

Short communications

Analysis of People's Attitudes towards Subsidized Rural Timber Allotment and Community Forestry in Sarpang Dzongkhag, Bhutan

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ABSTRACT

This research investigated people's attitudes towards the subsidized rural timber allotment (SRTA) policy and the community forestry (CF) approach in Bhutan. It was assumed that there was no people's participation under the current SRTA policy and this was a threat to sustainable forest management (SFM). Samples for the study consisted of rural households in Dekiling *geog* (block), a part of *Sarpang Dzongkhag* (district). Both quantitative and qualitative data were collected through household interviews. Statistical tests as well as the perceptions of different categories of people based on occupation, social status, education and age groups confirmed that there was little or no people's participation in forest management under the current SRTA policy. The attitudes of people on SFM ($\chi^2 = 14.514$, $p < 0.024$) indicated uncertainty in the future supply of rural timber. The assessment of both the attitudes of people on SRTA and the opinions of people towards CF strongly favored replacing SRTA by CF to achieve sustainable forest management.

Keywords: people's attitudes, subsidized rural timber allotment, community forestry, Bhutan

INTRODUCTION

Bhutan is a small country with a total area of 38,394 km²; it is located in between the Indian plains and the Tibetan plateau. About 69% of the population is dependent on subsistence agriculture and livestock farming. Forests play very important roles in sustaining people's livelihood. Forest resources are granted almost at no cost to rural communities for supplementing their farming activities. Royalties are only charged nominally including for timber that is highly subsidized to ensure proper development of rural housing and farm infrastructure.

The subsidized rural timber allotment (SRTA) policy provided one of the essential *kidu* or grants that has been available in Bhutan since 1969. It was primarily aimed to ensure proper rural housing and farm infrastructure and was provided when most people were suffering economically and there was a lower population (Dhital, 2009). The situation today has greatly changed and the socioeconomic conditions of the Bhutanese have increased greatly. Yet, SRTA is currently claimed as a matter of right (Royal Government of Bhutan, 2009) and there is a tremendous increase in the demand for timber.

On the other hand, the recipients of SRTA have had no reciprocal role in or responsibility for managing their forests for future sustainability. Although a community forestry program was initiated almost two decades ago and proved better at local resource management, SRTA continued with a series of amendments to the Forest and Nature Conservation Rules (FNCR). Every change in the rules favored SRTA by offering more, through extended times for timber operation and reduced royalty rates (Royal Government of Bhutan, 2006). However, people's participation and aspects of sustainable forest management (SFM) were overlooked.

The immediate lifting of the timber subsidy would cause difficulties since the poorer section of the community in rural areas would be affected the most. The use of forest resources is inevitable since one quarter of the country's population (mostly in rural areas) continues to live in poverty. Natural resources and poverty are directly linked (Giri, 2004). With the changing economic scenario and people's needs, the challenge was to limit such allocations. However, if the current trend of SRTA continued, it would be a great threat to SFM in the country. Therefore, there was a genuine need to look at the impacts of SRTA and how its replacement with community forests (CFs) could enhance SFM.

The experiences arising from CFs in Bhutan and other countries have shown that CFs have not only built social capital, but they have also contributed towards economic development and environmental conservation; CFs instilled a sense of ownership in the local forest resources and met the requirements needed of the forests without compromising future sustainability

(Temphel and Bukeabum, 2006; Gilmour *et al.*, 2004; Royal Government of Bhutan, 2010a). Thus, CF was the best form of people's participation in local resource management.

Therefore this study was focused on assessing people's attitudes on SRTA and community forestry in order to explore the possibility of replacing the SRTA policy with CF under SFM. The study would facilitate knowledge of the awareness of people of resource management. It would also help in planning activities, policy formulation, and the implementation of strategies best suited to the Bhutanese context. Thus, it would be a guide to ensuring people's participation in local resource management and future sustainability.

MATERIALS AND METHODS

Study Site

The study population consisted of local villages in the Dekiling *geog* as part of the Sarpang *Dzongkhag* in southern Bhutan (Figure 1). The unit of analysis was the household in nine *chiwogs* (hamlets) in this *geog*. The Dekiling *geog* was selected for the study based on its central location and its mix of ethnic people from old and new settlement. Out of 651 households, 248 sample households were selected randomly. The total *geog* area was 113.21 km² with a population of 4,561. The *geog* had one approved community forest (Bumpaling CF) and another one (Dolpani CF) was being established. In general, the study focused on forest condition, timber supply (SRTA) and need for people to participate (CF) in SFM.

