

**SOCIAL NETWORK ANALYSIS OF STAKEHOLDERS IN THE CONTEXT OF
FOREST RELATED DEVELOPMENT INTERVENTIONS IN NWFP**



SADIA KIRAN
06-arid-1313

Department of Sociology and Anthropology
Faculty of Sciences
Pir Mehr Ali Shah
Arid Agriculture University
Rawalpindi, Pakistan

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by

**SADIA KIRAN
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**Pir Mehr Ali Shah
Arid Agriculture University**

Rawalpindi, Pakistan

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Certification

I hereby undertake that this research is an original and no part of this thesis falls under plagiarism. If found otherwise, at any stage, I will be responsible for the consequences.

Student's Name: Sadia Kiran

Signature: _____

Registration No.: _____ Date: _____

Certified that the contents and form of thesis entitled "Social Network Analysis of Stakeholders in the Context of Forest Related Development Interventions in NWFP" submitted by **Miss. Sadia Kiran** have been found satisfactory for the requirement of the degree.

Supervisor: _____
(Mr. Zaheer Adnan)

Member: _____
(Mr. Abid Ghafoor Chaudhry)

Member: _____
(Prof Dr. Tariq Mehmood)

Date of Viva Voce: _____ External Examiner: _____

Chairperson: _____

Dean: _____

Director, Advanced Studies: _____



*"In the Name of Allah, the most Beneficent,
the most Merciful"*

**I dedicate This Humble Task,
Fruit of My Thoughts and Study
To My
Affectionate “Parents, Teachers
And
Especially to my Teacher
Mr. Zaheer Adnan**

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INTRODUCTION

There is a close relationship between human and the environment in which they live. The interaction and dependence of human beings on environment sometimes lead to degradation of natural resources, and on the other hand the depletion of natural resources may have an adverse effect on the well-being of those who depend on these resources. Any attempt to restore or conserve the natural resource would not be successful if it ignores the people (i.e. stakeholders) who have some stake in these resources (that is stakeholders). In this context, the forestry sector of NWFP makes an interesting case study to analyze the stakeholders of forests and their role in the forest related development projects, because numerous projects/interventions had been implemented in the forest areas of NWFP but the forests continue to degrade at a very high rate. Most of these projects did not give due consideration to the social networks of stakeholders, their perceptions, concerns and influence on the forests and decision making process (Ahmed and Mehmood, 1998; Steimann, 2004). The proposed research thesis will attempt to understand the interaction of people and forests from a sociological and anthropological perspective. This study would suggest policy recommendations for the effective involvement of stakeholders in the future interventions so that the livelihoods of the people living around forests are secured and the rate of forest depletion in NWFP may be lowered.

The usefulness of stakeholder analysis was underlined in understanding complexity and compatibility problems between objectives and stakeholders (Grimble and Wellard, 1996). Likewise, the concept of “stakeholder management” was proposed as a framework to help managers understand the turbulent and complex business environment. Hence the term “stakeholder” is often associated with corporate management. A central assumption is the manager’s ability to manage stakeholder relationships. This is difficult to transport to other fields, such as natural resource

management, where the power to control the system is at the heart of many debates (Freeman and Gilbert, 1987)

A thorough description of stakeholder analysis as a qualitative method in organizational research is provided by (Burgoyne, 1994). Several other origins of stakeholder analysis including political economy, were traced namely through the notion of how to combine numerous individual preferences by applying cost–benefit analyses (Grimble and Wellard, 1996). Stakeholder analysis is also derived from participatory methods of project design, such as rapid and participatory rural appraisal (PRA) that seek to integrate the interests and perspectives of disadvantaged and less powerful groups (Pretty *et al.*, 1995 and Chambers, 1997). The questions of who is a stakeholder and under what circumstances the opinions or knowledge of stakeholders count are common to both participatory research and business literature and in both instances, power is described as a central attribute of knowledge (Chambers, 1997 and Mitchell *et al.*, 1997). Furthermore, stakeholder analysis is also a central theme in conflict management and dispute resolution and has important roots in the social actor perspective in the Sociology of Development (Long, 1992).

The development researchers (Röling and Wagemakers, 1998; Engel, 1997 and Grimble and Wellard, 1996) have outlined a number of motives to do stakeholder analysis (SA), such as to discover existing patterns of social interaction among stakeholders to improve development interventions, as a management tool in policy-making and as a tool to predict conflict.

Development should be understood as a process, not a product. Societies are always changing. Some improve, while others fail. Development theory aims at explaining both processes. Development practice intends to provide tools that can be applied to entire societies or specific communities. Such interventions are intended to move communities or societies from a situation in which they are believed to be worse off to a situation in which they are assumed to be better off (Barbanti, 2004).

In order to fight poverty and create livelihood opportunities, a series of regional and sectoral development policies have been designed and implemented during the past decades by different bodies and at different levels: by the State of Pakistan at federal level and through its provincial governments as well as by International Non-

Governmental Organizations (INGO's) and national NGO's mainly at provincial and local levels with the support of various donors. In these development policies the promotion of cash income and cash income generating activities for urban as well as rural areas has been a very prominent element.

Forests and trees planted on the farm lands cover about 4.22 million hectares (ha) area in Pakistan, which is 4.8% of the total land area (Ahmad, 2000 and GOP, 2006). The majority of the natural forests are distributed in the Himalayan, Karakoram and Hindu-Kush mountain ranges of NWFP and Northern Areas (Ahmed and Mahmood, 1998, Poffenberger, 2000; and Suleri, 2002). Most of the country's forests are found in the northern part (40 percent in NWFP, 15.8 percent in Northern Areas and six percent in Azad Kashmir). About 17% of the North West Frontier Province (NWFP) is forested with trees of different densities and ages. The main types of forest in different areas of the province are; coniferous forest (Himalayan moist temperate and sub-tropical pine forests), scrub forest (sub -tropical broad-leaved evergreen forest, mazri forest), linear plantations, trees on private lands (FSMP, 1996). These forests protect the country's ecosystem and watersheds, which yield power and water for the large agricultural economy of the rest of Pakistan (IUCN, 1996).

The ownership arrangement in NWFP forests is quite complex. The forests are divided into state and non-state forests with various sub-categories within each class. The direct stakeholders of the natural forests in NWFP are the state and the local community (right-holders and users). The state through Provincial Forest Department is involved in the management and development of forest resources for the long-term benefits; while the local communities use forest in a variety of ways.

There exists a diverse variety of stakeholders who do have a stake in the use of forest resources in NWFP. These stakeholders have different rights and claims in the forest, and different means of securing these (Ahmed and Mehmood, 1998 and Steimann, 2003). A broad listing of forest stakeholders is given by some previous researchers (Ahmed and Mahmood, 1998, Suleri, 2002 and Steimann, 2003) this includes people living in and close to forests, gujars (nomads), provincial forest department (PFD), federal government, local governments, timber contractors, timber mafia, Non-Governmental Organizations (NGO's), and international donor agencies.

The multifaceted relationships and practices which bind together all the stakeholders involved in the use of the forest are needed to be clearly understood. From one place to another, the situation can be quite different. The question about the level of influence on decision-making by particular categories of stakeholders and the level of interest in the resource is of particular importance. Regarding forest related interventions, questions arise on how to influence the stakeholders with a lot of decision-making power to improve management of natural forests and at the same time to improve the livelihood of local stakeholders who are really dependent on the natural resources, but have less say.

Depletion of natural forests in mountainous areas of NWFP and Northern Areas is one of the most serious environmental issues of Pakistan. According to an estimate 39 thousand hectares of forests are vanishing annually. Between the years 1990 and 2000, the deforestation rate in Pakistan was 1.5 percent annually (FAO, 2005). Studies based on remote sensing show that the rates of decline in forest cover in NWFP will lead to a complete disappearance of the forest from most areas within 30 years. Though significant progress has been made in tree planting, notably on farmland, it does not compensate the loss of natural forests (Suleri, 2002). It is worth noting that total forest area in Pakistan is very low as compared to other countries.

Many authors believed that ineffective and unsustainable forest management practices by the state forest departments are the main cause of forest depletion, which have focused more on economic than on environmental utilization (Iqbal, 2000; Mahmood, 2003; Ali *et al.*, 2007). Various forests related projects were launched in the forest areas by national and international donor agencies, however in spite of numerous multi-million dollars projects the rate of forest depletion in Pakistan is still one of the highest in world (FAO, 2005).

