to the youth. Keeping in view of the increase in transportation cost for forest and agricultural goods, the men and the

committee members group expressed their interest to start a transport business too (purchasing a truck) from the CFMG fund. They felt the need to form a smaller group of two to five members to run the business and provide cheaper transport services to the members for transporting forest products from the CF area. Further, the group acknowledged that such business could also facilitate easy transportation of potato to the market as potato production is one of the main cash generating activities for the Shambayung CFMG members.

4.1.4 Summary

The potential pro-poor activities listed by different focus groups were much more than the current community forestry activities. All three focus groups highlighted two major current preferred activities with the men's group placing high sticky dots to the harvesting of timber, pole and fencing posts for bonafide use whilst the women's group assigning high sticky dots to the loan services. With the establishment of CF, long and cumbersome administrative procedures for obtaining approval from the Forest Department were shortened. All focus groups indicated several problems such as lack of capacities of the CFMG, limited fund and non issuance of marking and passing harmer from the government while implementing the current CF activities. Beside the current activities, potential activities such as road construction in the CF area have been placed as high important by all the focus groups. Both poor men and committee members placed importance in furniture enterprises and transport business as potential activities that would generate income for the CFMG. The focus groups aim to have more commercialization of forest resources rather than focusing only to traditional subsistence practices.

4.2. Masangdaza Community Forest

Masangdaza CF is located 37 km from Mongar town. The area covers 87 hectares and extends from 690 to 980 masl (CFMP, 2002). There are 37 households involved in managing the CF since its establishment in 2002. The first and current management plan is for a 10 year period (2002 to 2012). The main objectives of the CF was to improve the sustainable supply of forest produce and services to enhance the self-sufficiency, improve the economy and to ensure equitable decision making, implementation and distribution of forest benefits for its members (CFMP, 2002). Masangdaza CF (fig 5) consists of a mixture of 70% chirpine (*Pinus roxburghii*) and 30% broadleaf forest (*Rhuspenticulatum*, *schimawallichii*, *quercus spp.*, etc.).



Figure 5: Overview of Masangdaza Community Forest

According to the Dzongkhag Forest Officer (key informant) The Masangdaza community depends on this forest mainly to meet the daily necessities such as fuel wood, timber, shingles and other construction materials. The forest was also used for cattle grazing by the local community. The local community has noticed over-exploitation of timber and fuel-wood

species by outsiders from neighbouring villages. The NTFPs such as wild fern, mushroom, etc. were scarcely distributed in some corners of the designated forest and it is insufficient for their daily needs. Beside the forestry products, the main source of drinking water for the Masangdaza community is being tapped from the stream located towards the eastern boundary. The entire village depends on this forest for water as it is the main source of drinking water for the community.

The committee consisted of five members: The Chairperson, the Secretary, two CFMG representatives and one accountant who will serve for three years (Masangdaza CF plan, 2002). The committee members will be changed if they do not satisfy the overall development and management of the CF within the three years term. According to the committee members, the committee members were selected from all categories of the people irrespective of social status. The elections of the committee were done through a general CFMG meeting and were based on the personal capabilities and efficiency of work assigned. The main roles and responsibilities of the committee were to implement the CF management plan such as planning and implementing activities, monitoring and reporting activities, and management of the CFMG fund.

The general meetings for the CFMG were held twice a year mainly to discuss the progress and implementation of activities and to present the financial information to the CFMG members (Masangdaza CF plan, 2002). All the CFMG members from each household are required to attend the meeting and the absentees will be liable to be fined. Concerning benefit sharing the committee members revealed that any kind of forest product will be distributed on need basis and based on the availability of resources. However individual members do not have the right to sell forest products (timber, pole, post and firewood) to outsiders that were provided for their bonafide use. Only the CFMG has the right to sell the forest resources.

4.2.1 Current activities and benefits

The current activities highlighted by the different focus groups can be seen in Table 6. It revealed that most of the activities were similar with some variations in their preferences among the different focus groups.

Table 6: Current Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting of timber, pole, post and firewood for CFMG members	27	23	27	32
Farm road construction	25	23	23	28
Support for disadvantaged CFMG members	19	17	20	20
Loan to CFMG members	18	20	13	20
Timber processing and marketing	11	17	17	--
Number of participants	-	6	6	5
Number of sticky dots per participant	-	5	5	5

Note: -- Activity not mentioned by that focus group

One of the immediate benefits the CFMG have seen is the harvesting of house building timber, pole and post and firewood from the CF area. All three focus groups assigned high sticky dots for this activity with the poor women's group placing the highest sticky dots compared to poor men and committee (Table 6). This revealed that with the establishment of CF, it has become unproblematic for the members to obtain permit for forest resources which have been very long procedures in the past. Fees fixed by the CFMG were to be paid as royalty for forest resources which was lower than the royalty they were paying prior to the establishment of the CF.

To generate funds and provide loan services to the members was considered important by the women's group placing high sticky dots. They expressed that by acquiring loan they were able to purchase household items and also helped in procuring weaving materials for weaving cloths by the women and were able to earn income by selling woven cloths. The committee members also expressed that although the fund was limited, the members benefitted as they could acquire loan at lower interest rate compared with the normal bank and also they could avail loan within short period of time. When there aren't many members interested to avail loan, the opportunity was given to the outsiders to avail loan at higher interest rate to maximize profit. The loan service was established through the CFMG fund generated from various sources such as sale of forest products, membership fee, donations from visitors and fines collected from rule violators.

The committee and men’s group have highlighted timber processing and marketing as one of the important activities (Table 6). They revealed that through the sale of dead and fallen trees they were able to raise funds which have been invested for road construction in their village and for other purposes. The poor men’s group expressed: *“We managed to construct almost two km of road through our CFMG fund”*. They assume that by constructing a farm road would bring economic benefit to the community for instance the community can transport agricultural goods for marketing. Providing support to the disadvantaged groups was also considered important by all focus groups with the poor men and women’s group assigning high sticky dots. The men’s group expressed that whenever the community has to contribute cash for organizing local festival/ceremony or labor contribution, they have stopped collecting the same from the disadvantage groups’ who cannot afford to pay. Instead, the contribution is made from the CFMG fund. The poor men’s group expressed: *“This has really relieved the poor member (...) otherwise they are facing problem looking for money.”*

4.2.2 Current problems

Several problems that hindered the effective implementation of the CF program were revealed during the group discussions (Table 7).

Table 7: Assessment whether problems encountered while implementing the Community Forestry Program is serious or not

Problem encountered	Committee	Men	Women
Lack of skills and knowledge for processing and marketing of forest products	yes	yes	yes
Limited funds	yes	yes	yes
Loan not accessible to poor CFMG	no	no	yes
Limited managerial skills	yes	yes	yes

Despite the benefit they derived from the CF, numerous issues were raised by the focus groups (Table 7). Although they have potential of marketing timber and various NTFPs, they were not able to do so due to their limited skills and knowledge in processing and marketing of the products. The limited CFMG fund and their limited managerial skills were also raised by all the three groups.

Although the committee members revealed that the loan was provided to the CFMG members irrespective of poor or rich, the poor women’s group expressed their concern on the loan disbursement. They revealed that the clients were mostly from the wealthy members. For the poor member/disadvantaged group it was difficult to receive a loan as the

CFMG fears that they may not be able to repay the loan and interest at the given time period.

4.2.3 Potential new activities

The focus group highlighted their preference of potential activities based on the capacity and considering the availability of resources from the CF. Beside the current activities, several new activities were prioritized as potential activities that will improve the contribution of CF to income generation for the CFMG (Table 8).

Table 8: Potential Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting of timber, pole, post and firewood for CFMG member	21	23	20	20
Loan to CFMG members	21	23	20	20
Support to disadvantaged CFMG members	15	17	17	12
Processing and marketing of timber	15	--	23	20
Furniture enterprise	13	20	20	--
Weaving enterprises	9	--	--	28
Bamboo product development	6	17	--	--
Number of participants	-	6	6	5
Number of sticky dots per participant	-	5	5	5

Note: -- Activity not mentioned by that focus group

The subsistence use of timber, pole, post and fire wood and strengthening loan services were considered important by all groups assigning high sticky dots. This indicates that the CFMG are deriving benefit from these two activities and they would like to continue enjoying benefit from the services. The opening up of furniture enterprises was placed as important by committee and men's group. They expressed their interest of harvesting high class timber and manufacturing furniture to earn cash income and provide employment to the youth. Bamboo product development and marketing was also considered important by the committee members. The committee members revealed that there is potential for bamboo production and producing bamboo furniture and handicraft items could fetch good prize. As such, they have the desire of forming a sub-group within the CFMG who could work on such enterprises.

