

The Practices and Prospects of Community Participation in Joint Forest Management in Khyber Pakhtunkhwa Pakistan

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Received: 11th October 2021

Revised: 27th December 2021

Accepted: 01st March 2022

Abstract: Pakistan has initiated community participation in forest management since 1996, which has both positive and negative prospects. This study focuses on the participation level of community in forest management and how benefits of participation is shared between community and forest department, and how community has contributed towards forest protection and conservation. The Study was conducted in eight selected villages of Siran valley of Hazara Division of Khyber Pakhtunkhwa Pakistan because of extensive joint forest management (JFM) practices and implementation. The primary data has been collected from Forest department and communities who were actively involved in joint forest management through interviews and questionnaires. Results revealed that 80 percent of communities were involved in JFM activities like forest conservation and afforestation. The JFM practices sensitized the communities about forest and its worth in the form of protection, plantation and conservation on sustainable basis. Communities have been found satisfactory for direct benefits such as cash money and direct participation in utilization of forest, however, the benefits did not trickle down to the base level. The research shows that forest resources are sustained since application of JFM interventions in the selected communities. Further researches are needed on challenges and opportunities of JFM interventions for the purpose of wider application among different societies.

Key words: Joint forest management, Forest conservation, Khyber Pakhtunkhwa, sustainable Forest management

1 Introduction

Forests are home to more than 3/4 of the world's life ashore. In a broader perspective there are five dimensions in which indigenous people take advantage from forest and forest products. These perspectives are the type of beneficiaries, types of forest products and services provided, the role of forest benefits within the household's strategy (subsistence versus commercial use), type of natural

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resource management, extraction to (re)planted forests, and high or low return products (Angelsen and Wunder, 2003). In 2013, in lower- and middle-income countries over 30 percent of forests are owned or managed by indigenous peoples and local communities (Rights and Resources Initiative, 2014). Deforestation and forest degradation happen due to factors such as population growth, poverty, lack of land tenure rights, construction of building and limited capacity for forest management. Forest degradation occur due to three drivers, these are logging of forest product from tree plantation 26%, shifting agriculture 24% and forest fires 23% (Ritchie and Roser 2021).

Since 1980's arising issues of forest degradation and deforestation around the globe particularly in developing countries lead the thinkers to use alternative plan for forest protection and conservation. Earlier under MDGs the forest conservation was made compulsory targets which is further extended in Sustainable Development Goals (SDGs) with multiple targets of environmental protection and climate change. To put the forest resources on sustainable development guidelines, the participatory development and management practices have been preferred over centralized system. Many scholars and practitioners are agreed to shift forest management practices from state centered to local level in developing countries because of unsuccessful forest conservation policies (Gibbs et.al, 2010). To decrease deforestation through structural reforms in the forestry sector most of the national governments of South Asia such as Nepal, India and Bangladesh have launched major initiatives since 1980 (Siry et. al, 2005). In Indonesia, social forestry gave an opportunity for local communities to become a key player in improving their welfare, safeguarding stability between the environment and socio-cultural dynamics through various programs implemented through a sustainable forest management system in state forest areas and customary forest areas (Luhr, 2022). Since mid-1990s Tanzania has been endorsing Joint Forest Management (JFM), about 5.39 million hectares of forest area are covered by forest. 17.33 million hectares of forest in India is overseen by 84,632 JFM communities including 8.38 million families in its 27 states (Government of India, 2002). In late 1970 community forestry was instilled in Nepal to conserve forest resources (Pandit et. al, 2004). JFM is being rehearsed since 1980s through forest user group by which the public authority has given over 1.1 million hectares of forest to 14000 forest user committees (Agarwal, 2001).