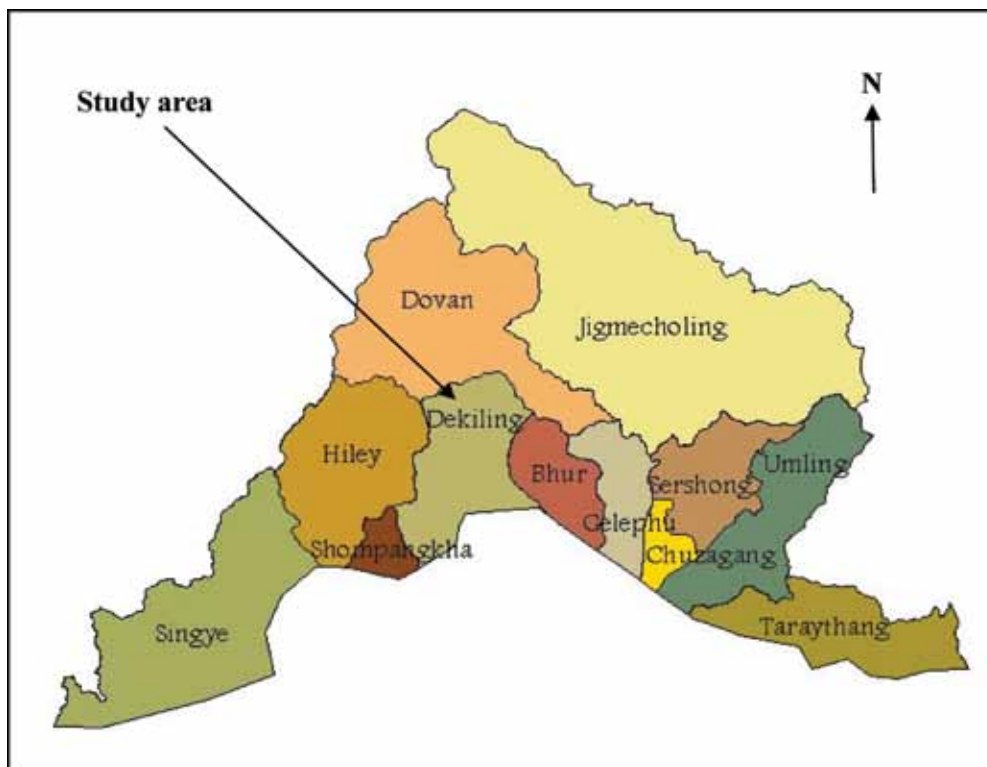


Figure 1 Map of Sarpang *Dzongkhag* showing study area (Dekiling *geog*).

Source: Royal Government of Bhutan (2005)

Data Collection and Analysis

Qualitative and quantitative data were collected separately. The quantitative data were generated through structured questionnaires to the sample households. Qualitative data were explored through two approaches: focus group and key stakeholder meetings. The focus group meeting was carried out with members of *Geog Yargay Tshogdu* (Block Development Committee) and executive members of the community forest. The data collected for this study were analyzed in two stages. First, quantitative data were processed and analyzed using descriptive statistics and a non parametric test (chi square). Correlation (Spearman rank) was also used to determine relationships. The second (qualitative) set of information

was generated through focus group meetings and these data were analyzed using participatory rural appraisal tools (resource mapping, historical timeline, SWOT analysis, force field analysis, and problem tree analysis). The quantitative and qualitative information generated were compared and triangulated.

RESULTS AND DISCUSSION

The results are presented in three separate sections: attitudes of people to SRTA, opinions of people on community forests and findings from qualitative data collection (focus group and key stakeholder meetings).