The poor women's groups have indicated to establish a weaving enterprise especially for the young women in their village. They revealed that with the weaving business, they can employ young women and can earn good income for their living. The poor women's group stated:

"Our priority is to have a weaving group within the CFMG and seek loan from the CFMG fund."

The Dzongkhag Forest Officer also expressed that instead of providing loan to each and every individual it would be more convenient for the CFMG to provide loan to a small sub-groups such as weaving enterprise and furniture enterprise as the level of risk for non-payment would be reduced and it would benefit a larger group.

4.2.4 Summary

The poor women's group listed four current and five potential activities whereas poor men and committee members listed five activities each. The subsistence use of forest resources such as timber, pole, post and firewood were considered important by all three groups. This indicates their dependency on the resources and the benefit they enjoy from the CF. Several problems such as limited capacities in processing and marketing of forest products, limited financial capital and inequality in disbursing loans were highlighted. Besides the current activities, the poor women's group indicated weaving enterprise as potential activity, the poor men's group proposed a furniture enterprise as potential new activity. The committee members came up with potential activities such as bamboo product development and establishment of a furniture enterprise. Supports to disadvantaged groups were also listed as important by all three focus groups. Both poor men and women's group expressed their desire to strengthen loan services by raising funds and making the services easily accessible to the poor/disadvantaged groups.

4.3 Dozam Community Forest

Dozam CF was the first nationally approved CF in 1997 (CFMP, 1997). It is located in Drametse Geog, 67 km from Mongar town and has 114 households from seven villages. The CF covers 300 hectares and is located between 800 to 2000 masl (CFMP, 1997). The Dozam CF consists of open grassland within conifer vegetation. Chirpine (*Pinus roxburghii*) is the dominant tree species in the area. Some fodder tree and grass species can also be found. According to the Dzongkhag Forest Officer (key informant) the vegetation within the CF is poor and barren, due to earlier severe biotic pressure for timber, fuelwood, open grazing and lately by harvesting of lemon grass (Fig 6).



Figure 6: Overview of Dozam Community Forest

The Dozam CF is divided into 3 main blocks: Plantation block, the Barren, and the Natural stand blocks. The objective of the CFMG was to promote community participation towards environmental conservation. This was to be achieved by improving the productivity of the CF through rehabilitation: Planting of native species and ensuring its subsequent protection.

According to the Geog Forest Extension Officer (key informant) except for profuse lemon grass cover, the Dozam CF provides hardly any other forest resources for use by the community. Thus, the CFMG members have to depend on outside CF for construction timber, firewood etc. As per the Dozam CFMP (1997) the average density of seed trees can be estimated at 15-20 trees per hectare. Ground regeneration is favourable, mainly in the east than other parts of the area. The under-stocked plantations raised by the CFMG since 1996 have attained height between two to three meters. Fodder tree species known locally as *Ratsashing*, *Barchongmashing* and *Naptangshing* are the only three species found in CF. The Geog Forest Extension Officer articulated that usually regeneration takes a long time to establish, as the soil depth is low: between 0 and 20 cm. The CF has seven spring water sources which need to be protected for sustainable supply.

According to the Dzongkhag Forest Officer, although the CF is severely degraded, there is high potential for lemon grass (*Cymbopogon flexuosus*) and Indian gooseberry or Amla (*Emblica officinalis*) production from the CF area. He stated that these two species grows abundantly in chirpine forests favoured by warmer climatic conditions. Lemon grass oil distillation was part of the activity carried out in the Dozam CF area and is one of the main sources of income for the CFMG.

Following the guideline from the Department of Forests, the CFMG with the support of Dzongkhag Forest Office prepared the CFMP (1997). For effective management of the CF, seven committee members were elected. These include the Chairman, Secretary, and five other members. As per the Dozam CFMP (1997) the committee members are responsible for smooth implementation of CF activities in consistence with the agreed CF management plan. For this, the committee was entrusted to mobilize and organize the CFMG members to implement annual planned activities, protection and management of the regeneration and manage the CFMG funds. The chairman of the CFMG mentioned that every CFMG member

were eligible for committee member irrespective of gender class as long as he or she is capable of shouldering responsibilities. The selection of the committee members were done through the voting process, which takes place during annual CFMG meeting.

As far as the benefit sharing is concerned, allotment of timber were not to be considered for the entire plan period because of the limited stock of timber size trees in the CF. However, in special cases, such as if houses are damaged by natural calamities, one to two standing trees will be accorded to the family, at the royalty fixed by the CFMG. Collection of lemon grass for oil distillation and Installation of cottage distillation unit are possible following permission from the committee members, and payment of the amount fixed for each type of distillation unit. The CFMG members will have the priority to operate distillation units based on above conditions.

4.3.1 Current activities and benefits

The poor men and women's group indicated high priority for forest nursery and seedling plantation by placing high sticky dots (Table 9). This reflects the fact that the CF area has few tree resources, thus making it difficult to meet the demand for household consumption. The poor men's group expressed that their CF area is almost barren due to frequent fire outbreak and because of unregulated grazing and exploitation of forest resources in the past. They are carrying out an intensive reforestation program so that in the long run they will no longer suffer from shortage of timber, pole, post and firewood for their living. It reveals that the CFMG were becoming more aware of the benefits they are deriving from the CF and felt the importance of conserving the environment through awareness trainings and their participation in managing the resources.

Table 9: Current Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Nursery creation and forest plantation	30	20	37	32
Lemon grass production and marketing	27	27	25	28
Amla production and marketing	22	23	20	24
Support for disadvantaged CFMG members	12	17	18	--
Wild asparagus collection and marketing	5	--	--	16
Loan to CFMG members	4	13	--	--
Number of participants	-	6	8	5
Number of sticky dots per participant	-	5	5	5

Note: -- Activity not mentioned by that focus group

One of the dominant pro-poor activities was the Lemon grass harvesting and marketing. All three groups indicated this activity as an important economic activity with the poor women's

group assigning highest number of sticky dots (Table 9). According to the men and women's group, the CFMG auction the contract of harvesting lemon grass to the local distillation units. The amount from the sale of lemon grass contract is deposited in the CFMG fund. The CFMG members are then hired by the distillation unit owners for harvesting the lemon grass from the CF area. The daily labour wages received from the collection of lemon grass were paid to the individuals. The poor men's group stated:

"Lemon grass harvesting from the CF area is our main cash income generating activity right now."

The Geog Forest Extension Officer stated that the practice of lemon grass collection and distillation of oil and marketing was first introduced by Tashi Commercial Corporation followed by Ministry of Agriculture since 1980s. The committee members revealed that annually, about 500 liters of lemon grass oil are produced from this CF alone. The residues of the distillation process are used as mulching, cattle feed and bedding material.

One important activity highlighted was the collection and marketing of Amla (Indian gooseberry). The poor women's group revealed that in the year 2010 the community was able to raise Nu. 60,000 (\$ 1,333) through the sale of Amla to the Indigenous hospital in Thimphu. The amount was then distributed to the individual collectors according to the quantity of Amla fruit they have collected. The poor women's group expressed:

"We could sell as much as we have harvested from the CF."

"Although it was a small amount it helped a lot in purchasing household items."

The support to disadvantaged groups within the CFMG was considered important by men and committee members. They mentioned that the CFMG were able to assist in building two to three houses for the homeless members. They have contributed labour, timber and roofing for constructing the houses. This, they said was a great achievement for the CFMG members and has benefited the disadvantaged groups.

The women's group expressed their preference for the collection of wild asparagus as they were earning income from the sale of asparagus and were able to purchase necessary household items such as salt, cooking oil and cloths, etc for their family. The asparagus is grown widely in the barren land and mostly women and youth were collecting this wild vegetable for home consumption and for marketing.

Although poor men and women's group did not mention the loan services, the committee members considered it important and helpful for generating income. They revealed that through the loan services mostly to richer members and outsiders they were able to maximize the profit through levying interest.

4.3.2 Current problems

There were several problems raised by the focus groups that hindered the effective implementation of the community forestry program (Table 10).