Pakistan has around 4.478 million ha land covered under forests, which is comparable to an aggregate of 5.1 percent of the absolute land region (FAO, 2019), and very low when differentiated with 30 percent for the world (FAO, 2001). Total area of various regions of Pakistan viz. Sindh 4.6%, Baluchistan 1.4%, Punjab 2.7%, Khyber Pakhtun khawa (KPK) 19.6%, Azad Kashmir 36.7% and Gilgit Baltistan 4.5% (Bukhari etal 2012). This shows that the majority of the forest lies in northern part of the country in KPK and Azad Kashmir. There is an extraordinary variety of species in light of the country's incredible physiographic and climatic differentiations. These are (a) littoral and swamp forests, (b) tropical dry deciduous forests, (c) tropical thorn forests, (d) sub-tropical broad-leaved evergreen forests, (e) sub-tropical pine forests, (f) Himalayan moist temperate forests, (g) Himalayan dry temperate forests, (h) sub-alpine forests and (I) alpine scrub belong to coniferous type (Forestry Sector Review, 2019). Regulation portrays 85% of the forest of KPK is state forest. These state forests are additionally partitioned into classes under forestry sector master plan (FSMP, 1992). These include, reserve forest, protected land, resumed land, communal forest, Guzara land and section 38 land. These forests are vanishing at a rate 0.2-0.3 % per Annum that is one of the highest in the world (Forestry Sector Review, 2019). Forest consumption is one of the most genuine ecological worries for Pakistan since it is joined by numerous other natural and financial impacts like avalanches, soil disintegration, floods, soil corruption, and removal of individuals, (FAO, 2007).

The Sustainable Development Goals 15 articulates targets for preserving biodiversity of forest, desert and mountain eco-systems, as a percentage of total land mass. Sustainable Development Goals give more emphasis on participation of community for achieving its goals. Following MDGs and later SDGs, Pakistan has also implemented JFM to conserve its depleting forest resources since 1996. Forest department of KPK initiated the Forestry Sector Project (FSP) with collaboration of several donor agencies - the Asian Development Bank (ADB), the Dutch Government, GTZ and the Swiss Agency for Development and Cooperation (SDC). Its main purpose was to eliminate the fundamental causes of the depletion of forest resources through participation of stakeholders (Suleri 2002; Shahbaz et. al, 2007). Re-structuring and decentralization were core issues of the forest department's hierarchy. The community participation in Khyber Pakhtunkhwa was additionally sanctioned under section 101 and 102 of KPK Forest Ordinance 2002. Which legitimately enabled the Divisional Forest Officer (DFO) to include Joint Forest Management Committees (JFMC) in the protection and the management of forest inside their locale. Provincial forest policy 2001 gives lawful cover to the participatory methodology and joint forest management and to apply participatory approach to deal with forest (Shahbaz et al. 2007). For viable execution of the JFM framework, the Government of Khyber Pakhtunkhwa Forest Department outlined Community Participation Rules. The methodology of JFM was then extended to entire Khyber Pakhtunkhwa Province and various JFMCs have been laid out under the above rules in different areas of the KPK Province for joint administration of forest. Village Development Committees (VDC) and Women's Organizations (WO) were laid out at village level. Responsibilities include dynamic jobs of the communities in arranging and advancement of forest, support in safeguarding the forest from outsiders, and the utilization of forest assets (Kyeremeh, 2015). Diverse terminology for forest community is practiced for instance joint forest management, community participation, participatory management and community based participatory resources management. Here in this study the terms joint forest management are used. Participation is the act of engaging communities and contributing to the activities, processes and outcomes of activities (Warah, 2008; Paul, 1987). However participatory management has its own challenges. At one hand it isn't fit with local culture and livelihood and at the other hand it has limited effects on elite's communities. Land tenure rights and benefit sharing are the main hurdle in implementation of participatory management. If the communities don't get any advantages, they are generally prone to pull out from participation in forest management. While implementing JFM in KPK province a number of issues aroused e.g. trust issues between FD and community and reluctant of community to participate in forest management. The FD staff were not well aware of plans and strategies of community participation. They were not trained to implement forest management plan for sustainable use of resources along with community.

Little is known after formulation of the JFM policy in Siran valley about the practices of community participation and their prospects in term of forest conservation and sharing of benefits. Therefore, this study focuses to examine that to what extent the community participated in joint forest management and to analyze the impact of the JFM on conservation and protection of forest resource in Siran forest valley. The research also identifies how the benefits of participation has been shared between department and community.

2. Methods and Materials

Qualitative method was utilized to explore the practice and process of participatory approach in the management and conservation of forest resources. According to Mack et. al, (2005) qualitative methodology is more successful in exploring intangible aspects of society. Since this research is focusing on practices and perception of community and forest official about JFM, therefore qualitative and

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thematic analysis were considered more relevant. Data was divided into themes according to objectives to further elaborate the intricate issues of community participation in forest department.