The roles, perceptions, power relations, spheres of influence etc. of the involved stakeholders in a development intervention is of vital importance in the success of that project. The present research project will therefore analyze the social networks in selected stakeholders of forest related projects in NWFP.

The main objectives of the study were:

- To identify and characterize major social networks of stakeholders involved at

multiple levels in the context of forest related development projects.

- To assess social sphere of influence of involved major stakeholders involved and their effects on poverty environment nexus.
- To recommend remedial policy measures for poverty environment nexus through social network analysis of major stakeholders in selected forest related development projects.

REVEIW OF LITERATURE

Peluso and Padoch (1996) argued that it is very important to recognize and involve the ideologies, interests, objectives and knowledge of the involved individuals for the success of sustainable participatory forest development. Where forests continue to be central to livelihood systems, local people should be the main stakeholders, thus meeting their needs and aspirations on a sustainable basis is the key factor in the sustainable development of participatory forestry

Stellrecht (1997) looks at the historical development of highland-lowland interaction with regard to forestry, and concludes that a loss of influence of the people of highland regions over their resources is causing part of the deforestation.

Ahmed and Mahmood (1998) stated that the different stakeholders of forests depending upon the rights of stakeholders in the forestry sector of NWFP are residents (including Guzara forest owners, right-holders and non-right holders, Gujars (nomads), provincial government/forest department, federal government, timber contractors, timber mafia, NGO's and international donor agencies.

Arnold and Bird (1999) concluded that if poverty was the main cause of deforestation, and assuming some trickle-down of wealth takes place during economic growth, then they would expect to see a reduction in rates of deforestation during rapid economic expansion. Yet the opposite is true, they saw that some of the most extreme deforestation takes place during economic boom periods, often at the expense of the rural poor who lose access to land, or a reduction in wage earning opportunities as labor saving machinery is utilized. This does not mean to say that economic growth is the problem, it is the way in which development takes place that is important, and how key terms such as poverty and sustainability are defined. Poor people's livelihood strategies are attempts to manage and modify the substitutions, trade-offs and draw downs of different capital assets. If development implies an increase in capital stock, the relative sustainability of that development depends on the substitution that occurs among the types of capital. The issue of substitution and the definition of sustainability are particularly important when

considering the poverty-environment nexus. The International Development Target on environmental sustainability and regeneration argues that different types of capital cannot be substituted for each other. Natural resources are deemed to be too important to a range of livelihoods and their preservation and regeneration should be one of the aims. Others argue that sustainability should be considered in terms of the maintenance and accumulation of overall stocks of capital. It is clear that any assessment of whether a change in either quantity or quality of forests is beneficial or harmful is largely a political judgment related to local circumstances. Nevertheless, there is consensus that some changes are always harmful, including shifts from sustainable management to unsustainable utilizations, but also includes erosion of many of the services provided by forests such as preventing soil erosion and a loss of soil fertility, and moderating pollution. Moreover some of the goods and services provided by forests are not replaceable, for instance providing the living space and livelihood for indigenous people or the biological diversity the forest contains these features and may be termed 'critical natural capital'. So, there are strong cases for sustaining many forests, but the social costs of deforestation do not always outweigh the benefits. The terms deforestation and forest degradation are value loaded, by implication they suggest that replacement of forest by other uses is necessarily harmful and all reforestation is necessarily beneficial. They divert attention from a more focused approach which would concentrate on addressing those policies and market failures that encourage inappropriate forest clearance.

Castro and Nielson (2001) any forest related development intervention has first to analyze the powers and interests of all stakeholders involved in that intervention before making recommendations.

Kakizawa (2002) concluded that public participation has become an essential element in decision making that affects natural resources, reflecting the increasing interest of the public in environmental issues and evolving relationships among stakeholders and in order to reach better decisions and prepare better plans, it is necessary to have mutual communication and encouragement of serious discussions between the stakeholders and the specialists from various fields, Collaborative decision making rests on continuous and open participation by all stakeholders and the public. Participation should be organized so as to promote mutual communication and

education. Participation in forestry and conservation management refers to the active involvement of various stakeholders in defining forest sector and conserving objects, determining beneficiaries, managing forest resources, resulting conflicts over forest uses and monitoring and evaluating the performance of forestry and biodiversity conservation projects.

Ketti (2002) found that stakeholders' analysis has become more crucial than ever because the world is going to be more and more interconnected. Consider any public problem, economic development, poor educational performance, natural resource management, health issue, global warming, terrorism; it is very clear that 'the problem' affects a lot of people, communities and organizations. In this shared power world, no one is fully in charge and problem does not lie in a single organization and at one place.

Steimann (2004) tried to understand the institutional dynamics of the Forest Department, and asking how forest officials are acting under the given local and personal circumstances. He discussed forest and its stakeholders and how they would become somewhat more balanced. He finds that there are many stakeholders but the more important ones are local people, Gujars (nomads), Provincial Government / Forest Department (FD), Federal Government, Timber contractors, NGO's, International Donor Agencies and 'Timber Mafia'.

Purnomo *et al.* (2004) focuses on analyzing local perspectives about forest sustainability. They made three main hypotheses that Local communities' perspectives are close to those of the NGO's; Timber merchants perspectives are close to those of the local government because the merchants are theoretically expected to follow regulations assigned by the government and urban and field-based offices of the same organization follow similar perceptions. All of their hypotheses were rejected and they found that the local communities perceived good forest management as a way to practically improve their daily lives from the existing situation. They were interested in the timber concession directly providing financial and human resources for local economic development. NGOs on the other hand focused on fair benefit sharing between the communities and the concessions as a condition of good forest management and were concerned about the absence of law enforcement in the area. The timber concession perceived sustainability as a duty to economic development in the villages, that made them move towards better and

environmentally friendly timber harvesting, clarified boundaries between their concessions and other land uses, and improved communication between themselves and communities. Local development agencies perceived sustainability as a minimization of conflicts, good quality of food for low ranking concession for employees who were mostly from local communities.

In the end they concluded that there are groups of stakeholders that show high similarities within certain groups of indicators. Further analysis of the results also showed that while certain groups showed high similarity of perceptions collectively, many groups actually had divergent views when examined more closely using hypothesis testing. This suggests that although collectively there was general agreement among groups of stakeholders on the set of indicators under each sub-group (e.g. social, ecological, or economic) on a finer scale groups may in fact hold significantly different views. For example, one interesting finding of this research was that the same institution at different levels might have different views with respect to what they perceive to be important indicators of sustainable forest management. This suggested that there can be gaps in perception between field-based and urban-based institutions. Part of the problem may be caused by inadequate communication between the different levels or organizational units, or different types of work, background, and incentives among institutional units.

Belcher (2005) briefly reviewed the evolution of the 'livelihoods' issue, analyzed the concept of 'poverty alleviation' and discussed means by which forestry can contribute to livelihoods improvement. It focuses on the contributions of forest products and markets, questioning the typical timber vs. non-timber dichotomy. The role and the potential of a forest product is determined more by the socio-economic and environmental context of the production, processing and marketing system than by the physical characteristics of the product itself. This was important as new opportunities arise through increased control of resources by local people and new markets for forest products. Helping achieve poverty alleviation through management of forestry resources required protecting poverty mitigation functions, enhancing income and employment options, and taking advantage of opportunities to build and strengthen local institutions through policies and project-level interventions.

Nelson (2005) focus on the primary stakeholders involved in the conversion issue, those organizations and institutions that have been directly involved in forest policy in Washington, and that for the most part have been involved in the Forum. Traditional groupings based on caucus type, as were used, for example, in negotiations over the State Forest Practices Act, are reflected here. A discussion of some relatively new actors to the network, the Timber Investment Management Organizations (TIMOs), is also included. He also pointed out that stakeholder values are defined as unique bundles of interests and concerns that are “at-stake” with regard to a particular issue. Issues often become conflicts when stakeholders perceive their values to be threatened or at risk, or alternatively, when stakeholders perceive opportunities to achieve benefits and enhance values.

Andrianto *et al.*, (2006) explained the influences on district officials’ ability to effectively address poverty in two forest districts based on observations between 2003 and 2005. They found that centrally-imposed programs have created bureaucratic requirements that officials are reluctant to meet or prefer to use to their own benefit. District initiatives for economic development rarely reach the poor and even increase their vulnerability. This poor performance can be explained by weak incentives and institutions, unclear strategies and information and little participation of the poor themselves. District, provincial and central authorities need to ensure benefits for district officials who work to reduce poverty, have coherent, simple strategies, and enable poor communities to voice their needs, revitalize coordination with funding and stronger leadership, and enable monitoring by districts and Impacts of government programs on poverty alleviation in communities.