Table 10: Assessment whether problems encountered while implementing the Community Forestry program is serious or not

Problem encountered	Committee	Men	Women
Limited funds	yes	yes	yes
Lack of organizational and development skills	yes	yes	yes
Hostile forest rule on stone extraction from CF	yes	yes	no
Poor members are left out from the loan service	no	yes	yes

One common problem raised by all the three focus groups (Table 10) was the inadequate fund for further development of pro-poor activities. Although they wish to strengthen support for the disadvantaged groups they were able to support only few members due to lack of financial capital. Therefore, they felt it necessary to increase the CFMG fund through income generating activities such as stone quarry and strengthening lemon grass and Amla production and marketing. All focus groups have also expressed their weak management of the CFMG as the CFMG was large and the committee members have limited capacity in organizing and managing the group effectively. Therefore they would like to seek support from the Government or from donors to support the capacity development of the CFMG. The committee members expressed:

“We lack organizational skills to manage such a big group.”

In line with their statement, the Geog Forest Extension Officer has expressed his concern about the organizational problem within the CFMG and said that the CFMG need to organize in a resourceful way for effective management and to derive optimum benefit from the CF.

The committee and men’s group also expressed their dissatisfaction on the hostile forest rule on stone extraction from the CF area. Although the CF has potential for stone extraction, the Forest and Nature Conservation Rule doesn’t permit them to extract stone as stated by the poor men and committee members. The poor men’s group expressed:

“When other people can extract stone why is the CFMG not allowing it”, and said “we have a good stone collection site if we are given chance to extract.”

The committee and men’s group feel that the “Forest Rule” could be re-visited and some changes made to benefit the local communities.

Pertaining to the loan services, the men and women’s group expressed their dissatisfaction on how the committees are handling the loan services system. They mentioned that they haven’t benefited from the loan services. They suspect that the poor members were left out because of the fear by the committee members that the poor may not be able to repay the loan.

4.3.3 Potential new activities

The poor men and committee members have listed six potential activities and women group listed five potential activities (Table 11). The women’s group indicated lemon grass and Amla harvesting and marketing as important activity for them by assigning high sticky dots. This reveals that the two activities were the main source of income for the CF MG and they would like to further strengthen producing and marketing of the products to generate income.

Table 11: Potential Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Lemon grass production and marketing	19	14	18	24
Amla production and marketing	18	14	15	24
Nursery creation for forest plantation	18	14	20	20
Stone extraction and establishment of stone crushing unit	16	28	20	--
Loan to CFMG members	15	14	15	16
Construction of CFMG office	5	16	--	--
Wild asparagus collection and marketing	5	--	--	16
Support for disadvantage CFMG members	4	--	12	--
Number of participants	-	6	8	5
Number of sticky dot per participants	-	6	5	5

Note: -- Activity not mentioned by that focus group

Considering the acute shortage of forest resources (timber, pole, post and fire wood) in the CF, all the focus groups have emphasized to protect and improve the CF area. The committee members mentioned that there are seven small spring water sources within the CF area which was used by the members as drinking water source. This, they said need to be protected through plantation and protection.

As there is a high potential for stone collection for marketing from the CF area, the poor men and committee members expressed their interest in extracting stone and establishing a stone crushing unit for marketing of stone and stone chips to the contractors working for the road development and in construction companies. According to the Geog Forest Extension Officer, currently the Forest and Nature Conservation Rules do not allow the community to extract stone for marketing from the CF area. He however said that the issues were being

discussed with the higher authority and he believes that there will be a positive response from the higher level.

The poor men and women's group indicated that the loan services should be strengthened. This means that the services should be available even to the poor people, which is not happening right now. If the disadvantaged groups had access to loan facilities they would benefit a lot, especially in terms of purchasing household items. They could even start some cash income activities, as was stated by the poor men and women's group. The construction of an office for the CFMG committee was also raised by the committee members. They expressed that without a proper office for the committee member, they cannot carry out their duties efficiently, therefore the CFMG wish to construct a small office from the CFMG fund.

The poor women's group listed the collection of wild asparagus for marketing as one of the potential activities as this activity has benefited them and hereafter also they have the aspiration to continue harvesting for income generation. They even would like to go for mass cultivation of wild asparagus to increase production and enhance income for the family.

Although the committee and poor women's group have not considered the support to disadvantaged group as potential activity, the poor men have listed as important activity (Table 11) and expressed their desire to continue supporting the poor people through voluntary services and financial contributions from the CFMG fund.

4.3.4 Summary

The Dozam CF consists of open grassland with conifer vegetation. Chirpine is the main tree species in the area with some fodder tree and grass species. The vegetation in the CF is very poor and most of the areas are barren due to earlier severe biotic pressure. Although the CFMG does not receive any benefit from the trees, the plantation programs was considered important by all the three groups as they have felt the sense of ownership and were aware of the importance of having forest resources. Both poor men and women's group assigned high sticky dots for protection and plantation within the CF area. All three groups indicated their preference for lemon grass and Amla production and marketing (Table 11). Loan services and support to disadvantaged groups was important potential activities by poor women's group. The CF has a potential for stone extraction and marketing. Thus the poor men and committee members expressed their interest in stone extraction from their CF including to set up a stone crushing machine and like to sell the materials to generate income for the CFMG. This, they said would improve the living condition of the CFMG.

4.4 Waku Damchi Community Forest

The Waku Damchi CF was established in the year 2005. It is situated in *Kabjisa Geog* under *Punakha* Dzongkhag with an area of 87 hectares. The CFMG is comprised of 42 households. The CF area was divided into three blocks for effective management. Each block has its own specific management objective. The *Thunchulum* block has high potential for production of pole and post size timber for marketing, thus its specific objective was to improve the stands and harvest on a sustainable basis and protect the catchment area for drinking water source. The *Dholhigang* block objective was to carry out enrichment planting of preferred species and improve the stand by controlling over harvesting. The third block was the *Lumchungzom* block with the objective to increase the timber quantity by minimizing the indiscriminate felling and carrying out plantation.

The main forest type is cool broadleaved forest dominated by Oak (*Quercus glauca*) and other broadleaf species (fig 7).

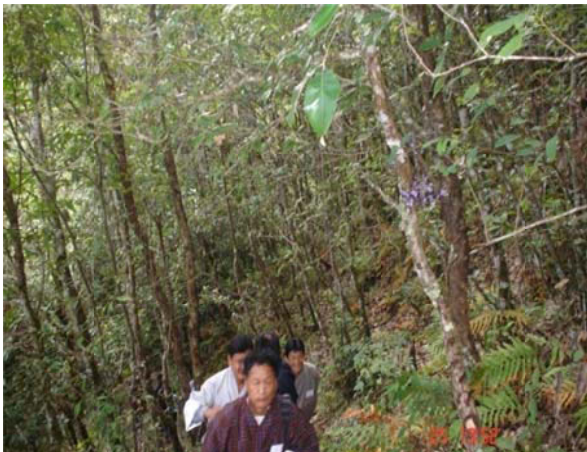


Figure 7: Inside Waku Damchi Community Forest

The undergrowth is mostly shrubs associated with wild fern and some medicinal plants. The overall forest condition is good, dominated by pole stand forests. The main products they harvest from the CF are timber, pole, fencing post and fire wood for bonafide use. According to the committee members, the CF area was being over harvested in the past as a result most of the forest stands is seen as secondary growth and there are few

matured trees in the CF area. Their main goal is to manage the CF to meet their own requirement of forest products such as house building timber, pole and post, firewood and NTFP such as wild-fern, bamboo and medicinal plants for home consumption. Additionally, they would like to harvest pole and post size timber through silviculture management (thinning) for marketing.

The Geog Forest Extension Officer (key informant) revealed that based on the guideline of the CF plan preparation, the CFMP and by laws was prepared by the CFMG group with the support of Dzongkhag forestry Office. For effective implementation of the plan the executive committee members comprised of five members was elected and their tenure was for three years and based on their capability and commitment towards CF activities, the members can

be re-elected (CFMP, 2005). However, any members could resign without completing his/her tenure in case of unavoidable circumstances. The meetings for the committee members were held on monthly basis to discuss about the ongoing activities and on other important issues related to CF. The elections of the committee were done through a general CFMG meeting. The main role and responsibilities of the committee is to coordinate and implement the CF plan and managing the CFMG fund etc. The general CFMG meeting is held twice a year mainly to review the ongoing activities, plan new activities, discuss issues and present the financial status to the CFMG members.