1. Attitudes of People to SRTA

The attitudes of people towards SRTA were assessed in relation to satisfaction with and perception of future rural timber supply, current people participation and opinions on the sustainability of local forests. The attitudes were assessed according to the amount of SRTA benefits provided to the rural households: none (no allotment), low (less than 500 cubic feet (cft)), moderate (501 - 1000 cft) and high (more than 1000 cft). The survey results revealed 16.13% of the sample households had acquired no SRTA, 11.29% received less than 500 cft (low), 60.89% had been allotted moderate

benefit (501 - 1000cft) and 11.69% had a high allotment of SRTA (more than 1000 cft). The details are given below.

1.1. Satisfaction and Perception on Future Rural Timber Supply

The evaluation of a satisfactory level for different beneficiary groups showed that the majority (mean = 51.77%) had mixed feelings (ok). About 38.16% of the beneficiaries were satisfied while only 3.07% were greatly dissatisfied. Among the respondents, only the moderate group (almost 2%) was strongly dissatisfied with the timber allotment through SRTA (Table 1).

Table 1 Level of satisfaction from timber allotted through satisfaction - timber allotment (SRTA).

Benefit of SRTA	Rep (100%)	SRTA					Total (%)
		Strongly dissatisfied	Dissatisfied	Mixed feelings (Ok)	Satisfied	Greatly satisfied	
None	16.13	0.00	2.48	75.02*	22.50	0.00	100
Low (1–500)	11.29	0.00	10.72	46.41*	39.33	3.54	100
Moderate (501–1000)	60.89	1.99	5.96	47.68*	39.07	5.30	100
High (above 1000)	11.69	0.00	6.93	37.98*	51.75	3.42	100
Average		0.50	6.52	51.77	38.16	3.07	

Note: * Majority of households within the group;
Rep: Representation

The views of SRTA and CF were analyzed with respect to future timber source (Table 2). The majority of beneficiaries (55.83%) supported the replacement of SRTA by CF while 43.84% felt that the current

SRTA system should be continued. The other options such as purchasing timber from commercial sawmill and the formation of a Natural Resource Development Corporation Limited was not preferred at all.

Table 2 Perception of people on future rural timber supply.

Benefit of SRTA	Rep (%)	Opinions on people on future rural timber supply			Total (%)
		Continue present system (SRTA)	Replace by CF	Phase out completely	
None	16.13	47.49	52.51*	0.00	100
Low (1–500)	11.29	39.33	60.67*	0.00	100
Moderate (501–1000)	60.89	43.70	54.97*	1.33	100
High (above 1000)	11.69	44.82	55.18*	0.00	100
Average		43.84	55.83	0.33	100

Note: * Majority of people's opinions within the group;
Rep: Representation

1.2. People's Participation and Sustainability

Participation here refers to the involvement of people in the management of forests (for protection and production) for sustainable management. In an assessment

of current participation from the different beneficiary levels of SRTA, the highest was in the no participation category (87.40%) as shown in Table 3. Only 4.89% responded they passively participated and 7.71% were actively participating in SRTA towards SFM.

Table 3 Current level of people's participation in SRTA policy.

Benefit of SRTA	Rep (100%)	Present level of participation (SRTA) (%)			Total (%)
		No participation	Passive participation	Active participation	
None	16.13	94.98*	2.48	2.48	100
Low (1–500)	11.29	85.74*	3.54	10.72	100
Moderate (501–1000)	60.89	86.09*	6.62	7.29	100
High (above 1000)	11.69	82.81*	6.93	10.35	100
Average		87.40	4.89	7.71	

Note: *Majority of people's opinions within a group
Rep: Representation

Similar opinions were observed in all categories of people—namely, by occupation, social status, education and age group—towards the present level of participation (Figure 2).

The statistical test confirmed there was a significant association ($\chi^2 = 14.514$, $p < 0.024$) indicating no or very little presence of people's participation in SRTA.

In the assessment of people's opinion on the sustainability of the forest, almost 86% considered that the current forest could not be sustained while less than 9% had no idea about sustainability and even fewer (5.03%) supported the notion that the current forest was sustainable (Table 4).

2. Opinions of People on Community Forestry

In the study, there was only one CF and sample households were represented by around 8% CF members and almost 92% non-CF members. As with the assessment of the attitudes of people on SRTA, the opinions of people on community forestry were also assessed based on the same categories

used for the SRTA benefits (none, low, moderate and high). The opinions of people assessed were mainly on the future level of participation, willingness to participate in CF and expectations of participation in CF.