In this study they tried to better understand the factors affecting district official’s efforts to alleviate poverty. National and district policies indicate that poverty alleviation should be a district priority. In practice, however, they found that centrally imposed poverty programs created bureaucratic requirements that officials were reluctant to meet and preferred to use funds to their own benefit. District initiatives for economic development were concentrated around district capitals, and rarely reached the poor in remoter regions. While significant efforts are being made to tackle poverty, they are falling far short of their potential. The reasons for this shortfall can be summarized as: a

Limited incentive for poverty alleviation is a public agenda that requires additional support to make people change from what they do. It may be necessary for the central government to promote public mindedness by providing the incentives to encourage them to go beyond districts' self interest. But districts officials' incentive to comply with centrally directed programs is low. The policy is imposed, much of it is locally irrelevant and rank and file officials receive little direct benefit from such policies. While officials say they are supportive of poverty reduction, and some are truly committed, few work to ensure that full project benefits reach the poor. Benefits from subsidies are siphoned off or shared as favors to political allies and family before they reach the poor, especially those in remote places. District auditors are not fully effective. Perverse effects occur like the manipulation of data to portray higher levels of poverty in order to receive more project funds in areas that need it least. Marginal institution - The lead institution responsible for coordinating poverty alleviation programs lacks authority and funding, capabilities, influence and in some places leadership to promote poverty alleviation programs. Incoherent strategy and information base District officials are faced with a confusing array of classifications of poverty and lack good information to develop their programs. Poverty assessments lead to contradictory results. Programs are built on different sets of assumptions and have no defined clear groups of the poor that they seek to assist. Separate programs address poverty, prosperity, self-sufficiency and economic development, and have no clear relationship to each other. Although officials can easily describe poverty in their districts, different agencies view poverty's causes differently. There is a need for a common understanding of who the poor, what the causes of their poverty are and what can be done to tackle it. Because of lack of involvement of poor people Officials are still learning about how to best communicate with villagers about government programs and to learn about local villagers' perceptions of poverty and priorities. Local people complained about a general lack of transparency, weak professional competence, and low responsiveness to local initiatives, a top-down approach, and rent-seeking behavior of project managers in the district government. Most communities did not even know about poverty reduction programs in their area. One difficulty is that many of the poor are insufficiently trained and organized to participate effectively in political processes.

Faysse (2006) used analytical framework for two very different Multi Stakeholders Platform Case Studies, different both in nature, permanence and institutionalization in the case of the South African WUAs, short-term and with unclear links to official decision making in the case of the Bolivian mesa técnica and in practical implementation. These two MSPs were analyzed in terms of five issues (power relationships; platform composition; stakeholder representation, decision making powers, and costs and they shared many crucial problems. Among these problems, asymmetries of power appeared to be of key importance in both cases, though these had not been given much importance during the setting up of the MSPs. One of the reasons for underestimating the importance of power distribution is that it is much more equal in the countries where MSP approaches were designed, such as, Europe and North America. Social and economic inequalities are far greater in many developing countries, and this is sometimes disregarded when international cooperation agencies advise MSP-type decision-making, as for instance, about water reforms in South Africa and Zimbabwe.

P&D Department NWFP (2007) reported that province has been facing development constraints due to geo-political situation, location disadvantage, weak fiscal and financial base, deficit in food, over regulated private sector, heavy burden of Afghan refugees, rehabilitation and re-construction of earthquake hit areas and drought. So the ADP has been formulated on the basis of the government priorities and people's aspiration. The main focus of ADP is poverty alleviation, protection of rights of the people and uplift of the backward and remote areas of the province. The total size of ADP 2006-07 was Rs. 26630.432 million, which is, an increase of 26.8% over last year. Given the limitation of resources, the following order of priority was observed for the formulation of annual development programmed that is first is arrangement of counterpart funds for foreign aided projects, ongoing projects and new projects in social sectors and revenue generating sector.

In this report they also pointed out that NWFP has rich forestry resources and it is of vital significance that these forests are protected by the provincial government. So nurseries will be established on 122 acres land, afforestation on 33,750 acres land will be carried out throughout the province, seed spraying on 2500 acres land will be carried out, 500,000 saplings will be distributed among farmers, trees will be planted under the farm

forestry programme over 10200 acres area, Soil conservation of 125,000 acres land will be undertaken, 3000 people will be provided jobs opportunities, extension of Range Management over 10000 acres.

Rishi (2006) worked on attitudinal analysis of forest stakeholders in Madhya Pradesh, India and defined that both forest officers and rural communities were in the process of developing positive attitudes towards each other and a significant improvement in the inter-relationships between the two was found. Rural communities were not able to express a clear attitude towards functioning of forest committee and role of women. However, they had a clear positive attitude towards forest protection and management. Forest officers were also not clearly positive in their attitude towards forest department in terms of freedom of working and participatory approach as they wanted more freedom in their work environment with limited external pressures.

Salam and Toshikuni (2006) through conceptual content analysis based on information derived from focus group and individual interviews identified future generations, national and foreign governments, local governments, local elites, funding agencies, policy makers, forest industry, NGOs, pressure groups, forest department staff, forest dwellers, political leaders, religious and cultural organizations and participating farmers as potential stakeholders for participatory forest management in Bangladesh's Sal Forests.

Shahbaz and Suleri (2006) said that there are vast numbers of stakeholders in NWFP who can or can be influenced by any poverty or forestry intervention projects including local people, the state, civil society, NGO's, CBO's, *Jirgas*, religious groups, local governments, the timber merchants etc. According to them the most important groups of stakeholders in the context of forest in NWFP are local communities living in and around forests. Next in importance were the timber merchants who were the most powerful actors and included state official ministers, local provincial government officials and ministers as well as powerful elite within the communities. They wanted to maintain status quo because it went to their benefit and prevented any institutional or developmental reforms. Various civil society organizations including NGO's implementing donor funded local developmental schemes, the traditionally powerful

Jirga and religious groups were trying to operate within the contested political space of NWFP.

Another impediment to the success of poverty related and forest related development project was that there was no coordination between forest department and local government introduced by General Pervaiz Musharaf. The main flaw in the devolution plan of Federal Government was that forestry department remained independent of local governmental system. Another factor influencing poverty alleviation and improvement of environment was that most of the women based CBO's could not develop on account of social constraints especially the notion that womenfolks were the *ghairat* of people and should not participate in any meetings of CBO's. This constraint was mostly due to religious hold on people and misconceptions about the true values of Islam. They concluded that any forest related or livelihood related developmental project in NWFP must take all these stakeholders into account before planning any intervention and that to be successful, had to be considered in this context which could even lead to violence, murders, arsons, lootings, if not properly managed. And above all the most difficult task is to get the state and provincial governments and local Nazims to give their consent and approve any such interventions.

Yasmi *et al.* (2006) analyzed secondary data regarding new policies and regulations by interviewing government officials at district, provincial and national levels in the Ministry of Forestry (MOF) in Jakarta, and in local land-use planning bureau and district and provincial forestry and tax offices. Furthermore, they convened a multi-stakeholder district workshop in April 2004 to present and discuss their findings. They pointed out that the implementation of decentralization policies gave rise to conflicts between local and central government as well as among local stakeholders. Despite the goal of benefiting local stakeholders by decentralizing forest management, the central government's subsequent withdrawal of much of the local governments' authority to manage forestry raises new questions on whether the central government is indeed willing to share power. They concluded that central and local governments and relevant stakeholders need to develop better communication and negotiation procedures to address current conflicts appropriately.

Shahbaz and Ali (2007) worked on development of forest areas particularly in the mountain regions of NWFP and with the people of that area and they found people faced two types of challenges first was poverty alleviation and the second was environmental conservation. The condition of forests is relatively serious now a day and because of this mountain communities suffer with poverty. They depend on natural resources to earn their living. So they point out that they should be provided with economic incentives to become involved in sustainable forest management. The major source of income and livelihood for people depended on forests but which are environmentally vulnerable. It is important to understand that poor people depended on multiple livelihood assets and livelihood activities and that was important in order to understand the multiple source of vulnerability faced by the poor. The multiple ways in which their lives were affected by structure and institutions and the varied ways in which development interventions may strengthen or weaken these livelihood activities.