As far as benefit sharing is concerned, the committee members revealed that the house building timber, pole and post are distributed on need basis to the individual household as per their entitlement prescribed in the CF plan. They mentioned that following the CF plan, the individual household members do not have the right to sale forest products (timber, pole, post and firewood) to outsiders, since they are provided for their bonafide use. Only the CFMG group has the right to sell any kind of forest products except wild vegetables and medicinal plants which were not restricted.

4.4.1 Current activities and benefits

All three focus groups indicated harvesting of timber, pole and post as the most important activity for the CFMG by placing high sticky dots (Table 12). This, they said was because the resources were widely used for house construction/maintenance, as fencing materials for their agricultural fields and for other essential domestic purposes. The poor men and women group expressed that with the establishment of CF the long procedures for obtaining permit for timber was shortened. They also revealed that they are able to manage their forest in a better way and felt the benefit of having CF. The poor men's group expressed; *"It has become so convenient now for obtaining permit"*. For the collection of timber, pole and post, the members were required to pay a fee fixed by the CFMG, which is similar to the royalty they were paying prior to the establishment of CF. For firewood collection the members were required to pay a nominal fee which is about half of what they have been paying before.

Table 12: Current Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting of timber, pole and posts for household consumption	40	40	40	40
Harvesting of pole and posts for marketing	38	40	40	33
Collecting fire wood and litter for cattle bedding	22	20	20	27
Number of participants	-	5	5	5
Number of sticky dots per participant	-	3	3	3

One of the main activities of CFMG were the harvesting and marketing of pole and post. The committee and poor men's group revealed that the CF have a potential for harvesting and marketing of poles and posts-size timber. They mentioned that beside member's fee and donations from visitors, the only source of fund for the CFMG was through the sale of pole and post. The royalty they have collected were deposited in the CFMG account and once the funds are enough, they would like to start providing loan services for the members.

The focus groups also revealed that although there is potential for commercial production of firewood, as of now the CFMG have not been able to sell any due to unclear marketing procedures. However the collection of firewood and litter for cattle bedding for home consumption were considered important by women's group by assigning the high sticky dots among the three groups (Table 12). This was due to the fact that the firewood and litter were mostly collected by women in the village and they felt it important for sustaining the farming life. The women group mentioned that since they have easy access in the forest and with the procedures for obtaining firewood being shortened, it has become easy for them to collect firewood and litter. They even claimed that with the inception of CF program there was no more competition from outsiders for forest resources in the CF area.

4.4.2 Current problems

Several problems were encountered that hindered the effective implementation of the community forestry program (Table 13).

Table 13: Assessment whether problems encountered while implementing the community forestry program is serious or not

Problem encountered	Committee	Men	Women
Limited skills and knowledge on marketing of forest resources	yes	yes	yes
Limited funds	yes	yes	yes
Limited managerial skills	yes	yes	yes
Lack of incentive for the CFMG committee members	yes	yes	yes

One common problem raised by the three focus groups (Table 13) was the limited fund to initiate pro-poor activities. They expressed that due to lack of financial capital the CFMG could not initiate new activities such as providing loan services and support to disadvantaged groups. Therefore, they felt it necessary to enhance income generation through marketing of poles, posts, fire wood and Bamboo.

According to the committee and men's group (Table 13) the limited skills and knowledge on processing and marketing of forest products from the CF was also a problem because the

CF program was new to them and many of them were not trained in handling such activities. The committee members have also raised their concerns on the amount of work they are carrying out and the responsibilities is increasing every year where more time need to be devoted on CFMG activities, but they were not paid any salary/incentives. The committee members expressed:

“We contribute equal labour for any work beside our own responsibilities (...) but we don't get anything.”

Consequently, the committee members felt the need to have a reasonable incentive either in terms of cash or in kind to the CFMG committee members which could accelerate the progress of CF program. The men and women's group have also acknowledged the committee members concern and said that the issues raised by the committee were genuine and need to be looked into if CF program is to be enhanced in future.

4.4.3 Potential new activities

Beside the current activities, several new activities were prioritized by the focus groups to improve the contribution of CF for income generation (Table 14).

Table 14: Potential Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting pole and post for marketing	20	24	17	20
Furniture enterprise	20	20	20	20
Firewood production and marketing	20	20	20	20
Loan to CFMG members	18	20	13	20
Harvesting timber, pole and posts for CFMG members	18	16	17	20
Bamboo plantation for marketing	4	--	13	--
Number of participants		5	5	5
Number of sticky dots per participant		5	6	5

Note: -- Activity not mentioned by that focus group

All three groups indicated harvesting and marketing of pole and post, establishing a furniture enterprises and firewood production as important pro-poor activities by placing high sticky dots against the program (Table 14). This reveals that the CF has a potential to produce pole size timber and firewood for marketing.

The men and women's group revealed that they have the intention to start selling firewood, poles and posts to increase profit for the CFMG fund and wish to provide loan to the needy CFMG members at low interest rate. The poor women's group expressed that:

“We need money to buy good quality vegetable seeds for commercial production of vegetables (...) but during that time we have no money.”

This indicates that poor men and women's group were keen in marketing the forest resources (pole and post) and aspired to increase revenue for the CFMG to establish loan services.

The groups also wish to start a furniture manufacturing enterprise. The committee and men's group mentioned that they have a hardwood species in the CF area such as walnut (*Juglans regia*) and champ (*Michelia champaca*) which would be good for making furniture and handicraft items. The men's group expressed their interest of owning a portable sawmill so that they would be able to process the timber for making furniture and other purposes. They said this would be very cost effective and would allow them to employ youth in the near future.

The Geog Forest Extension Officer also articulated that the CF has the potential to produce high class timber in the near future so that the CFMG would be in position to start furniture enterprises and can generate good income and provide employment for the CFMG members. He also felt the need to form a smaller group to run the business.

In order to support the poor members, the CFMG would like to establish a loan service for the members, so that they may purchase fertilizers, seeds for vegetables and other agricultural items. The women's group said that providing loans would greatly benefit the poor members as they do not have to seek loan from the bank at high interest rate, and at the same time they do not have to go through a long procedure for obtaining a loan.

4.4.4. Summary

The potential pro-poor activities listed by different focus groups were more extensive than the current community forestry activities. Although most of the activities listed were similar, there were variations among the different focus groups with respect to their preference. All the three focus groups considered harvesting of timber, poles and posts as important by placing high sticky dots. This indicates that those resources were widely used for their subsistence farming. The men and committee members assigned high sticky dots for harvesting and marketing of pole and post whilst the poor women's group placed high preference for firewood and leaf litter collection.

Several problems such as lack of capacities on processing and marketing of forest products, and limited fund were highlighted. The committee members expressed their concern for the lack of incentive while performing their duties. The poor men and women's group

acknowledged their concerns as genuine. Potential activities such as marketing of poles, posts and firewood, furniture business were considered important for generating income for the CFMG. The poor women group emphasized on strengthening loan services for the poor members for procuring agriculture seeds and other household items. In general, all focus groups have the intention to divert from the subsistence use to commercialization of their forest resources to enhance income for the CFMG.

4.5 Dungkarling Community Forest

The Dungkarling CF was established in the year 2004 and is located in Bhur Geog of Sarpang Dzongkhag which is about half an hour walk from the motorable road. The general aspect of the forest is southeast. The CF has a total area of 115 hectares, including barren land and abandoned orange orchards. The CFMG is composed of 65 households. The CF (fig 8) is divided into three management blocks: Kopchey Pakha block with 87 hectares, Devithan block with 27 hectares and Dungkarling block with 5 hectares (CFMP, 2004).



Figure 8: Overview of Dungkarling Community Forest

source and to protect and conserve the forest to ensure sustainable production of timber and other forest products.

According to the Geog Forest Extension Officer (key informant) only one of the three management blocks, Kopchey Pakha Block, has potential for harvesting timber, as it contains good stock with uneven aged stands. The other two blocks do not qualify for timber harvesting as they are mostly barren land with small abandoned orange orchards. The overall objective of CF was to protect the forest above their drinking water

and to protect and conserve the forest to ensure sustainable production of timber and other forest products. The preliminary forest assessment of the CF area revealed that the forest type is classified as warm broadleaved forest (CFMP, 2004). The undergrowth is mostly bushes such as *artimisia* and *wild ferns*. There are also some plants species which has high medicinal value. Regeneration is profuse in areas where the canopy density is more than 50%. In the open areas, regeneration is poor due to the dense under growth of bushes and ferns. Signs of animal tracks, debarked trees, and ploughed soil are indication of wildlife existence in the CF.