2.1. Future Participation and Willingness in Community Forestry

The level of people's participation (no, passive, active) were assessed. On average, around 86% of the total beneficiaries expressed the need and interest for active participation in the future. Less than 5% of the total households surveyed were not interested in future participation (Table 5). Specifically, while more than 87% of noncurrent beneficiaries felt there was a need to participate in future forest management, there were more people (13.77%) from the high beneficiaries group who showed less interest in future participation.

Similar opinions were observed in all categories of people (occupation, social status, education and age group) towards the future level of people's participation (Figure 3).

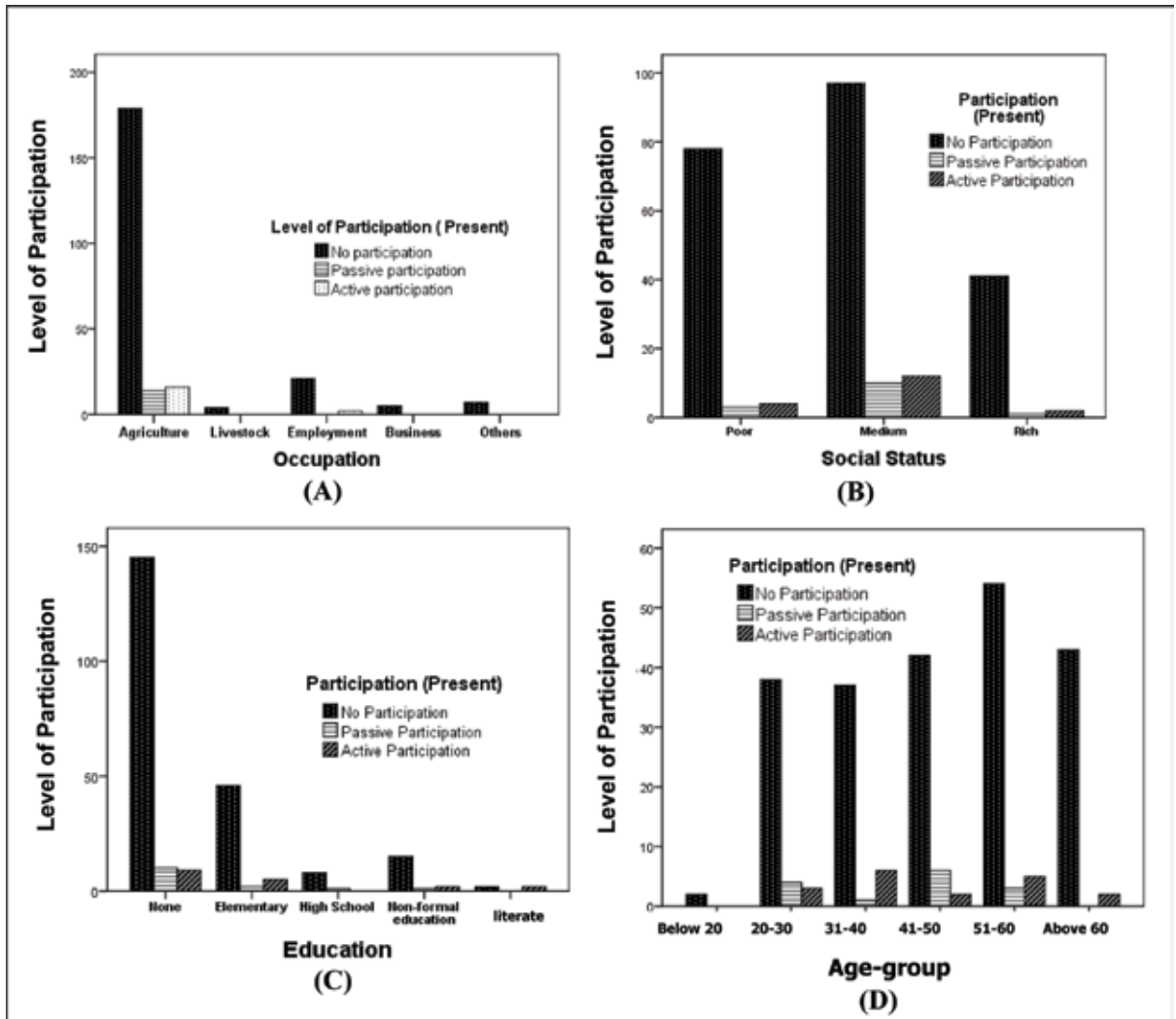


Figure 2 Perception from different groups of people on current level of participation by: Occupation (A), Social status (B), Education (C), Age group (D)

Table 4 Opinions of people towards sustainability of current forest.