Macdonald *et al.*, (2007) concluded that it is important for development process to consider and assess the existing knowledge of stakeholders about the issue. Those stakeholders who are more informed on an issue may be more insightful and their perceptions may be of greater validity. Most of the stakeholders are required for further information prior to decision-making. For development it is necessary to acknowledge that there are a variety of stakeholders and they warrant a similar insightful review of their perceptions and trade-offs. For development process a well-managed dialogue with stakeholders is very critical. The dialogue between stakeholders is important because if it is not achieved, a significant disconnection between stakeholders will exist at each level.

Price (2007) suggested that cost-benefit analysis of local management options would need to take explicit account of their wider effects, via pecuniary externalities, as well as of the local environmental and social impacts. But these effects are hard to identify, harder to quantify and hardest for all to evaluate. On the other hand, it is scarcely conceivable that participatory decision making would make any allowance at all for the effects of pecuniary externalities, the net effect of local decision making, via global markets, will lead to outcomes that local stakeholders neither envisage nor perhaps desire.

MATERIALS AND METHODS

3.1 Universe

Almost 300 forest related development and extension projects were initiated in the 24 districts of North West Frontier Province (NWFP) during the years 1997-2007 and served as the universe of the study. Most of these projects were completed but some projects were still in ongoing phase. According to one estimate approximately above 50 million rupees are being spent to preserve and sustain and develop the forest resources in N.W.F.P.

All the stakeholders of the forest related development and extension projects implemented or ongoing during the years 1997-2007 comprised the population of the study. These stakeholders included federal and provincial governments, federal and provincial forest departments, donor agencies, executing agencies of the projects, project partners, timber merchants, timber mafia, community based organizations and local communities of the projects etc.

3.2 Sampling Method

Because of the vast number of forest related development projects being carried out and the vast tracts of areas throughout the province being covered and the numerous numbers of stakeholders involved it was not possible for the researcher to study all of them. Thus the multistage sampling technique was used to reduce the population into a representative sample. In the first stage the researcher had to reduce area so she focused on highland districts in which 80 percent of forests were laying. And in that district approximately 75 percent of projects have been implemented. In the second stage by simple random sampling method total number of development projects were reduced to about 40 and three districts based on the criteria that those projects and districts were selected which had comparatively more gender friendly environment and law and order situation was relatively better. Sample was further reduced to three projects through

systematic random sampling technique based on the effectiveness of the projects being implemented. To make the sample further representative only donors, implementing agencies and local beneficiaries were investigated in three villages in each district through purposive sampling technique. Finally through snowball sampling technique method 40 locals were selected as sample in each locale. Also in addition employees of implementing agencies were part of the sample. Following three projects were selected Farm Forestry Support Project (FFSP), Promotion Energy Efficiency and Conserving Forest in Abbottabad District or promoting tropical forests (PTF) and Environmental Recovery Programme for the Earthquake Areas (ERP).

3.3 Different Methods Used for Data Collection

3.3.1 Interview Schedule

For this research proper interview schedule was developed with the help of supervisor and Babar Shabaz. The basis of this schedule was according to the requirements of being part of a project which was implemented by an NGO. Most of the work of this NGO is on forest related research. Interview schedule was fully focused on objective and variables of the study. And the people which were selected were also part of the project as a whole being carried out and the executors of this project were well informed about the forests and related problems of the areas because of having being conducted projects on forest related issues in these areas by this NGO. Thus the experience and help of this NGO and its resources played an important role in the preparation of objective or close ended questions for a survey in the initial part of study and their help was important in developing the subjective section of the interview schedule for conducting in-depth interviews in later part of study.

3.3.2 Establishment of Rapport

Before starting interviews researcher choose to remain in the midst of the community with the help of her NGO and visited and communicated with the people for the first week of her research. Because of her Ngo it was not as much difficult. People were very cooperative and responsive. In one village the researcher created rapport and because of her friendly behavior it was easy.

3.3.3 Key Informants Interviews

Key informant interviews are qualitative in-depth interviews with people who know what is going on in the community. The purpose of key informant interviews is to collect information from people including community leaders, professionals, or residents who have first hand knowledge about the community. These community experts, with their particular knowledge and understanding, can provide insight on the nature of problems and give recommendations for solutions. There are two common techniques used to conduct key informant interviews Telephone Interviews and Face to Face Interviews. Key informant interviews seek qualitative information that can be narrated and cross checked with quantitative data, a method called “triangulation”. The interviewer has to remain neutral and must refrain from asking biased or leading questions during the interview. An effective interviewer understands the topic and does not impose judgments.

So that through NGO reference the researcher identified the key informants. In which some social workers and *bazurg* of the community were included. Key informants helped the researcher in providing most of the basic information about forests related issues relevant to research and important changes that had taken place at the time of research. Key informants also helped her to locate various respondents in each locale. The study was conducted in three villages so 5 key informants were selected from each village. In Jabri and Passala village it was easy to identify key informants and obtain their cooperation but in Shahotor it was very difficult because most of the local well informed informants had migrated because of earthquake or had died because of it. But the researcher was able to identify informants after great efforts and all of them later were very helpful and cooperative. One of the criteria for selecting key informants was their literacy level.

3.3.4. Structured Interview

In structure interviews, the researcher asked all informants exactly the same set of questions, in the same sequence, and preferably under the same set of conditions. Structure interviews are basically built on close ended questions. It was easy for illiterate people of community to answer the question to the point. Some of the respondents from community were shy and less confident so this type of interview

helped them for developing interest and the researcher encouraged the respondents by assuring that the purpose of this research was academic research and their names and information will be keep confident. Before starting formal interview, researcher spent some time with respondents to discuss the topics of their interest for initial rapport building.

3.3.5 In-depth interviews

By using this technique researcher got detailed information relating to the objectives of the study and in crosschecking data obtained from other techniques. These interviews were conducted through key informants only by the help of interview guide, which was existed on open ended questions. They were the most knowledgeable people of community and they guide the researcher that how their community preserve their forest. Researcher tried her best to get detailed information from key informants. Researcher took 5 in-depth interviews from key informants from each village. It took approximately four to five hours for each in-depth interview. It was very hectic. Questions were asked according to the need of the situation so that quality of data could be improved. These various means were used to obtain as much relevant information in as much detailed way as possible to get as much relevant information in as much detailed way as possible to get as much know about topic and objectives and all other details were also noted down to get as complete information about the social behavior, social networks, family system, their usage of forests, forest deforestation, poverty meaning, benefits of forests, forests enemies and recommendations etc.

3.3.6 Focus group discussions (FGD's)

A group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research. (Powell 1996)

Focus groups are a form of group interviewing but it is important to distinguish between the two. Group interviewing involves interviewing a number of people at the same time, the emphasis being on questions and responses between the researcher and participants. Focus groups however rely on interaction within the group based on topics that are supplied by the researcher. (Morgan 1997)

There were some kinds of data related to the objectives that could not be obtained from other techniques therefore this method was required. The data acquired by using this technique was also used for the purpose of crosschecking data. Focus groups can be used at the preliminary or exploratory stages of a study (Kreuger 1988); during a study, perhaps to evaluate or develop a particular program of activities (Race et al 1994); or after a program has been completed, to assess its impact or to generate further avenues of research. They can be used either as a method in their own right or as a complement to other methods, especially for triangulation (Morgan 1988) and validity checking. Researcher used this method frequently to get relevant information. Researcher conducted focus group discussions with the help of her organization and called different stakeholders at one place three times. During discussion when participants got off focus from the topic researcher did her best and brought the participants back to the topic of discussion. During all FGD's a note taker and an observer were with the researcher there in the field. Note taker carefully noted all points of the discussions and the observer observed the facial expressions and the gesture of the participants during discussions to extract the reality and authenticity of the information provided by them.

3.3.7 Archival Data

This method helps the researcher to get information through books, photography, films, internet and related material regarding the research demand. The researcher has used photography, internet and get information through old records. The still photography technique was helpful for the researcher to capture the various events during the research. Forests types and deforestation and how wood is being wasted in forest department. The data of that kind helped for crosschecking that increased the reliability and validity of research.

For the researcher it was not easy to get all information by her self because of shortage of time and gender problem. So the researcher found data from net and other documents of the projects holders to generate information from that documents, which was not possible for researcher to get from any other mean.