According with the committee members of Dungkarling CF, due to the growing population of the nearby villages and towns, increasing numbers of outsiders have started to harvest

timber and other forest products from the CF area, upon which the people of Bhur depend solely for all of their forest products. The inhabitants of Bhur have realized that unless they introduce proper management measures, the forest condition will deteriorate, which will bring negative effects on their livelihoods over time. Additionally they fear that their drinking water source will be disturbed and that erosion will cause additional damage to the arable land in their village. Considering the potential negative impacts of inadequate forest management, the CFMG has initiated to establish CF in accordance with the Forest and Nature Conservation Rules, 2003.

According to the Geog Forest Extension Officer, the CF is expected to meet their daily requirement of forest products such as house building timber, firewood, fencing posts and non timber product such as medicinal plants and broomstick. The CFMG was actively involved in the management plan preparation with support from other relevant agencies. The staff from the Sarpang Dzongkhag Forestry Sector assisted with site identification, boundary surveying and preparation of the management plan. The committee comprises eight members, and was formed mainly for effective implementation of the CF management plan.

The Chairman will serve for a management plan period (10 years) unless he is confronted with unavoidable circumstances. The Secretary, Accountant and other Committee Members will serve for three years. Any committee members can resign without completing his/her tenure under unavoidable circumstance. The election of the committee will be done through a general CFMG meeting. The CFMG will have a general meeting twice a year, however, the Chairman has a right to call a general meeting at any time if she/he feels. The meeting was held mainly to review and plan the activities, discuss and solve issues pertaining to the implementation of management plan and financial status.

As far as the benefit sharing is concerned the resources were distributed on need basis and after assessing whether the need was genuine. CFMG members were not authorized to sell any forest products that were provided to them for their own domestic purpose. Selling of forestry products to non-members will only be done by the CFMG, and not by individuals.

4.5.1 Current activities and benefits

While listing the preference of current activities, all the focus groups considered timber harvesting, post and firewood collection as important activities by assigning high sticky dots (Table 15) as these resources were widely used by the members. The committee and men's group mentioned that with the establishment of CF it was very convenient for the members to obtain timber and firewood permit as the members do not have to travel to Forest offices.

Table 15: Current Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting of timber, post and firewood for CFMG member	39	43	40	33
Medicinal plant and broomstick production	35	33	33	40
Loan to CFMG members	26	24	27	27
Number of participants	-	7	5	5
Number of sticky dots per participant	-	3	3	3

The poor women’s group placed high sticky dots for medicinal plants and broom stick production and marketing. This reveals that typically women were involved in collecting medicinal plants and broom stick from the forest. The women’s group expressed the collection of medicinal plants and broomstick and marketing to outsiders was one of their main income generating activities from the CF. They expressed: “ *we earn money from selling brooms and buying household items*”. The Geog Forest Extension Officer confirmed that there are a lot of scope for marketing of medicinal plants and broom stick production from the CF area.

Poor men and women’s group also considered loan services within the CFMG as important activity. The money collected from the membership fee, royalty collected from the harvesting of forest resources (timber, post, firewood) and donations from visitors were the main sources of revenue for the CFMG. Through these funds the needy members were provided loan during emergencies and for other domestic purposes.

4.5.2 Current problems

The focus groups came out with three main problems that hindered the effective implementation of the community forestry program for income generation (Table 16).

Table 16: Assessment whether problems encountered while implementing the Community Forestry program is serious or not

Problem encountered	Committee	Men	Women
Lack of skills and knowledge on processing and marketing of medicinal plants.	yes	yes	yes
Limited funds	yes	yes	yes
Hostile forest rule for stone extraction from the CF area	yes	yes	no

Although the CF has a potential to produce medicinal plants, the limited skills and knowledge on of the CFMG members on propagation, processing and marketing of products were poor, consequently hindered the members for generating income. The focus groups expressed

their interest in seeking training opportunities for a few selected members, particularly the school dropout youth. They should learn about propagation, processing and marketing of the medicinal plants. The poor men's group expressed:

“We like our self to be trained so that we can earn more cash by marketing the products.”

One common problem for the CFMG was the fund constrain as stated by all the focus groups. They revealed that the CF program was new for them and with limited fund, they were not able to initiate pro-poor activities. Although there is high possibility for extraction of stone from the CF area, the CFMG were not able to start extraction due to restriction from the government. The committee members feel that the government should reconsider and keep provision for such activities in the CF area.

4.5.3 Potential new activities

The committee and poor men's group listed five main activities as potential activities where as poor women's group came out with four main activities (Table 17). There were not many variations in preference among the focus groups.

Table 17: Potential Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Furniture enterprise	23	23	20	25
Medicinal plant and bamboo production for marketing	23	20	20	30
Harvesting of timber, pole, post and firewood for CFMG members	21	17	20	25
Loan to CFMG members	19	20	16	20
Stone extraction for marketing	15	20	24	--
Number of participants	-	7	5	5
Number of sticky dot per participant	-	5	5	4

Note: -- Activity not mentioned by that focus group

The poor women's group indicated high preference for medicinal plant, Bamboo production and marketing as they expressed that there is a high potential to produce and market the products if proper management is put in place. The preference for harvesting timber, pole, post and firewood for home consumption was also considered important by all three groups with the poor women's group assigning the high sticky dots (Table 17).

The furniture manufacturing business was considered as potential activity by all the three groups. The committee members expressed their interest for opening a furniture enterprise so that the CFMG could earn profit from the sale of furniture. The strengthening of a loan

services was also indicated as potential activity by all the focus group with the women's group placing the high sticky dots.

The committee and poor men's group mentioned stone extraction from the CF as a potential CFMG activity. Stone collection would help the CFMG to earn large profits so that we could be able to provide loan and support to the members as was said by the committee and poor men's group. The poor men's group revealed:

"We are sure if we start stone business it will bring lots of cash", and said "we can provide loan and other support to the needy people which will benefit them a lot."

4.5.4 Summary

Beside few additional new activities, all three focus groups have listed similar preference for current and potential activities. Dungkarling CF has high potential to produce NTFPs such as medicinal plants and broomsticks for marketing. The poor women's group was considering this activity as important for their living as they could earn income from selling broomsticks and other medicinal plants, providing them the cash to buy household items. The subsistence use of forest resources such as timber, pole, post and firewood were considered as preference by all three focus groups illustrates their dependency on forest resources and the benefits they are enjoying from the CF. Loan services was established with the fund collected through the membership fee and royalties from the sale of timber. The focus groups indicated that loan services need to be strengthened so as to provide loan to the poor members at low interest rate. Also it could be used to start small enterprises. One way of strengthening the loan services would be to increase the CFMG fund through diversifying the CFs activities such as stone extraction for marketing, opening furniture enterprises and marketing of NTFPs.

4.6 Yarkey Community Forest

Yarkey CF in Beteni *geog* under Tsirang *Dzongkhag* is the first community forest in the *geog* which was initiated in 2007 with financial support from Participatory Forest Management Project. The CF has an area of 128 hectares and is located in cool broadleaved forest (fig 9) dominated by *Castanopsis hystrix*, *Symplocos lucida*, *Cinnamomum glanduliferum* and *Daphniphyllum chartaceum* tree species with an altitude ranging from 1700-2100 masl. The overall forest condition is good with average canopy density of less than 70% (fig 9). The CFMG is comprised of 44 household members from Upper and Lower Beteni village. For proper and sustainable management of the CF, the CFMG has divided the CF into three blocks. The *Talkharki* Block has an area of 38 hectares and the block consists of maximum matured cool broadleaved tree species with dense canopy closure.



Figure 9: Overview of Yarkey Community Forest

The specific objective of this block is to produce timber, firewood and other NTFPs.

The *Sanumalingay* block has got an area of 53 hectares and was the only block connected with the forest road. The specific objective of this block was to produce poles and posts for bonafide use as well as marketing and sustainable harvesting of Non Timber Forest Products. The *Batari* block has an area of 37 hectares and its

specific objective was to manage the forest for producing firewood and establish high quality species plantation. According to the Dzongkhag Forest Officer (key informant) there was a logging operation carried out in Sanumalingay and *Batari* block by the forest department in 1990's. As a result only low quality timbers and pole size trees can only be seen in these blocks.