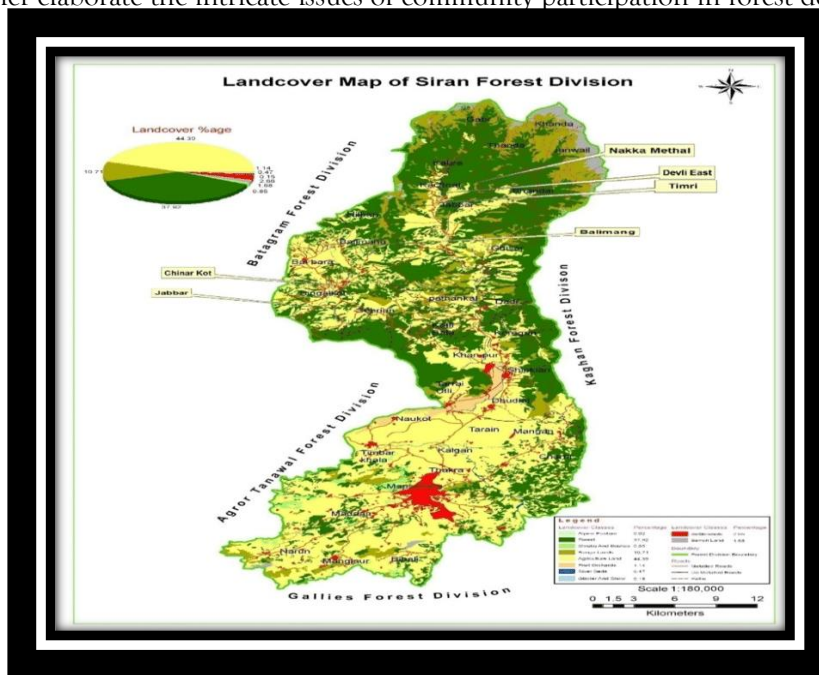


Figure 1: Land cover Map of Siran Forest Division
Source Forest Department KPK, Pakistan

Study area was Siran Forest division Mansehra situated in the northwest of the Khyber Pakhtunkhwa. It covers an area of 4,579 KM², including 118,438.97 hectors of guzara (private forest, managed by forest department) and 72,340.996 hectors of protected forest (government declared forest). Siran Forest

Division of District Mansehra is extremely wealthy in biodiversity and contains 37.92 % of Forest,

10.71 % Range Lands and 0.85 % of Shrubs and Bushes. The Longitudinal Extent of District Mansehra is from 72° 48'9.43" East to 74° 8'51.05" East and Latitudinal Extent is from 32° 12'29.39" North to 35° 10'51.62". The environment is freezing and gets heavy snow fall. The most of the precipitation happens in July, averaging 294 mm. As indicated by 2017 statistics, District Mansehra has population of 1,556,560. Population thickness in District Mansehra is 340/km². Majority of people are poor and rely on minor agribusiness, and forest assets like timber.

The Siran Forest Division has been divided in to four parts by Forest Department. Mansehra subdivision, lower Siran, Upper Siran and Hill Kot Range. Total eight villages; Chipragali, Bongrmang, Ogara, Chinar kot, Shenaibala, Godwai Arab khan, Kundsyeddan and Jabbori, were selected according to the identification of Forest Department. Joint forest management has been active in these villages since 2003. Non active communities inJFM were not taken since the study is based on participation level and benefits of participation between community and FD.

Multistage sampling techniques (Snijders and Tom, 2001) was adopted for this research to achieve time and cost efficiencies associated with extensive field. The first stage sampling consisted of field visit

listing the entire registration of JFMCs of Siran valley. This list of JFMCs obtained from the Divisional Forest Office of Hazara Forest Division at Mansehra was verified on the ground and each village was visited. In the second stage JFM committees, women organization, Government departments were visited. In the third stage, each selected JFMC, WO, and government department was further divided into target groups. Participant observation method was applied while visiting the study area. Interview guide, structured and unstructured interviews were used for collection of primary data from VDC/WO, FD officials and general community. Below is the detail of the selected sample for this study.