3.8 Locale of Study

The research was conducted in three villages of NWFP. The focus of study was to evaluate the three projects briefly. All areas of those projects were visited by researcher before the selection of area for study. All the projects were of different nature so the researcher decided to include one village from the area of each project.

3.8.1 Geographical locations

The research is conducted in Tehsil Balakot, Tehsil Haripur and Tehsil NathiyaGali. Tehsil Balakot is in District Manshara, and near Tehsil Manshara and Tehsil Oghi. Balakot is located at the eastern border of the [North-West Frontier Province](#), three and a half hours away from [Peshawar](#) and four and a half hours away from [Islamabad](#). It is located at 34° - 12' and 35° - 50' and 47° - 07' longitude. Tehsil haripur is in District Haripur and it is 2 hours from Islamabad. Haripur is situated at latitude 33° 44' to 34° 22' and longitude 72° 35' to 73° 15' and about 610 meters above the sea level and located on the bank of a stream called Dor. Tehsil Nathiya Gali is in district Abbottabad, and it is three and a half away from Islamabad towards Murree. It is two thousand and five hundred metres from sea level.

3.8.2 Population

Three village from different districts have been selected, one them the village Passla in NathiaGali District Abbottabad have approximately two thousand male and female are living there and there are almost one fifty to two hundred households. There are three Masjids and there is no school for children. There is also no dispensary or hospital in that area. The other village named Shahouter in Manshara district population is twelve hundred to fifteen hundred. There are two Masjids and one primary school. And they have two dispensaries because of earthquake. The third village named Jabri in Haripur District has approximately two thousand to twenty five hundred populations.

3.8.3 Ethnic Composition

The researcher found that there are some ethnic groups of the villages.

1. Pathan
2. Gujar
7. Mughal
8. Karlal

3. Awan

3.8.4 Dress

All the three villages' people wear Shalwar Qamiz.

3.8.5 Food and Habits

The villagers of that area have no sufficient food because of extreme climatic change. But they have a variety of fruits and vegetables which will help them for survival.

3.8.6 Transportation

In NWFP they used heavy vehicles like jeeps because of hilly area. They also used donkeys and horses for transportation.

3.8.7 Climate

The weather of the area is generally cold being located in sub-tropical highland of NWFP. NWFP highland is a snowy area but the summer season is pleasant and conducive. The climate of Nathiya Gali is too cool in winters and too good in summer. During the summer, Nathiagali is relatively popular amongst tourists, because of its climate. The climate of village Shahouter and village Jabri is normal. Cool in winter and hot in summer season.

3.8.8 Flora

There is a large scale of forests in that area and NWFP is famous for forest area because only this province has forty percent of forest. There is a wide range of trees of pine and deodar. It has also agriculture land.

3.8.9 Fauna

3.8.10 Marriage

Marriage patterns followed by the population of all three villages of the research area are same. Marriages are dominantly arranged marriages and mostly cross cousin marriages because people of the study area are following the traditions of their *Buzurgs* and did not allow their children to be marry out of family. Marriage ceremony starts from the family function of *Deharay Taye karna* usually is arranged two weeks before

Rukhsati and ended to *Waleema*. During all these days, numerous functions are arranged in the houses of bride and grooms. Basically the purpose of these family functions is to increase the understanding between both families by increasing their visits of the houses of each other. At these occasions lunch or dinner has been held by the host.

3.8.11 Occupation.

The major part of that area is dependent on agriculture. Some people are engaged in business, few are employed in government service and other have private job.

3.8.12 Language

According to the 1998 District Census Report, [Hindko](#) is the predominant language in the districts, representing 68 percent of the total population. Other languages spoken are Punjabi, Pushto, Potohari, Gojri and Pahaari and urdu is well understood language of area. The researcher conducted interviews in punjabi and urdu with and noted carefully the termes used by respondents and translated them with help of lingual experts of the area.

3.8.13 Literacy Rate

The overall [literacy](#) rate for districts is 53.7 percent, substantially higher than the provincial literacy rate in NWFP 35.2 percent. The female literacy rate is dismally low at 37.4 percent compared to male literacy of 70.5 percent. The urban: rural break down show that rural literacy is lower 51.4 percent than urban literacy 69.7 percent.

3.8.14. Poverty

Poverty is prevalent in the districts and is assuming menacing proportions with the passage of time. Unemployment rate in the district is 31.1 percent¹. More than 51 percent district's population lies below poverty line and 30 percent population belong to middle-income group that is living hand to mouth³. Poverty in this context perpetuates due to ongoing political instability, uneven distribution of resources, poor human resource development and polarization of power and resources in the hands of a small percentage of population.

3.8.15 Gender Empowerment

The district's overall performance on gender empowerment is dismal. A low investment in (female) human capital, negative social biases and prejudices, controversial and discriminatory policies and laws, restriction on female mobility and the internalization of patriarchy by women themselves, has become the basis for gender discrimination and disparities in all spheres of life.

3.9 Data Analysis

For quantitative data analysis the software statistical package for social sciences (SPSS) was used. Qualitative data were analyzed through spread sheets and presented descriptively.

RESULT AND DISCUSSIONS

4.1 BASIC INFORMATION

The study was designed to investigate social networks operating in three different districts to obtain an overview of impacts of three forest related developments projects through extensive and intensive data collecting techniques and try to reach some position of generalization about these social networks and their impacts on forest development through analysis of data collected. It was not possible to study the entire social networks operating in each locale; because many actors were involved in the initiation, implementation, monitoring of each project as well as the beneficiaries of each project varied.

Three randomly selected forest related development and extension projects implemented in highland districts of NWFP during the decade 1997-2007 consisted of the following three projects were selected; Farm Forestry Support Project (FFSP), Environmental Recovery Programmed (ERP) for Earthquake-affected Areas and Promoting Energy Efficiency and Conserving Forests in Abbottabad District (PTF).

The first objective of this research was to identify and characterize major social networks of stakeholders involved at multiple levels in the context of forest related development projects. For the achievement of this objective the first and foremost stakeholders studied were donors of the project. Here the researcher considered that how much a donor of a project influence on environment and how they fulfill their requirement to reduce poverty through their project, and this is the second objective of this study. In some projects donor of the project get information and details from community before launching their project in the area. This is new way of lunching of a projects, in some cases or in some projects they even don't know the main requirements

of the community in which they want to work or they even don't know the main needs of the people. Some projects are making by for only earning money. In NWFP, a large number of people are working on preserving forest, but, to the contrary, they earn money by chopping down the trees. It is necessary that we should know about major stakeholders of forests whom are interested in preservation and extension of forests. Through project over view the researcher found main stakeholders of the three projects which have been study for her research.

4.2. Description of Projects

4.2.1. Farm Forestry Support Project (FFSP)

The researcher found that the Farm Forestry Project was working in the dry rain fed rural areas of NWFP, Pakistan District Haripur, District Karak and Kurram Agency. The FFSP institutional setup is based on formal and informal partnerships with different partners at various levels, with an incremental stronger role being delegated to the local NGOs, emerging cluster organizations and other local players including government line agencies.



Plate 1: FFSP Plantation Area

4.2.1.1 Stakeholders of the Project

In Kurram and Karak, Kurram Rural Support Organization (KRSO) .Spinghar Rural Development Organization (SRDO), Society Reformer Organization (SRO), Waten Development Organization (WDO), Khwendo Kor Development organization Karak, Yaran local cluster Karak, Alaqai Taraqiati Federation and Research Institutions (Pakistan Forest Institute and NWFP Agricultural University) are the partners of FFSP. Table 1 show the main partners or stakeholders of the project in Haripur are Dehi Development Society (DDS) Mashal Development Organization (MDO) Pind Hasham Khan Network (PHKN) and Beer Development Organization (BDO). It is joint venture with Swiss Development Corporation (SDC).

4.2.1.2 Objectives of the project

The project was to promote multi-purpose trees within the farming system for maximization of benefits for the poor. The target group was poor farmers and women. The project was contributing towards poverty alleviation through productivity enhancement from the farming system. The project focused on enhancing the entrepreneurial and management capacities of the farmers and on facilitating their access to quality inputs, market information and credit. While aiming at poverty alleviation, the project encourages landless and small farmers to explore income earning options from resources which so far were not recognized for providing economic incentives farm forestry, dry lands, etc. Local level farm forestry forums enable disadvantaged resource users to bargain for their rights and enjoy access to productive means. Furthermore, FFSP facilitates women involvement and ensures their representation and recognition in farm forestry activities.