The CFMG with the assistance of Dzongkhag Forest Office prepared the by-laws and CFMP that is used as a guiding document for CF management. In order to implement the CF plan in an effective way, the CFMG have elected twelve committee members who will be responsible to carry out all the administrative and developmental work based on the CFMP. The committee is comprised of a Chairman, secretary, accountant and nine general members. All committee members will remain on designated post for at least five years period. However, if any of the committee members does not fulfill their responsibilities he/she would be terminated during the CFMG general meeting. The main role and responsibilities of the committee members were to look after all the administrative work pertaining to CF management, coordinating all official matters related to community forest developmental activities and sanction the CF resources to CFMG as well for selling.

As per the Yarkey CFMP (2008) the CFMG organize the general meeting twice a year mainly to review and plan activities, discuss issues and problems and present the financial information to the members. However the monthly meeting for the committee members was held on monthly basis to discuss issues and progress in the process of implementation of CF activities.

In order to ensure equitable sharing of CF resources among the CFMG, the priority for allotment of timber products were provided on need basis and priority was given based on genuineness and poor ones first. The resources were allotted based on their entitlement prescribed in the CF plan. Nominal fees (royalty) were charged for harvesting timber, pole,

post and firewood. However, for NTFP Products such as mushroom, wild ferns, etc. can be collected free of charge by CFMG members for home consumption. However, for marketing purposes the collection will be done by the CFMG and the cash generated from the sale will be deposited in the bank in the CF account. Wild fruit, medicinal herbs and plants will be collected by the CFMG in bulk, in a particular season for marketing and the cash generated from the sale will be deposited in the CF account.

4.6.1 Current activities and benefits

All three focus groups highlighted harvesting of timber, poles, posts and firewood as an important activity for the CFMG (Table 18) with the poor women's group assigning the highest sticky dot. This indicates that for subsistence farming these resources were used widely for their living. It further reveals that poor women were equally concerned as poor men about the resources and felt the benefit of having CF. The poor women and men's group claimed that with the establishment of CF, long and cumbersome administrative procedures for obtaining approval for forest resources from the Forest Department were shortened. The poor women's group revealed: *"It has saved time as we don't have to go outside of our village to obtain a permit"*. The committee and poor men's group revealed that with the establishment of CF, the protection of drinking water source has strengthened and illegal cutting in the forest has drastically reduced as people felt the sense of ownership of the CF. The men and committee members also mentioned that the royalty they collect from the members for harvesting forest resources were deposited in the CFMG account and although they haven't shared any fund among the members they are planning to establish loan services through this fund.

Table 18: Current Community Forestry activities and preference for each focus group (% of sticky dots)

Activity	Average	Committee	Men	Women
Harvesting of timber, pole, post and firewood for CFMG members	58	53	53	67
Timber harvesting and marketing	42	47	47	33
Number of participants	-	5	5	5
Number of sticky dots per participant	-	3	3	3

All three focus groups also indicated timber harvesting and marketing to generate income as an important activity with the poor men and committee members assigning high sticky dot. The poor men's group revealed that besides the royalty collection from the members and levying fine from rule violators, timber marketing was the only source of income-generating activity

for the CFMG. Although the CFMG also use to collect NTFP such as wild vegetables for their own consumption, were not mentioned during the sticky dot exercise session.

4.6.2 Current problems

There were several problems that hindered the effective implementation of the CF program (Table 19).

Table 19: Assessment whether problems encountered while implementing the Community Forestry program is serious or not.

Problem encountered	Committee	Men	Women
Lack of skills and knowledge on processing and marketing of NTFP	yes	yes	yes
Limited funds	yes	yes	yes
Shortage of labour prevents members from joining the CFMG	yes	no	no
Forest rule not clear	yes	no	no

Although the CF has high potential to produce high quality wood and several NTFPs such as wild vegetable and medicinal plants, the members lack skills and knowledge on how to add value to the goods. The committee members expressed:

“Our forest is rich and we have many wild vegetables and medicinal plants (...) but we don’t know how to sell them and make money.”

The committee members revealed that some of their members would like to be trained in harvesting and processing of the NTFPs and like to sell the product locally as well as outside the Dzongkhag to generate income for the CFMG. One problem the CFMG have seen is the lack of fund. They mentioned that due to limited fund they cannot start any pro-poor activities such as providing loan, furniture manufacturing business etc. The Committee members were also concerned about the members not able to join the CFMG because of the shortage of labour. They revealed that once the household become the members of CFMG, they have to contribute labour as other members do, so since they cannot contribute labor/cash they are refraining from joining the CFMG.

The committee members also mentioned on the impracticality of forest rules on rights for the CFMG members. For instance, if a member likes to construct a house in another village/location and wish to claim timber from the CF as per his/her entitlement, the rule does not allow the right to take the timber outside his village for construction. This, they said need to be looked into by the government.

4.6.3 Potential new activities

The committee and poor men's group listed six potential activities whereas poor women's group came out with five activities (Table 20). All focus groups claimed the furniture manufacturing business as high potential enterprise by placing high sticky dots. They revealed that the CFMG has a potential to produce big and high quality timber where they could harvest and producing furniture and handicraft items. This, they said would be a thriving business as they could generate profits from the sale of furniture and provide employment to their youth. They also revealed that as per the management plan, there is potential for timber harvesting and marketing with a potential to sell 77 standing trees annually.

Table 20: Potential Community Forestry activities and preference for each focus group (% of sticky dots).

Activity	Average	Committee	Men	Women
Furniture enterprise	23	23	23	24
Shitake mushroom rearing	23	20	20	28
Loan for CFMG members	17	17	17	16
Harvesting of timber for marketing	14	13	13	16
Forest nursery development	11	17	17	--
Cane and bamboo product development	7	10	10	--
Collection of medicinal plants, wild vegetable and marketing	5	--	--	16
Number of participants		5	5	5
Number of sticky dots per participant		6	6	5

Note: -- Activity not mentioned by that focus group

The three groups indicated mushroom rearing business as important activity by placing high sticky dots with the poor women's group assigning the highest dots (Table 20). The poor women's group expressed that there is high potential of shitake mushroom rearing in their village as the CF can produce high quality billets for the mushroom and there is readily market available locally as well as in other part of the country. The committee and men's group emphasized for producing cane and bamboo product. They wish to be trained in manufacturing handicraft items through cane and bamboo product for cash income generation. The committee and poor men's group considered establishing forest seedling nursery for rehabilitation of the forest area and at the same time the poor members could work as labour in the nursery and earn income.

As the CF has a potential to produce NTFPs such as medicinal plants, wild vegetables etc, the women's group expressed support from the government for processing and marketing of the products. The women's group expressed;

“We have plenty of various wild vegetables and medicinal plants if we know how to extract and do marketing.”

They said that they could earn a profit from the marketing of these products in the future if a proper management practice is put in place.

4.6.4 Summary

The potential pro-poor activities listed by different focus groups were more than the current CF activities. All the three focus groups considered harvesting of timber, pole and post as important by placing high sticky dots which shows that these resources were extensively used for their subsistence farming. The harvesting and marketing of timber have been indicated as an important activity with the poor men and committee members assigning high sticky dots.

Several problems encountered while implementing the CF activities such as lack of capacities in processing and marketing of NTFPs and limited fund were highlighted by all the focus groups. Committee members have also mentioned the shortage of labour within the household and the unclear rule (restriction of construction outside the village) as an emerging problem. Potential activities such as marketing of timber, furniture enterprise, mushroom cultivation, medicinal plants marketing, establishment of loan services and cane and bamboo product development were considered important for generating income for the CFMG.

5. Discussion

5.1 Current activities and benefits

The study showed that most of the current activities of studied CFs were similar amongst the different focus groups with respect to their preference. Most of the current activities highlighted by both poor men and women's group were for subsistence use only and with few CF enterprises established for income generation. This might be linked to the fact that most CFs has been established only few years ago. Wangdi and Tshering (2006) in their study also concluded that there was minimal benefit sharing amongst the members as the CF program is new and members were harvesting the resources for their domestic purpose only.

Out of the six CF surveyed, five CF have indicated harvesting of timber, pole and post as the most important resources for their subsistence. This shows that those resources were widely used by the CFMGs for their living. Although Dozam CF is rather degraded, the members have benefited much from it for their living through the harvesting and marketing of lemon grass and Amla fruit from their CF. The poor men and women's group in some CFs (e.g. Shambayung and Dungkarling) revealed that although there were some unfairness in loan disbursement, loan services established for the CFMG has benefitted them such as for buying households items and other basic necessary items during the time of need. In other CFs (e.g. Dozam and Masangdaza) the poor had no access to loan services as the preference was given to rich and outsiders.