Table 1: Distribution of Respondents

Villages	HH Survey	JFM Community Owner and users interviews		Forester Forest Guard	Conservator, DFO, SDCFO, CDO
		Male	Female		
Shenaibala	10	10	10	2	9 (7 male and 2 female)
Ogara	10	10	10	2	
Chipragali	10	10	0	2	
Kundsyeddan	10	10	5	2	
Chinar kot	10	10	7	2	
BongrMang	10	15	15	2	
Godwai Arab khan	10	15	0	2	
Jobori	10	10	0	2	
Total	80	90	47	16	

Every village chief was asked to recognize 10-15 individuals for Focus Group Discussion (FGD) involving men, women and youth as well as a few forest laborers. Total three FGD were held, two with males and one with females to get complete picture of community

perspective on JFM. Key informant interviews were conducted to know the people perception on the forest development plan, execution of plan, benefits they got as well as their satisfaction from dealing with the Siran Community. A semi-structured questionnaire was applied to community members chosen through multistage methodology from eight selected villages of Siran valley. The data was then coded into themes according to objectives. Results were deducted from these themes.

3. Results and Discussion

This section elaborate the practical engagement of the community in the forest management interventions and discuss the opinions of the community and government department officials about JFM.

3.1 Community participation in forest management plan

According to participatory rule 2004, Directorate of Community Development Department, Extension Department, Gender and Development (CDEGAD) was set up. To activate Forest staff and forest communities to take active part in forest resources management. CDEGAD delegates and trains Community Development Officers (CDOs), and Female Forest Extensionists (FFEs) who work with

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ranger service staff. They assist them with assembling and make local area associations called VDC, JFMC and WO. The main job is to plan forest activities as well as funds allocation to use forest resources sustainably within the community. JFMCs likewise have the authority to establish new check posts for controlling the smuggling illegal cutting of wood and to help and coordinate with the Forest Department (FD). The FD select the village for VDC, WO or JFM according to forests and forest resources. They make village land use plan (VLUP) for the management of forest resources involving communities. It tried to involve all stake holders particularly both user and owners (Shahbaz and Ali, 2007). The FD held a meeting with locals of the village to inform about the community participation and its advantages. Afterward the CDO along with two forest staff helped the community to form VDC (comprising of 12 to 15 male members) and WO (8 to 10 female members) or JFM (15 male members). VDC is general committee for the management of guzara and reserved forest while JFM is specific committee for the management of both protected and reserved forests. They select the president and secretary by electoral process and in majority of the cases the president are forest owners. Similarly they are in contact with FD for planning and implementation. The committee was supported to arrange combine meeting at least once a month however if there is an urgency, they can call meeting. The last power of endorsement and approval rest with the DFO (JFM Rules, 2004). Total number of active village functional committees were 45 including 10 JFMCs in Siran Forest Division.

Under the umbrella of VDC and WO and JFMC plans for usage of waste lands, afforestation, nurseries raising, protection from forest fires and smuggling of woods. Planning is needed for implementation of forest resource management told by forest staff. A president from Ogara, communicating his opinion on the matter told that, "Planning is the fundamental prerequisite for the achievement of any action or program, which was legitimated under VLUP preparation by the FD. Few of the members were of the view that during implementation of plan FD staff was not competent to involve all the interventions described by FD officials. When the CDO was asked about this matter, she explained, "some villages did not have resources for afforestation or forest enclosure but community demanded for VDC/WOs. She further elaborates the matter that "in few communities the department had distributed chickens and fruit orchards plants. Whenever we visit them they were expecting the same. It is worth focusing that preparation and its execution was unrealistic without legitimate distribution of funds for it. Neither FD nor JFM allotted funds for such exercises. This was explained by the member of JFM from Bongr Mangin his individual meeting. "Cash is expected for legitimate execution and giving functional shape to the preparation". The inaccessibility of assets made participatory methodology meaningless. Subsequently, people group showed lack of engagement in such exercises. It is likewise worth focusing on that Bongr Mang was the main village where individuals are more proficient and mindful with regards to their privileges to forest assets and JFM. It was featured by one of the individuals from FD office that individuals of previously mentioned town were tricky and want extra funds to be implemented in their village. All the committees carry out number of activities to coordinate with FD for legitimate implementation of community participation. These are as follow

3.2 Forest Protection and Conservation

JFMCs were established to include communities in forest protection and conservation exercises. FD had hired local males (called naighbans meaning security guard) and their number depends on the size of forest usually four to five naighbans in every JFM. Each naighbans were given Rs 15000/ for their services. JFM in the radiance of participatory approach, had the authority to lay out new check posts and shift any check post with the permission of the concerned SDFO. FD and JFMCs' individuals, in the radiance of participatory methodology, held the obligation to plan combined watching and take a

look at posts for the protection of forest from wood smugglers and forest fires. JFM individuals considered FD liable for customary watching. The individuals from JFMC in an individual meeting in Upper Siran communicated their perspectives by saying that the FD staff had special powers in regards to forest protection and they utilize those powers. In addition to this JFM also help FD in patrolling against forest fires. These fires are prevalent during summer season. If it is not timely responded it will take minutes to engulf the whole forest.