4.2.2 Environmental Recovery Programme for Earthquake-affected Areas

The researcher found that this program is an ongoing program and its areas are Mansehra district, Bagh Districts and Muzaffarabad.

4.2.2.1. Stakeholders of this project

Table 1 shows the main stakeholders of this project which are Forest department and local communities of that area.



Plate 2: Project area of ERP

4.4.2.2 Objectives of project

The overall objective of the program is to strengthen the institutional and community capacity to mitigate, rehabilitate and manage environmental impact of the earthquake. The Program focuses on active intervention in the two key areas of waste debris management providing training in reuse and recycling, debris management and facilitating private sector investment in debris recycling and slope stabilization, livelihoods and natural resource management vulnerability assessment and mapping, slope stabilization measures, capacity building and integrated forestry and livelihood.

The October-2005 earthquake caused serious concern over its environmental impact. Landslides claimed many lives and continue to pose a major threat to life, livelihood, vegetation and infrastructure. This Program is designed to work through a

partnership that has been developed in Pakistan between the Ministry of Environment, UNDP, UNEP, the Earthquake Rehabilitation and Reconstruction Authority (ERRA), other agencies, local and international NGOs to address the environmental issues triggered by the earthquake.

4.2.3. Promoting Energy Efficiency and Conserving Forests in Abbottabad District

This project has been done 2006 to 2008. This is for whole district of Abbottabad. And SUNGI Development Foundation was his implementing agency. This organization worked a lot on natural resources management in this area



Plate 3: Sungi project area

4.2.3.1 Objectives of Project

The aims of the project to improving the livelihoods and quality of life of at least six villages contiguous to Ayubia National Park through an integrated approach of socio-economic development and ecosystem management over a period of twelve months. The project would bring environmental benefits such as less pollution, less emission of greenhouse gases and less damage to biodiversity. The promotion of NR interventions coupled with enterprise development would result in reduction in indoor air pollution, improved domestic environment, household economy and social conditions.

The specific objectives of this project are the Local social capital strengthened for improved planning and management of sustainable development initiatives, Environmental education and awareness program launched for sensitizing the communities to conserve their natural resources, Micro enterprise program established inclusive of access to micro-credit, counseling, technical knowledge and expertise and access to market for selling the products and services and Community role enhanced in conservation and management.

4.2.3.2 Stakeholders of this project

The main stakeholders and beneficiaries are male and female community members of six villages contiguous to Ayubia National Park, local manufacturers, business community, Local Authority Ayubia National Park, Local Government, Forestry Department, and SUNGI Development Foundation. Table 1 show the partner and stakeholder of the project is Janbaz welfare society which is for Tohidabad village Passala.

Table 1: Details of stakeholders of the selected projects in study area

Project No.	Donor Agency	Implementing Agency	Partners of the Project	Beneficiaries of the project
Project I	Swiss development cooperation	Inter Cooperation (IC)	PHKN, DDS, MDO, and BDO	Local Communities of District Haripur
Project II	Government of Pakistan & United Nation Development Program	Forest Department & UNDP	Forest department & ERRA	Local communities of District Manshara, community of Azad Jumbo Kashmir AJK and tourists.
Project III	United Nation Development Program	SUNGI	Janbaz Welfare society	Local communities of Abbottabad 1200 people 60 % men and 40% women

Table 2: Perceived Impact of the projects in the study area

Statements	Mean	Percentage %	RO
Environmental sustainability	5.00	5	1
Economic sustainability	2.80	2.8	2
Socio-cultural sustainability	2.10	2.1	3

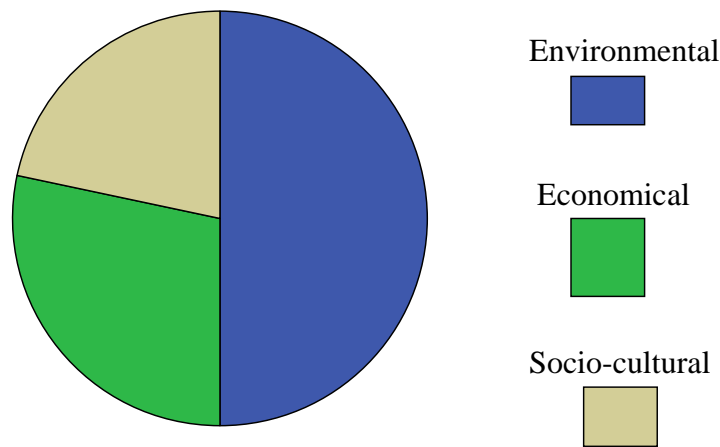


Figure 1: Perceived impacts of the projects

4.2.4 Perceived Impacts of Projects

The researcher found from her study that all of the projects worked for environmental sustainability, economic sustainability and socio-cultural sustainability but they are much focusing on environmental sustainability as in a question when the organization asked that please distribute total points among them with higher numbers indicating higher importance then most of the organization gave environmental sustainability 5 marks and 2.5 economic and 2.5 socio- cultural sustainability. So it proved that all of them working purely for environmental sustainability, but economic and socio cultural sustainability is also important for a community.

4.3 Stakeholders of the Projects

4.3.1. Donor of the Project

In Farm Forestry Support Project donor agency name was Swiss Development Cooperation. And in other two projects namely Environmental Recovery Programmed for Earthquake-Affected Areas and Promoting Energy Efficiency and Conserving Forests in Abbottabad District major donor agency was United Nation Development Program (UNDP) and sponsored by Government of Pakistan. Donor of a project is a main stakeholder on which a project depends. Any project cannot be successful if the donor does not provide sufficient funds or does not monitor the project adequately. Several people work for the project and expect attractive remunerations in order to gain better results out of that project failing which the project may not succeed. It is, therefore, necessary that the donor must have enough funds in his kitty to meet all the requirements of the project. SUNGI which has provided the stoves to the locals of Passala could not complete it successfully due to lack of funds but the people of the area complained that the funds have been mismanaged and distributed among their own persons which proved that the shortage of donation may cause the direct failure of the project. The main objective of the donors is not only to facilitate the people but to create awareness about the importance of the forests as another renowned organization Swiss Development Organization has done through their project FFSP who have developed skills through training, create awareness and facilitate them through micro-credit scheme because of sufficient budget. Similarly, UNDP and ADP level of organizations are also providing substantial donations for forest projects now days. In order to eradicate poverty, more donations are required to be poured in which, ultimately, leads to help ending deforestation.

4.3.1.1 Budget of studied projects

The researcher found that the utilization of the project's. Total budget at different administrative levels as utilized by the implementing agency of each project, influence

sector of each project and administrative and political scale of each of each project has been presented in Table 3.

The data presented in Table 3 indicate that project-I utilized 0 percent of its budget at international level and 0 percent at national level, second and third projects did not also spend any of their budget portions at international and national level. Both first and second project utilized 10 percent of their budget at provincial level respectively while third project spent 5 percent of its budget at provincial level. At district level, both second and third project spent 20 percent of their budget while first project utilized 10 percent of its budget at district level. From the data presented above it is clear that second project spent its major portion of the budget at tehsil level

Table 3: Utilization of Project’s (in percentage) at Different Administrative Levels

Level	Project I %Budget	Project II % Budget	Project III % Budget
International	0.0	0.0	0.0
National	0.0	0.0	0.0
Provincial	10.0	10.0	5.0
District level	10.0	20.0	20.0
Tehsil level	30.0	50.0	25.0
Village level	50.0	20.0	50.0
Total	100.0	100.0	100.0

:

Table 4: Project duration and budget

Project Name	Duration	Estimated Budget
FFSP	Jan 2000 to Dec 2008	35 million per year
ERP	July 2007 to June 2010	12.6 billion per year
PTF	June 2004 to 2006	32 lacks per year

50 percent while first and third project utilized major portion of the budget at the village level respectively. This utilization proved that donated of the project is important for the success of a project.

FFSP estimated budget is 143 million for four years, PTF estimated budget is 64 lack for two years and ERP 12.6 billion for three years. So it is proved that all had sufficient budget for this if they work properly. FFSP is near to be finish and PTF is finished in 2006 and ERP is now working in its area.