Benefit of SRTA	Representation (100%)	Opinions on Forest Sustainability (%)			Total (%)
		Yes	No idea	No	
None	16.13	5.02	7.50	87.48*	100
Low (1–500)	11.29	0.00	14.26	85.74*	100
Moderate (501–1000)	60.89	1.33	8.61	90.06*	100
High (1001 and above)	11.69	13.77	6.93	79.30*	100
Average		5.03	9.32	85.64	

Note: *Majority of people's opinions within a group.

Table 5 Future level of people's participation in local forest management.

Benefit of SRTA	Rep (100%)	Future level of people participation (%)			Total (%)
		No participation	Passive Participation	Active participation	
None	16.13	5.02	7.50	87.48*	100
Low (1–500)	11.29	0.00	14.26	85.74*	100
Moderate (501–1000)	60.89	1.33	8.61	90.06*	100
High (above 1000)	11.69	13.77	6.93	79.30*	100
Average		5.03	9.32	85.64	

Note: *Majority of people's opinions within a group

Rep: Representation

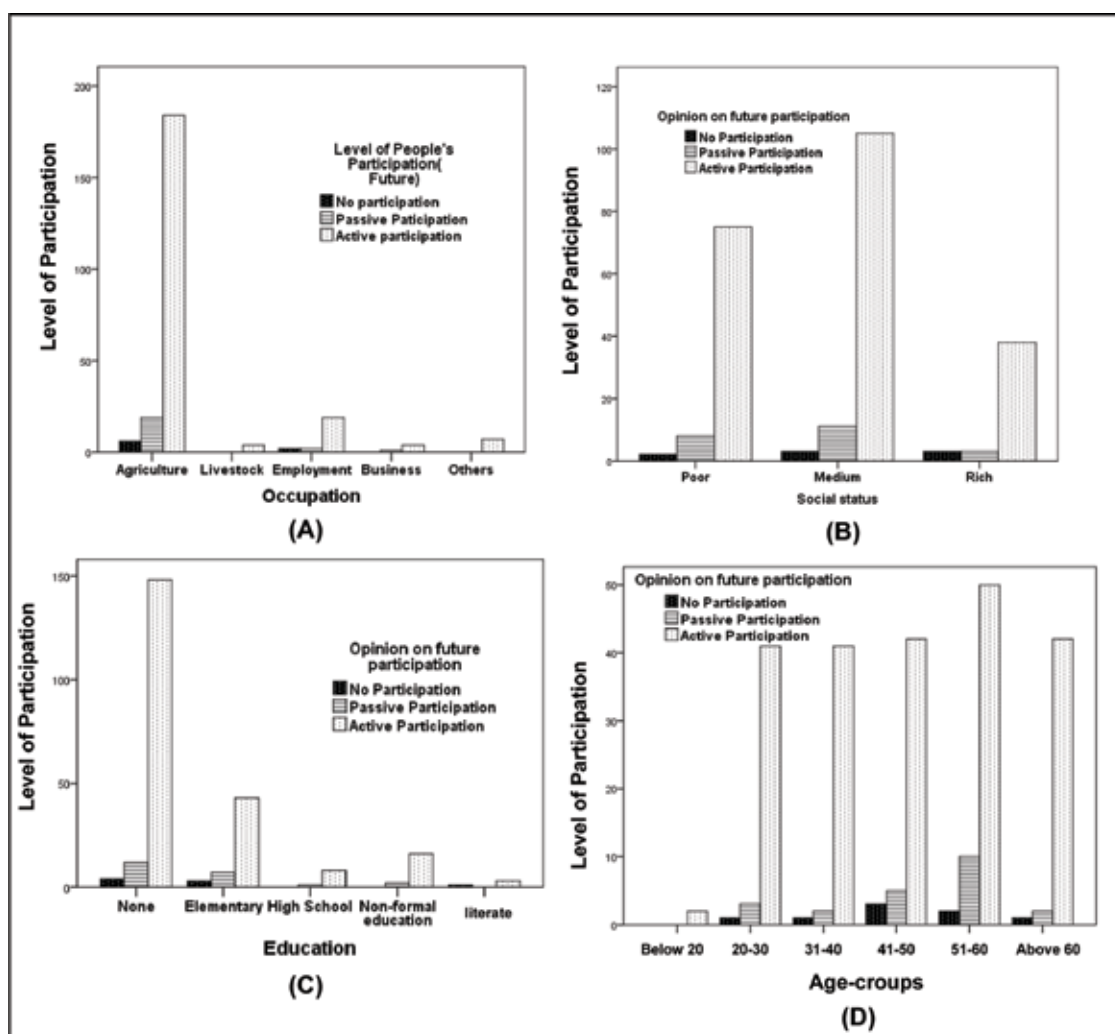


Figure 3 Perception from different groups of people on future level of people's participation by: Occupation (A), Social status (B), Education (C), Age group (D).

Further, around 77% of the households responded positively (yes) to CF participation. They would become involved in forest management activities such as planning,