A study by Mahanty et al (2006) in Nepal concluded that poor people are often restricted their access to forest and tree resources, while influential are able to harness the resources. In contrast to Mahanty et al (2006), Baral (2008) and Sharma (2002) in their studies in Nepal concluded that CF can contribute to poverty reduction as the poor members have easy access to forest resources and by commercializing its products would provide more benefits to poor members. Similarly, from the six CFs studied in Bhutan it confirms that with the establishment of CFs, the CFMGs have benefited, especially through ensuring easy access to forest resources. The CFMGs were able to obtain permit for harvesting of forest resources within a short time span. Also, the financial benefits derived from the royalties collected from harvesting resources, are being used by the CFMGs. The study also reveals that the CFMGs fund generated from the sale of forest products, levies and donations from visitors are the sources for financial capital. Through these funds the CFMG in some of the CFs were able to offer a low interest credit scheme as well as support to disadvantage groups for the CFMG members.

5.1 Problems

This study revealed that several important problems were encountered and were viewed as a bottleneck for enhancing the contribution of CF to poverty reduction. The CFMG members saw potential for establishment of CF enterprises such as timber processing and marketing, furniture and handicraft enterprises, weaving enterprise and medicinal plants. Beside the newness of the program, the lack of financial capital was seen as the major problem for not being able to initiate such enterprises by the CFMGs. For instance in Shambayung CF, the lack of financial capital led to lack of access to market due to lack of road infrastructure in the CF area. The study also found that although the government was increasingly giving assistance for effective implementation of the CF program, there were some administrative hurdles faced by some of the CFMG such as the non-issuance of timber marking and passing hammer by the government for the CFMG. This has further contributed as an obstacle for harvesting timbers as per the plan. It also confirms that even though some of the CFs such as in Waku Damchi have well stocked forest stand and the CFMP have provision for harvesting and marketing of timber and firewood, the CFMGs were reluctant to start marketing due to their limited capacities and were not confident in executing such operations. In order to derive optimum benefits from the CFs, there is a need for the government to provide loans to the CFMGs so that they may invest in CF enterprises and provide adequate capacity building trainings (management skills).

In some CFs (e.g. Dozam and Masangdaza CF) the poor members and disadvantaged groups were not able to fully access the loan services established within the CFMGs. This may be due to the fact that the management groups are keen in providing loans to rich and outsiders, since they can repay the loan on time and can pay higher interest rates. If the loans were provided to the poor members, the CFMGs fear that they may not pay the loan on time and can pay only low interest rates.

The study also shows that in some CFs (e.g. Shambayung and Waku Damchi) there was a lukewarm feeling amongst the committee member while carrying out their responsibilities. This might have hindered the effective implementation of the CF program. This could be because of the committee members were not being provided with incentives or any financial benefits for performing their duties. A nominal incentive for the committee members in terms of cash or in kind might accelerate the CF programs as stated by the focus groups from Shambayung and Waku Damchi CFs.

The study also revealed an unsatisfactory mind-set (e.g. Dozam and Dungkarling CF) on the issue on "extraction of stone" from the CF area. The Forest and Nature Conservation Rule

(2006) says that although the CFMG have the right to manage the forest resources, the communities were not authorized to manage and operate stone extraction from the CF area, unless issued with a license. This clause in the Forest and Nature Conservation Rule (2003) has created a barrier for the CFMGs to start generating income from such business. The poor men and committee members from Dozam and Dungkarling desire the governments to re-visit the Forest Rules and make it more flexible to derive optimum benefit for the poor peoples. Similarly, Wangchuk (2011) concluded that the issue of poverty cannot be addressed just by handing over a forest to the people with high responsibilities and few rights. He also argued that CFMGs were not given the right to utilize all natural resources found within the CFs such as stone and sand collection. This is especially problematic, if they have mostly degraded forest as CF, since it limits the potential for poverty reduction.

5.2 Potential activities

The study revealed that most of the potential activities prioritized by different focus group were similar and more oriented towards generating income for the CFMGs. The common potential activities and individual group's preference listed by poor men and women were presented in Table 21.

Table 21: Potential Community Forestry activities suggested by poor men and women's groups

Activity	Number of CF	
	Poor men	Poor women
Strengthening loan services	6	6
Harvesting of timber, pole and post for CFMG members	4	4
Processing and marketing of timber	4	4
Furniture enterprises	5	3
Support to disadvantages group (construction of house, scholarship for student, etc.)	2	1
Nursery creation and forest plantation	2	1
Cane and Bamboo product development and marketing	2	1
Medicinal plants production and marketing	1	2
Lemon grass production and marketing	1	1
Amla production and marketing	1	1
Firewood production and marketing	1	1
Mushroom farming/rearing	1	1
Stone extraction for marketing	2	--
Construction of CFMG office	1	--
Weaving enterprises	--	1
Collection of wild asparagus and marketing	--	1

Note: -- Not mentioned by that group

The study showed that many of the potential activities listed by poor men and women from different CFs were similar (Table 21). The potential activities such as strengthening of loan services, timber for marketing and furniture enterprises were considered important activities for generating income by both the poor men and women's group in most of the CFs.

According to Tempel and Beukeboom (2006) the CF program were not much focused on NTFPs and concluded that NTFPs collections were mostly based on conventional practices and there was no value-adding activities. However they revealed that good management of NTFPs could provide economic benefits to communities, especially if the skills and product development of the communities can be improved. Subsequently, Peldon (2009) also suggested that there is a large scope for marketing of NTFPs from the CF. Similarly this study also revealed that there is potential for NTFPs which could further be promoted through enhancing skills and knowledge of the CFMGs, processing and marketing of the products for income generation. For instance the NTFPs such as lemon grass and Amla harvesting was considered as important cash income generating activities by both poor men and women's group in Dozam CF and they further would like to promote these resources through better management practices. This would allow value addition of existing products and their marketing, thus enhancing cash income generation. Medicinal plants production and mushroom rearing activities is seen as a potential source of cash income by the poor men and women's group from Du ngkarling and Yarkey as their CFs have the potential to produce varieties of medicinal plants and mushrooms.

Moktan (2007) concluded that one of the strategies to generate income is the creation of forest based enterprises such as the development of handicrafts and wood works. Similarly, in this study it revealed that to enhance income for the CFMG will be possible through the establishment of forest based enterprises. It was found that in order to run the enterprises in an efficient way, the focus groups (e.g. Shambayung and Masangdaza CF) were enthusiastic in forming sub-groups within the CFMGs who could run furniture and handicraft manufacturing enterprises which could earn cash income and create employment.

The study had shown that there were not much variation in relation with the choice of activities by poor men and women. Nonetheless, specific preferences such as weaving enterprise and wild asparagus production were revealed by the poor women's groups (e.g. Masangdaza and Dozam) whilst the extraction of stone were revealed by the poor men's groups (e.g. Dozam). The choice of preference might be linked with their frequent engagement in such activities and considering the productivity of their CFs. This study had shown that the CFMGs were interested in shifting from subsistence use of forest resources to an enterprise-based forest management system that would provide benefits to CFMGs.

6. Conclusion and recommendations

Community forestry is considered to be one of the most important strategies in Bhutan in terms of reducing poverty and providing equitable distribution of forest resources. Since the beginning of 1990, Bhutan's plan has focused on the poverty reduction aspect of development through integration of various programs within the forestry sector. The aim of this study was to explore the preferences of current community forestry activities, benefits and potential activities as well as the main problems affecting the contribution of CF to income generation for the poor CFMG members.

Focus group discussion and semi-standardized interview were the main methods applied in the investigation. Sticky dots were used to gather information on the preference between various current and potential activities of the CFMG. Altogether, 18 focus group discussions were held in six community forests. In each community forest three focus group discussions were held; with Committee members, with poor men and with poor women. Key informants from five Dzongkhags and officials from the Social Forestry Division were also interviewed.

With the establishment of CF, the most important benefit the members are enjoying today is that it has become unproblematic for them to obtain permit for harvesting forest resources (timber, pole, post fire wood, etc) which used to involve a long procedure. The loan services for the CFMG members in some of the CFs were established. The goal is to provide loans at low interest rates. The funds come from the selling timber, royalties collected from the members and through donations.