4.3.2. Implementing Agencies

Implementing agencies are the second stakeholder. Most of the implementing agencies belong to the same area where the project is started because they are friendly for the local community. They know each other and this helps for the success of the project. Anthropological view describes that people are easily affected by their own locals, if anyone from outside comes there and try to persuade them to do the job, he will not succeed as he has not direct influence to the people living there. In 1st project the implementing Agency was Inter Cooperation (IC) and in 2nd project implementing Agency was Forest Department. And in third project, SINGI was the implementing agency. For the fulfillment of these projects they needed partners and partner of the implementing agency in the first project were PHKN, DDS, MDO, and BDO and all these were local NGO's. And in the second project partners were forest department and ERRRA. And in third project the partner of implementing agency was Janbaz Welfare society. Purnomo et al. (2004) found that the local communities perceived good forest management as a way to practically improve their daily lives from the existing situation. They were interested in the timber concession directly providing financial and human resources for local economic development. NGOs on the other hand focused on fair benefit sharing between the communities and the concessions as a condition of good forest management and were concerned about the absence of law enforcement in the area.



Plate 4: Researcher during Focus Group Discussion

Table 5: Environmental aspects of the projects

	Forest protection	Forest regeneration	New plantation	Climate moderation	Watershed protection
percentage	100%	60%	80%	50%	60%

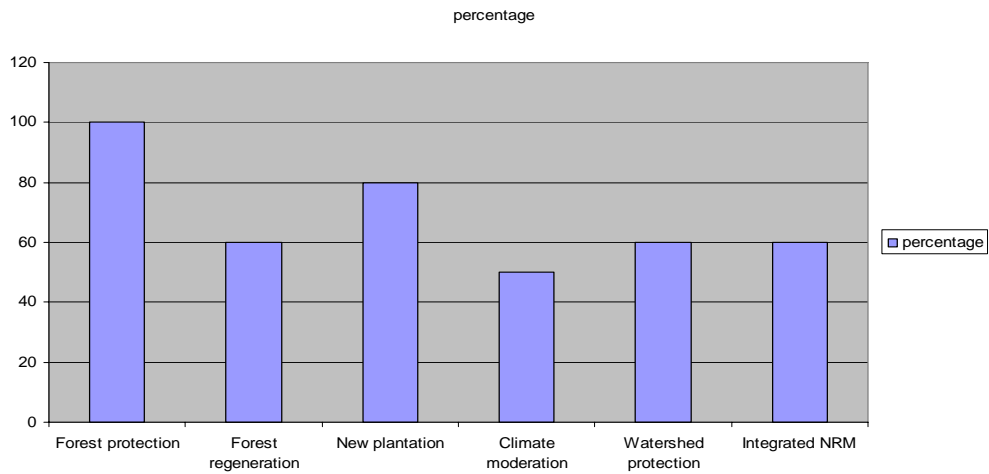


Figure 2: Environmental aspects of Projects

4.5 Economic aspects of Projects

The researcher found that all projects have also several economic aspects. All the projects have worked on income generation, increase in employment, introduce micro credit schemes, support small business and train the local community through skill development to improve their source of income. FFSP has prepared many programs through skill development in the people of the area of Haripur which has proved much beneficial for them in term of economically. They have trained the local people to prepare various types of things for interior and exterior decoration which are made of wood and cost them very cheap but they can get handsome amount from the market. They have also made display centers there for better marketing. Specifically, women are trained for stitching, embroiling, interior decoration, poultry farming and create nurseries.

Table 6: Economic aspects of Projects

	Income Generati on	Employment	Micro credit	savings	Small Business	training s
Percent age	60%	60%	60%	40%	80%	90%

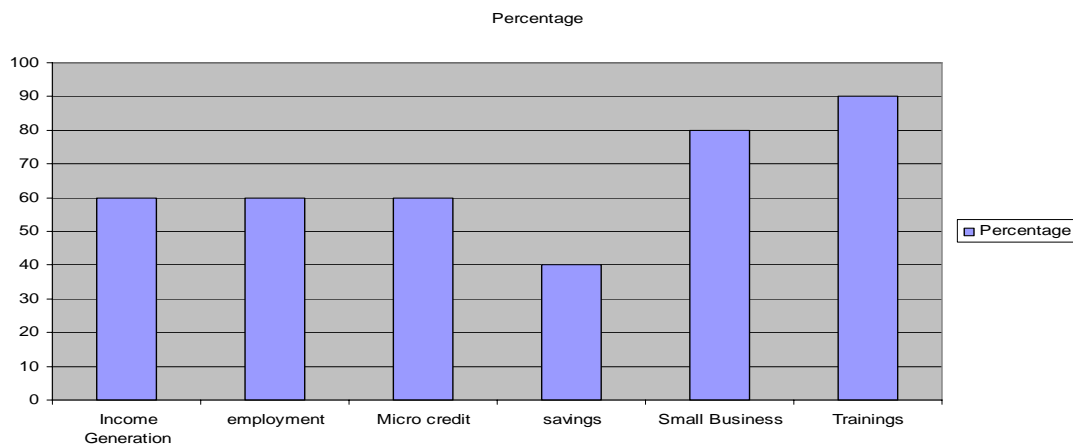


Figure 3: Economic aspects of Projects

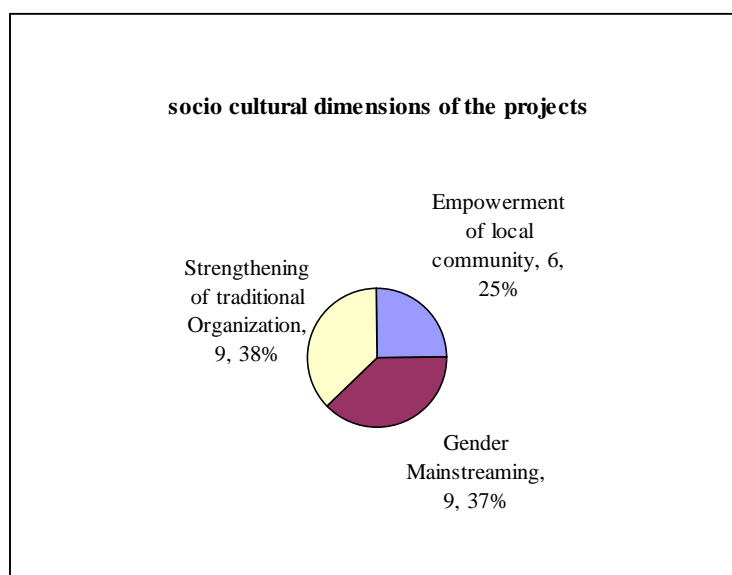
4.6 Socio-Cultural aspects of the Projects

Moreover, environmental and economic aspects have been given special attention during the projects on Socio-Cultural aspects.

Empowerment of local community sixty percent, Gender mainstreaming ninety percent and strengthening of traditional Organization ninety percent

Table7: Socio-Cultural aspects of the Projects

Socio-Cultural aspects of the Projects	Percentage
Empowerment of local community	60%
Gender Mainstreaming	90%
Strengthening of traditional Organization	90%



4.7 Participation in Project Meetings and Activities

Respondents were asked to rate of their family's and other people's participation in project's meetings on a six-point scale from 0-5. The data in this regard has presented in the table sixty four percent respondent said that their family participation in the project was average, eighteen percent said that the level of their participation was high and only eight percent said that the level of participation in the project was high. It showed that most of the village people were active in the project meetings except those who have no interest in other activities.

Table8: Family participation in the project meetings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	19	15.8	15.8	15.8
	very low	3	2.5	2.5	18.3
	Low	8	6.7	6.7	25.0
	Average	64	53.3	53.3	78.3
	High	18	15.0	15.0	93.3
	Very high	8	6.7	6.7	100.0
	Total	120	100.0	100.0	

Table 9: Other people's participation of the village in project activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very low	2	1.7	1.7	1.7
	Low	7	5.8	5.8	7.5
	Average	59	49.2	49.2	56.7
	High	47	39.2	39.2	95.8
	very high	5	4.2	4.2	100.0
	Total	120	100.0	100.0	

4.8 Benefits of Forests

There are some benefits of forests which poor people of that areas enjoy without any investment like good environment , Flood control , control soil erosion, wood for cooking, timber for house construction, source of recreation, climatic regulation, watershed protection, pasture of livestock, medicinal plants and tourism. Respondents were also asked that which type of benefits you receive from forest. Their responses were rated on a six-point scale from 0-5. The types of benefits which local communities received from forests has presented in table. They were asked to mark their areas as per their importance. Mode has been given in the table so as to verify the number used by them frequently as it was mentioned in the questionnaire. The wood, from the forest, is mainly used for cooking and heating purpose i.e 74 percent respondents have said that the

most of the wood is used for the above purpose as compare to gas which is not affordable for them. Moreover, other sources are also beyond their reach, that is why, wood is used easily. Forest is also used for their animals as pasture and livestock. Likewise the respondents said that the climate regulation 68 percent, source of good environment 63 percent, timber for house construction 62 percent, source of recreation 61 percent, watershed protection 60, flood control 37 percent, control soil erosion 29 percent tourism 29 or medicinal plants 6 are important.