In most of the villages the naighbans were complaining about the delay in their salary. When asked from FD officials they clarified that the Government had not released the funds for six months that is why this delay happened. But they assured all the naighbans that they will soon receive their salary. Forestry activities and forest protection done by the communities under the JFM program emphatically affected the state of forest and the forest assets have been created and expanded nearby expressed by SDFO of Shinkayari. Joining of indigenous information of forest dependent communities with the scientific information on forest, under JFM, is viewed as an ideal approach for sustainable development of forest (Wily, 2002; Appiah, 2001). Additionally, majority of the respondents from forest staff in FGD likewise expressed that JFM program had contributed in the assurance and advancement of forest. Since JFM are enlisted collections of FD, thus it focuses on those areas for execution of venture exercises where the JFM are accessible. The FD work force were of the view that the JFMCs offer help in protection and plantation and other forestry intervention in the JFM villages. The consequences of the review uncovered that forest are perhaps the main regular resources for the individual living in forest regions. The local community of Bongr Manguse wood for making coffin box as ground water level is extremely high. They cover their dead ones in casket boxes. Although the forest assets were not contributing straight forwardly to their cash income but were of great importance for subsistence use for instance, the utilization of wood for warming and cooking purpose, collection of wood, the grazing of animals. In any case, the institutional changes make regulated admittance to the forest more straightforward for the communities said by community chairman of Bongr Mang. Entrance to forest for inhabitants was more troublesome in light of the nearby naighbans stated by individuals from the Chipra Gali. By all accounts, this advancement appears to be positive with regards to the forest protection. Shahbaz (2009) conducted a study in two districts of KPK. His study revealed there were significance difference in community approach in the form of awareness about forest protection, reduced illegal cutting and changes in forest cover. Dev et al (2003) had conducted study on four district of Nepal, their findings revealed the positive outcomes of JFM were improved livelihood, income generation activities, protection and conservation of forest, improved social networking.

3.3 Nursery Raising and Capacity Building

One of the responsibility of CDO was to organize JFM communities for making of sapling for plantation purpose. Plastic bags and seeds were provided by CDO for making of nurseries. The forest department also trains them how to make the plants, raise them and protect those saplings for plantation season. Proper workshop was held during a field visit. It was observed that FD staff took all measures to involve the community members to train them for nursery raising and importance of plantation. In plantation season (March and September) forest department buy those plants from all the communities. A large number of the members detailed that they were given a nursery raising unit of 25000 plants under the Billion Tree Tsunami Project (BTAP) which they raised and the plants were then bought by the FD @ Rs.6/- per plant according to TOP endorsed with the FD for example (Rs. 150000/- was paid for every unit of 25000 plants). It was observed that various such nursery raising units of 25000 plants were given to local people and afterward the plants were bought from them by the

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FD. Nagaraja (2008) studied the impact of JFM on employment opportunities in Karnataka, India. The study revealed that during one year period JFM created RS 20 million rupees of paid employment for rural communities. During the most recent 5 years, the notable Project "Billion Trees Tsunami Afforestation Project" (BTAP) of KPK Forest Department had completed enormous afforestation in the study area through JFM/local community which emphatically affects the state of forest but the locals were not only provided with income and employment opportunities but also develop their skills through these forestry activities for their livelihoods improvement. In this way community was not only getting benefits in the form of salary and money but also contributing in afforestation and protection. The WO of Shenaibala and Ogara villages raised their own nurseries. In the same way there were forest enclosure in Godwai Arab Khan where male JFM protect the enclosure. All the community was actively involved in this protection process. They did not allow their own cattles for grazing in this enclosure. Community leader of Chinaar Kot along with members planted variety of plants in guzara forest on self-help basis to continue the past experience of nursery raising. Chinaarkot community were sensitive about their forest, they do not allow anybody in that protected area. Community of Kund Syeddan declared their forest as "green gold". Community leader of this village activate its community for plantation and protection of these plants. Belonging to well-off background he himself buy plants from nurseries to plant them in their forest.