decision - making, protection, production, benefit sharing, cost sharing and monitoring (Figure 4). However, at least 23% were resistant to CF participation.

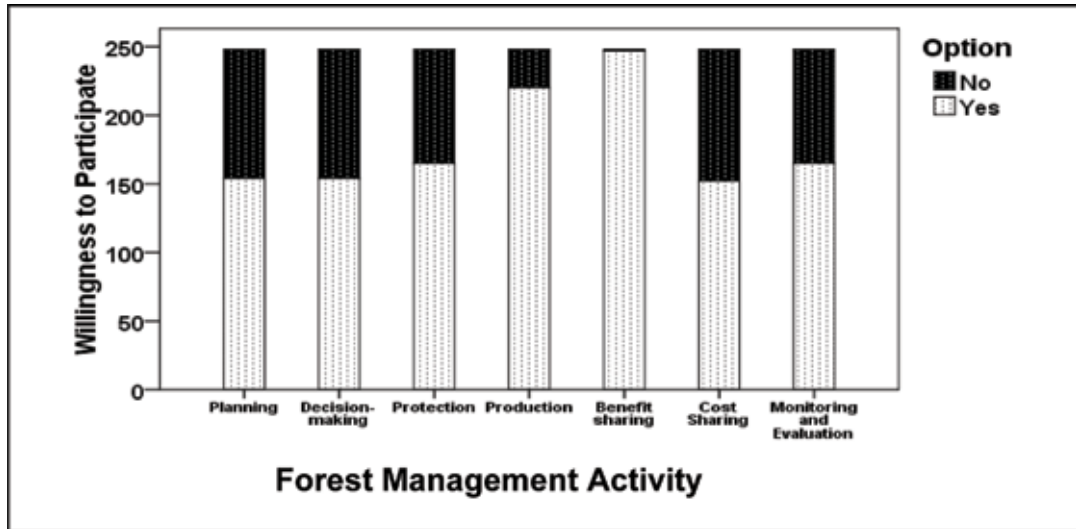


Figure 4 Willingness to participate in local forest management activities.

2.2. Expectation of Participation in CF

It was found that almost 61% of the beneficiaries had an expectation of participating in CF programs (on sustainable forest management). Nearly 26% of the respondents expressed their intention to join CF to improve the productivity as well as improving degraded land and water resources. Income generation was also an expectation for about 6% of the households while around 6% of the households expected sharing in the benefits (timber and NWFP) after participating in CF programs.

Statistical tests were also significant ($r_s = 0.170$, $P = 0.007$) and there was a positive correlation between the level of people's participation and opinion on future timber supply. This indicated that an increase in people's participation in forest management would increase the supply of rural timber from CF.