The potential activities for the CFMG listed by the different focus groups were more numerous than the current activities. The most frequently mentioned potential activities were the strengthening of loan facilities to the poor members, opening up of furniture enterprises and processing and marketing of timber, which will improve the contribution of CF to income generation. The committee members and poor men's groups (e.g. Dozam and Duingkarling CF) highlighted stone extraction from the CF as the potential income activity. The poor women's group (e.g. Masangdaza CF) suggested starting a woman's weaving group (sub-group) within the CFMG, where they could employ young women for weaving and enhance cash income generation. Similarly, other poor women's group (e.g. Dozam CF) specified that they have the potential to produce wild asparagus which is an important source of cash income generation for the poor members.

Several important issues were raised by the different focus groups such as the lack of human and financial capital that hindered the effective implementation of the CF program.

The lack of incentives for the committee members was raised in Wa ku Damchi CF and the Dozam and Dungkarling CF highlighted on the hostile forest rules on stone collection from the CF area.

Based on the results of this study a number of specific recommendations which would serve as a guiding document for the government, donors and other professionals involved in CF development program in the country have been proposed.

- The limited skills and knowledge of the management groups hinders the effective implementation of the community forestry program and the development of small enterprises. Therefore the government and the donors should accord high priority in capacity building. The committee members could be trained in areas such as group organization, account and record keeping. Other members could be trained in processing (value adding) and marketing of products. This would allow the members to enhance their capacity in CF governance and diversify CF activities.
- To facilitate the establishment of CF enterprises and to enhance income and employment opportunity, the government should facilitate in providing loan services from the financial institutions to invest in establishing CF enterprises. This would enable the CFMGs efficiently to start CF enterprises, enhance income and provide employment.
- It may be helpful to encourage the formation of sub-groups for specific activities such as weaving enterprises, furniture and handicraft enterprises, mushroom rearing and medicinal plants production. Forming sub-groups would create an avenue for the poor members to participate in cash income generating activities which will benefit them in generating income and employment opportunities.
- The loan services to the poorer members should be given priority. This could be strengthened by increasing CFMG fund through initiating various income generating activities such as timber and NTFPs marketing, furniture and handicraft enterprises. For the repayment, option should be given for instance in lieu of cash repayment, they should be given choice for compensation through labour input. Further, all CFs should give priority to provide loans to poor members rather than to the outsiders.

- Timber harvesting and marketing from the CFs may be facilitated by the government (Dzongkhag forest sector) for the CFs which have a provision to extract timber as per their CFMP. This would provide avenue for the members to earn profit from the sell of timbers and can raise fund to provide loan services to the poor members.
- It is very important to motivate the committee members for effectual implementation of the community forestry program. Therefore, if the committee members are deemed necessary to travel related to CF activities, they may be provided with the reasonable expenses to cover the logistics (travel and food) from the CFMG fund. This may stimulate their encouragement and will work efficiently to discharge their task. However the incentive should be linked to effective work (e.g. through assessment by poor members).
- Stone extraction from the CF was considered as the potential income activities for some of the CFMGs, however the Forest and Nature Conservation Rule (2006) was not favouring the CFMGs to operate such business. Therefore the Forest and Nature Conservation Rule (2006) may be revisited and make it more flexible to include all natural resources found in the CF.

A study by Elson (2009) concluded that the CF enterprise oriented may have a significant contribution at the household level and can create employment opportunities for the CFMG members. In order to increase income and improve livelihood of the poor people, it would be helpful to shift existing subsistence forest management towards commercialization of forest products. Nevertheless, consideration on equity such as the involvement of poor members in CF enterprises, employment opportunities and the access to loan services has to be taken cared to derive maximum benefit to the poor members.

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Annex

A1: Current activities of Shambayung CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole and post for household consumption	14	10	14
Loan to CFMG members	10	5	10
Fire wood and litter for cattle bedding	0	0	0
No of Participants	8	5	8
No of sticky dots per participant	3	3	3
Total no of sticky dots per focus group	24	15	24

A 2: Potential activities of Shambayung CFMG and number of sticky dots assigned by participants

Activity	Committee	Men	Women
Timber harvesting for marketing	9	5	10
Construction of road in the CF area	10	6	8
Loan to CFMG members	7	5	8
Harvesting of timber, pole and post for household consumption	8	5	6
Furniture enterprises	7	5	0
Purchase of truck for transportation	7	4	0
No of participants	8	5	8
Number of sticky dots per participant	6	6	4
Total no of sticky dots per focus group	48	30	32

A.3: Current activities of Masangdaza CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole, post and fire wood for CFMG member	7	8	8
Farm road construction	7	7	7
Support to disadvantage group	5	6	5
Loan to CFMG members	6	4	5
Timber processing and marketing	5	5	--
Number of Participants	6	6	5
Number of sticky dot per participant	5	5	5
Total number of sticky dot per focus group	30	30	25

A 4: Potential activities of Masangdaza CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole, post and fire wood for CFMG member	7	6	5
Loan to CFMG members	7	6	5
Support to disadvantage members	5	5	3
Processing and marketing of timber	0	7	5
Furniture enterprises	6	6	0
Weaving enterprises	0	0	7
Bamboo product development	5	0	0
Number of participants	6	6	5
Number of sticky dot per participant	5	5	5
Total number of sticky dot per focus group	30	30	25

A 5: Current activities of Dozam CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Nursery creation forest plantation	6	15	8
Lemon grass production and marketing	8	10	7
Emblica (Amla) production and marketing	7	8	6
Support to disadvantage group	5	7	0
Collection of wild asparagus and selling	0	0	4
Loan to CFMG members	4	0	0
Number of Participants	6	8	5
Number of sticky dots per participant	5	5	5
Total number of sticky dot per focus group	30	40	25

A 6: Potential activities of Dozam CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Lemon grass production and marketing	5	7	6
Nursery creation forest plantation	5	8	5
Stone extraction and establishment of stone crushing unit	10	8	--
Emblica (Amla) production and marketing	5	6	6
Loan to CFMG members	5	6	4
Construction of meeting hall	6	--	0
Support to disadvantage group	0	5	0
Collection of wild asparagus and selling	--	0	4
Number of participants	6	8	5
Number of sticky dot per participant	6	5	5
Total number of sticky dot per focus group	36	40	25

A 7: Current activities of Waku Damchi CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole and post for household consumption	6	6	5
Harvesting of pole and post for marketing	6	6	6
Fire wood and litter for cattle bedding	3	3	4
No of Participants	5	5	5
No of sticky dot per participant	3	3	3
Total number of sticky dot per focus group	15	15	15

A 8: Potential activities of Waku Damchi CFMG and number of sticky dots assigned by participants

Activity	Committee	Men	Women
Harvesting pole and post for marketing	6	5	5
Loan to CFMG members	5	4	5
Harvesting of timber, pole and post for CFMG members	4	5	5
Furniture enterprises	5	6	5
Firewood production and marketing	5	6	5
Bamboo plantation for marketing	--	4	--
No of participants	5	5	5
Number of sticky dot per participant	5	6	5
Total number of sticky dot per focus group	25	30	25

A 9: Current activities of Dungkarling CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole, post and firewood for CFMG member	9	6	5
Medicinal plant and broomstick production	7	5	6
Loan to CFMG members	5	4	4
Number of participants	7	5	5
Number of sticky dot per participants	3	3	3
Total number of sticky dot per focus group	21	15	15

A 10: Potential activities of Dungkarling CFMG and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole, post and firewood for CFMG member	6	5	5
Medicinal plant and Bamboo production for marketing	7	5	6
Loan to CFMG members	7	4	4
Furniture enterprises	8	5	5
Stone extraction for marketing	7	6	--
Number of participants	7	5	5
Number of sticky dot per participant	5	5	4
Total number of sticky dot per focus group	35	25	20

A 11: Preference of current Yarkey CFMG activities and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Harvesting of timber, pole and post for CFMG members	8	8	10
Timber harvesting and marketing	7	7	5
Number of participants	5	5	5
Number of sticky dots per participant	3	3	3
Number of sticky dots per focus group	15	15	15

A12: Preference of potential Yarkey CFMG activities and number of sticky dot assigned by participants

Activity	Committee	Men	Women
Furniture enterprises	7	7	6
Shitake mushroom rearing	6	6	7
Harvesting of timber for marketing	4	4	4
Forest Nursery development	5	5	--
Loan for CFMG	5	5	4
Cane and Bamboo product development	3	3	--
Collection of medicinal plants, wild vegetable and marketing	--	--	4
No of participants	5	5	5
No of sticky dots per participants	6	6	5
Total no of sticky dots per focus group	30	30	25