3.4 Conflict Resolution

JFMC assumed key part in the goal of local conflict connected with forest assets that occur between communities or community and FD. It was accepted that community organization would be viable in clashes because of grazing issues or land tenure rights. JFMC were addressed by the elites of the local area whose choices were respected; consequently, they validated successful. Many struggles and debates were settled by community organization in a brief period. Indeed, even the choice made by the court couldn't be carried out without the contribution of local elite. This was featured by individuals from an area Chipragali in an individual meeting, "The choices made by these elites were more satisfactory and it does not additionally required money to settle on a conflict when contrasted with the complicated judicial system". This was expressed by the individuals from FMCS in FGD altogether that "the choices taken by these JFMCs are as indicated by the traditions and customs of territory, thus, these are not difficult to be executed". The elites are the guarantor whose choices are regarded and complied". JFM being a joined gathering for communities (forest owners, users and FD) assumed a significant part in clashes between these partners. Prior to utilizing the participatory methodology, these partners (communities and FD) were simply accusing one another, and neither of them was prepared even to pay attention to one another. Presently on this gathering both had the amazing chance to share their interests and talk about the issues of forest and its resources. This was communicated by an individual interview in Mansehra that community organization assumed the part of middle person among local gatherings and FD. The issues were commonly examined for creating agreement. Aside from this, it was observed that greater part of the JFMCs individuals were associated with timber business and they were timber contractor. The job of Forest Development Corporation (FDC) was scrutinized in past by such individuals, and they requested the nullification of FDC in light of the fact that its transportation charges were higher than the real charges. This was advocated by a Chairman of a JFM in locale Mansehra. Presently, in the radiance of participatory approach, nearby communities were involved and enabled in promoting to get excessive cost for such items.

4.3 Timber Marketing, Revenue Utilization and Distribution

Marketing of wood along with Community was one of the main goals of the JFM methodology was community was the major shareholder. About 80% of the royalty was the share of the local community (forest owner) from forest resources such as wood, grass, fodder, grazing of animals, therapeutic plants and herbs and 20% share went to FD which will be used for development of the area. The native owner were happy regarding the royalty “FD gave us royalty on the spot and there were no issues of conflict between community and FD”. Nevertheless, native leaders were seen as extremely dynamic in those exercises that were financially significant for themselves and disregarded any remaining exercises connected with forest improvement. Individuals from JFM, being the delegates of the forest user were seen as extremely dynamic in tree marking and collecting along with advertising. Forest owner were intrigued to take advantage of forest assets and get additional eminence as their portion from the forest product. This gave forest non owners and women sense of deprivation. As result it can impede the participatory approach. Beforehand, FDC (Forest Development Corporation) had the obligation of advertising for the forest timber and it was criticized for setting low prices. FDC was generally scrutinized by those individuals from JFM who were project workers associated with wood corporate and were intrigued that promoting and transportation of lumber should be in the area of JFM. This was explained by SDFO of a JFM in an individual meeting.

In addition to marketing, JFM also circulated forest product royalty amongst the community member and made agreement between local area individuals on its distribution. But it was just distributed among the possessors and didn't spend a single penny on development of the community said by respondents from Chipra Gali. It was noticed during the field visit later an individual communicated their perspectives on the issue that forests were their property and 20% of the royalty from these forest product was given to government for development activities while the leftover 80% was distributed among the owners. Subsequently, not single penny was disbursed for the improvement of marginal people including forest non owners. When asked from FD officials about the matter they did not clarified the issue. Aside from the exclusion of non-owners, females were likewise denied of their share in the royalty from the forest product. The royalty was distributed among the male owners based on strength of male in a house hold, while the females were overlooked in the entire interaction. This was clarified by an individual from JFM that:

“The income of the forest is dispersed among the owners based on the number of male individuals as they shoulder monetary obligations while the females have no such obligation; subsequently, they are not given offer in the revenue”. It implies that those families that had more male individuals had more offer in the royalty when contrasted with those which had less male individuals. It was seen that females didn't relish property freedoms and financial autonomy. They were generally subject to the male individuals from their families as they were not skilled for managing forest. Consequently, they were denied of their entitlement to have share in the royalty/income from the forest products. In the end, they were not given the proportion inside the revenue/royalty from forest resources. That is the reason that the revenue/royalty become allotted among the male participants of the community. Conflict can be minimized if the JFM approach is transparent, accountability and equitable distribution of benefits reach to all segments of community.