3. Findings of Qualitative Approach (Focus Group and Stakeholder Meetings)

The results of the qualitative approach were similar to the outcomes of the quantitative approach. In resource mapping, adequate forest areas were found with high potential for CF. Despite the initiation of different approaches to forestry management (such as CF), SRTA had continued ever since its introduction in 1969. In SWOT (strengths, weaknesses, opportunities and threats) analysis, strong legal support for SRTA and the lack of roles in management outweighed the advantages of SRTA. Force-field analysis showed maintaining the status quo due to strong support from elected representatives while no participation in management and misuse of SRTA was an alternative. The main problem identified was the shortage of timber among other resources and no participation was still a setback. The causes of the problem were: ever increasing demand,

less production due to improper management plans, and lack of people participation leading to illegal activities and thus the

question of sustainability. The overall results of the focus group and key stakeholder meetings are shown in Table 6.

Table 6 Main findings from focus group and stakeholder meetings.

Approach	Findings
Resource mapping	• Adequate potential areas for CF as only one CF existed
Historical timeline	• Participatory management (CF/PF) had progressed • SRTA existed without beneficiary roles in management
SWOT Analysis	• No management or harvesting plans for SRTA • No encouragement for people participation in SRTA policy
Force-field analysis	• No participation and misuse of SRTA
Problem identification and prioritization	• No encouragement for participation in local forest management under SRTA policy
Problem tree analysis	• Cause: no participation/ownership • Effect: increased illegal activities leading to mismanagement and deflection of timber harvest to ineligible areas

Participation and Sustainability

The results from the household survey and perception of different groups of people indicated that there was little or no participation in the current SRTA policy. In addition, statistical testing confirmed this was significant ($\chi^2 = 14.514$, $p < 0.024$). Thus, this study highlighted that the current SRTA policy had weak people's participation. Accordingly, almost 86% of the households shared the view that the current forests could not be sustained.

Referring to Arnstein's ladder of participation, the current participation in SRTA could be compared to the first rung (Arnstein, 1969). It was "non-participation" or a level of very weak participation. The "non participation" level corresponded to passive participation based on the typology of the International Institute for Environment and Development on participation (International Institute for Environment and Development, 1994). The poor participation might be due to the lack of opportunity in the present context. Thus, large amounts of manipulation

and therapy were required, which might include changes in the policy itself or resorting to alternatives to reach "self mobilization". It was at the highest level where the local people were empowered for decision making or given managerial power. The best forest management should result from placing the responsibility in the hands of the local community who were the legitimate and ultimate guardian of local forests.

In this regard, Westoby (1987) argued that forestry was not about trees, it was about people. And it was about trees only in that trees could serve the needs of people. Thus, managing resources was about managing people; this was widely accepted and supported by many resource managers in different fields, with the United Nation Development Program (1990) acknowledging that the basic objective of development was to create an enabling environment for people to enjoy long, healthy and creative lives. Further, His Majesty, the Fourth King of Bhutan, said, "People's participation is

a key to conservation and utilization of forest resources” (Chhetri *et al.*, 2009).

However, while rural communities in Bhutan were blessed with SRTA, there was no encouragement of forest management for future sustainability. The different demographic variables considered in this study for participation all indicated the lack of a role for the beneficiaries. Perhaps this was due to the fact that the existing ownership of forest resources was with government and consequently there was no encouragement of people’s participation to make the people more independent.

The present level of participation could be a threat to sustainability. The views on awareness of forest sustainability with the present level of degradation were assessed. Almost 86% of the beneficiaries responded that the current situation could not be sustained under the SRTA policy. This was evident from the huge amount of timber required to meet the demand forecasts (Royal Government of Bhutan, 2010b). Various studies (Colfer, 1995; Harrison and Suh, 2004; Penjore, 2007; Zare *et al.*, 2008; Ozturk, 2010) claimed that without the involvement in the local forest management of the people dwelling nearby, there was a high possibility for degradation. Thus, the needs of the people whose livelihoods depended on the forest must be incorporated into sustainable forest management.

SRTA and CF Approach

People’s opinions were fairly evenly balanced on the replacement of SRTA by CF. Nearly 44% of sample households still required SRTA to be continued while only about 55% considered there was a need to replace the current rural timber supply from SRTA by CFs. Thus, the present rural timber supply policy could limit the interest of communities in becoming involved in CF because they already had entitlements

to obtain timber through the SRTA process. The government also found that the current rural timber supply through the SRTA process might be detrimental to the establishment of community forestry in Bhutan (Royal Government of Bhutan, 2010b). Sratz *et al.* (2007) emphasized that entitlements were guaranteed by law and timber/wood was either provided free of cost or (in the case of construction materials) at a minimal rate. This had resulted in a situation where local communities were not motivated to play an active part in the rehabilitation of forests. Consequently, this had resulted in increased demand on limited timber resources leading to pressure being exerted on the local forest resources.