5.3 Local people's satisfaction with community participation

In community participation, 80%respondents demonstrated JFM is a practical methodology for forest organization and it ought to be proceeded though 15% of the respondents were against JFM approach

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and were having the affirmation that the dynamic powers were with land owners in community participation. It was those areas where FD had helped the influential land owners. 70% respondent showing satisfaction, they were contented with the benefits they had been given in response to management of forest. The degree of fulfillment might improve the maintainability of the forest (Alhassan, 2010). It means the policies and rules protecting the Siran Valley forests assets are consistent. The Forest division has acknowledged the need to involve the community in management of the Siran Valley Forest resources. The respondents are fulfilled in light of the fact that they are currently engaged with the dynamic interaction and have responsibility for forests while in past they were disregarded. Results of the study showed that large scale forestry interventions had been undertaken in collaboration with local community in the study areas. These were protection and conservation, nursery raising and capacity building, afforestation and establishment of forest enclosures for natural regeneration and rangelands improvement activities. The FD respondents were also agreed that communities had an impact in safe guarding the forest from illicit use through making of community forest check posts, patrolling by JFMCs, forest fire protection. Rishi (2007) in his analysis of India likewise observed that JFMCs had a crucial impact in the management and protection of forest.

6.3 Forest Department Satisfaction with Community Participation

The forest department demonstrated that the community participation offer help in protection of forest and related activities. Further, it gives job opportunities to the forest dependent communities. 83% of the forest department staff perceived the JFM is opportunity for conservation of forests in KP while 17% staff went against the community participation and expressed that the native communal make obstacles for the FD staff during performing their responsibilities of forest management. This shows that although less in extent however the mentality of traditional forest management exists in the FD. The reason is that forests have been overseen by autocratic approach for more than a century. However, this approach has been replaced by participatory methodology. Additionally, the Forest ordinance 2002 and JFM Rules 2004 provide lawful arrangements for management of forest. FD was contented with community participation and its benefits. Following couple of decade of interventions and numerous preliminary mistakes finally FD got benefits from community participation. The FD and its staff were agreed that community participation offered support in safety of the plantations and different forestry interventions executed in the reserved and protected forests.

Conclusion

Community participation in forest conservation get uplifting perspective throughout Pakistan. As a result, awareness towards protection of forest has increased manifold, and additionally exhibited that improvement of the JFMCs has given a plate form to nearby forest dwellers for collective actions. Communities benefitted in term of occupations, cash money, capacity building and planning regarding the practical utilization of forest. Although, the outcomes are pessimistic among the individuals from poor and marginalized sections of the community. These groups are reliant upon the forest assets for their livelihood needs like fuel wood, timber, fodder and NTFPs. Majority of the users were lawfully considered permitted for selling of NTFPs like spices, seeds, grasses, mushrooms, restorative plants from the forest under community royalty and sovereignty under the JFM plans. The local communities were provided income and employment opportunities through nursery raising and selling, daily wager opportunities in plantations, employment in forest enclosures, provision of free of cost fruit plants for orchards and seeds for kitchen gardening.

The role of community participation in protection and development of forests, has recognized that large scale protection service and interventions were done with the coordinated effort of nearby communities. The communities contributed to forest protection through creation of community forest check posts, patrolling by the local community, production of witness against the forest offenders in the court and forest fire protection. The degree of communities' involvement in the participatory activities was high. There was very low participation of youth in JFM and male respondents were found more active than females. However, in few areas because of absence of substantial advantages in community participation and lack of decision making/ transfer of power to local communities under the community participation had resulted in low participation of the locals. This shows that the achievement of local area cooperation depends on dissemination of both the advantages and obligations among the two partners; participating local communities and state forest department. The perceptions of the majority of respondents from both the local community and forest department personnel was positive towards the approach of community participation. Although the respondents from the forest department were against this approach and this may be because of check on their corruption and illegal involvement in forest cutting. Similarly, in a couple of regions the issues like absence of trust among local people and FD, regulatory/non-participatory methodology of FD were impeding the community support. The study concludes that the community participation had an imperative impact on forest conservation during the last couple of decades and had contributed to sustainable management of various types of forest in the whole province. Therefore, there is a requirement for additional fortifying of the approach and extending it to all types of forests i.e. protected, reserved, and guzara throughout Pakistan. Further researches are needed from both social and natural scientists on participatory strategies to recommend feasible applications for sustaining forest resources.

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