Local people did not care about the local forest resources since they were not directly accountable and responsible for the management of the forest resources. The ownership rested with the government and most people had the notion that the government would take care of everything. But in reality, it was very difficult to monitor every piece of forest area with the handful of foresters employed by the government. Penjore and Rabten (2004) also considered that the limited number of forestry service staff could not adequately manage and control the local use of forests. Weak monitoring was reported as one of the main problems of misuse/deflection of timber supplied through SRTA (Royal Government of Bhutan, 2009).

In general, the local forest resources were over-utilized and under managed with very low productivity leading to unsustainable practices. Schindele (2005) found out that rural timber allocation was on a purely *ad hoc* basis and the harvesting of trees was driven by demand rather than by considering silvicultural practices. There was no proper plan and weak monitoring, resulting in the exploitation of the accessible timber resources nearby settlements. Dhital

(2009) agreed that SRTA took about 78% of the total wood production and the balance of about 22% was for commercial use. Consequently, demand for construction timber was increasing at a rate greater than the volume that could be sustained.

In this regard, while 23% of the households resisted participating in forest management, 77% of the households were willing to participate in any forest management activities such as planning, decision-making, protection, production, benefit sharing, cost sharing and monitoring. The concept of people participation is not new in Bhutan; it has existed since time immemorial and some form of strong participation was still seen in rural Bhutan (Dorji, 2003), being mostly related to sharing and helping each other within the context of forest resource allocation. Thus, as suggested by several studies (Gilmour *et al.*, 2004; Tempheh and Bukeabum, 2006; Wangdi and Tshering, 2006; Tempheh, 2008; Gilmour, 2009; Royal Government of Bhutan, 2010a), community forestry was a better form of people's participation in forest management. Community forests not only could build strong social capital, but they instilled a sense of ownership of the local forests for economic development and environmental conservation. The results of the current study also favored transformation of the SRTA policy into community forestry for maintaining the sustainability of local forest resources.

Community forestry in the Bhutanese context could be defined as the involvement of the community in the management of a specific forest area guided by common goals and objectives. With gaining awareness and publicity among local communities on the success of community forestry, more people were willing to participate in it. It was found that people's participation would increase the assurance of future rural timber supply. Around 88% of the total beneficiaries expressed the need and

interest for active participation in future management. The main goal behind their willingness was the restoration of the deteriorated local forest conditions. In the same way, obtaining ownership rights for the local forest was another goal. The sharing of benefits received little attention although it was the main driving force. Currently, there are 173 community forestry groups covering an area of about 21,025 hectares managed by 8650 households (Chhetri *et al.*, 2009). With more than 72% of the country's forest cover still not under CF management, there is huge potential for the development of an increased number of CFs for sustainable forest management.

CONCLUSION

SRTA is no doubt very useful as a means to provide timber grants to rural communities, but it does not encourage people's participation in forest management. Opinions from the different categories of people (occupation, social status, education and age group) confirmed that there was a very low level of people participation in the current SRTA policy. Almost 86% of the households had the shared concern that if the current SRTA policy continued, then the existing forests would not be sustained. Although almost one quarter of the households showed an unwillingness to participate in future forest management, three quarters indicated a high interest in strong participation in forest management activities including planning, implementation and monitoring. Resistance to participation was attributed mainly to the guaranteed entitlement of timber and other forest resources from the current SRTA policy without any obligation to undertake forest management. Moreover, local communities lacked confidence in their technical expertise in contemporary forest management.

However, strong agreement from different categories of people revealed the possibility of replacing the SRTA process by community forests. The majority of households who were non-CF members expressed concern that if they were given the opportunity to become involved, then the nearby forests would become degraded. Thus, the results of this study favor phasing out the SRTA policy gradually and replacing it with CF based on sustainable forest management. Sustainability will be best achieved when the current “resource users” are transformed to “*resource managers*”. This transformation would not only alleviate poverty but also ensure the constitutional mandate of maintaining 60% forest cover and also support the realization of the national goal of Gross National Happiness.

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