Plate 5: Wood for Cooking and Heating

Table10: Benefits of forest in NWFP

Series	Benefits of Forest	Respondents	f	Md	Percent age
1	Source of Good environment	120	76	5	63.3
2	Flood control	120	45	3	37.5
3	Control soil erosion	120	35	4	29.2
4	Wood for cooking and heating	120	87	4	74
5	Timber for house construction	120	76	4	62
6	Source of recreation	120	75	4	61
7	Climate Regulation	120	81	4	68
8	Watershed Protection	120	73	4	60
9	Pastures for Livestock	120	86	4	73
10	Medicinal plants	120	7	4	6
11	Tourism	120	35	1	29.2

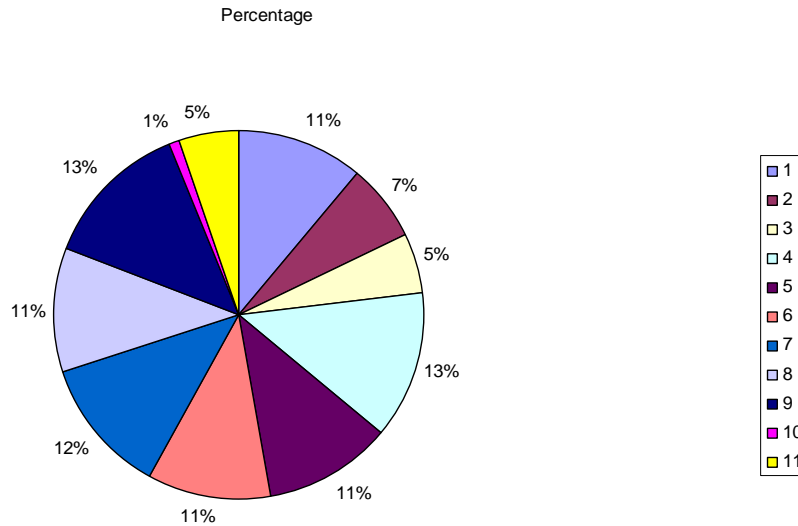


Figure 4: Benefits of forest in NWFP

4.9 Role of Different Institutions/Departments in Forest Degradation at local level

The table shows that the role of different institutions or departments that have important role in forest degradation. This is the scale in which different institutes` name was placed and asked respondents as, to which category they relate to. Ninety three percent respondents said that NGOs have no role in forest degradation while local community or forest based industries are responsible for it. 64.5 percent respondents said that in forest degradation local community is highly responsible and 62.5 percent said that, in forest degradation, forest based industries are highly responsible. The local communities` have the highest overall percentage in forest exploitation. It is a general view about deforestation in Pakistan that local (living in and around forests) communities over exploit the forests for local consumptive uses, as they unwisely use forests for getting wood for cooking and heating (Govt. of Pakistan, 1991; FAO, 1998).Whereas, the role of forest department and timber dealers were found below average in forest exploitation at local level. Some respondents from second project stated that fire and snow also significantly contribute in deforestation. In winter, heavy snowfall covers the whole tree and after that heavy storms break the tree from the top and sometimes even from the

middle of the tree. Similarly, forest fire significantly contributes in forest degradation especially in pine richer forest areas.

Table 11: Role of Different Institutions/Departments in Forest Degradation at local level

Institutions	Forest department	Local communities	Timber Mafia	NGOs	Forest based industries
None	.8	0	0	93.3	0
Very low	1.8	.8	.8	4.2	.8
Low	7.5	1.7	0	.8	0
Average	37.5	4,2	17.5	.8	5.8
High	32.5	64.2	56.7	.8	30.8
Very high	20.8	29.2	25.0	.8	62.5

Scale: 0= No role, 1= very low role, 2= Low role, 3= Average role, 4= High role, 5= Very high role

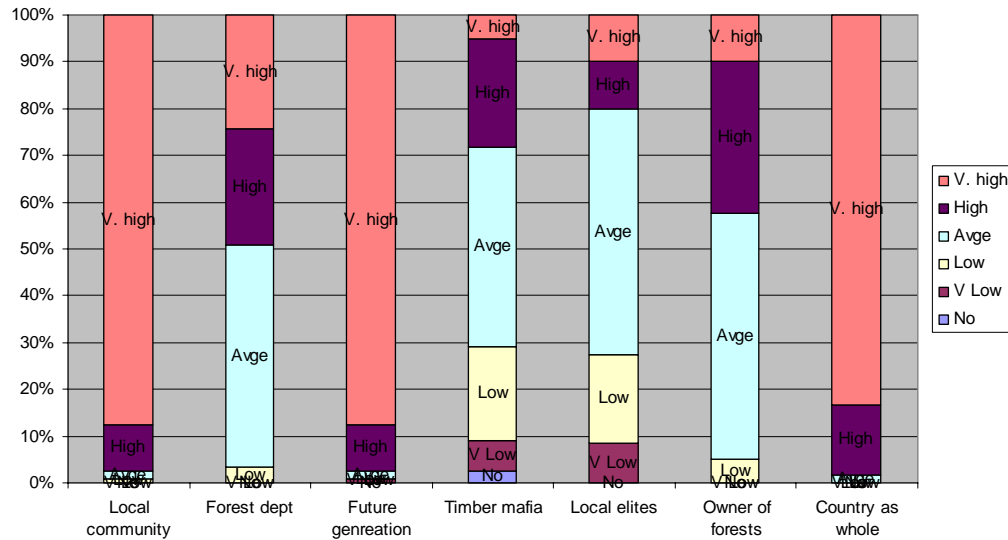
4.10 The Groups who will most suffer exploitation of forests

These are the frequencies of the respondent high frequencies mean respondents were in view that the group would be more suffer. Like country as a whole would be most suffer group.

Table 12: The Groups who will most suffer exploitation of forests

	Local community	Forest dept	Future generation	Timber mafia	Local elites	Owner of forests	Country as whole
None	0	0	0	3	0	0	0
Very Low	0	0	1	8	10	0	0
Low	1	4	0	24	23	6	0
Average	2	57	2	51	63	63	2
High	12	30	12	28	12	39	18
Very high	105	29	105	6	12	12	100

Figure 5: Percentage of the groups



Second objective of this research is to assess social sphere of influence of involved major stakeholders involved and their effects on poverty environment nexus. So first is how a project influences on community rather than it will be environmental project or economic project.

4.11 Perceived Benefits of Projects reduction of poverty

A project gives a lot of employments and also gives benefits for population. Likewise in a project of FFSP 22 persons for official work and above 150 local people work for them in different villages, this will approximately above 200 people who will get employment because of only one project. Same case like with PTF and ERP. It proves that a project helps for poverty reduction from its starts to end.

Most of the people of NWFP are in favor that the preservation and expansion of forests poverty can be reduced of local people could be reveal. Approximately 92% respondents are in favor in this statement. And they are also in favor that by reducing

poverty of local people forests preservation and expansion could be improved. They are approximately above 85%.

Wunder (2001) explored the two way causal links between poverty alleviation and natural tropical forests. At micro level, rise in poverty can increase or slow the forest loss but at macro level perhaps, it is due to higher income that stimulates forest loss by increasing demand for more and more agricultural land. Natural forests have potential to alleviate poverty in terms of producer benefits, consumer benefits and economy-wide employment. However, it is difficult to raise the producer benefit easily and significantly. As local people are not more skilled therefore absorption of unskilled labor (poor) is low in forestry, which tends to be capital-intensive. Natural forests may thus lack comparative advantage for poverty alleviation.

Training programs also helpful for the reduction of poverty, as FFSP and PTF started. Some projects are only for training and create awareness in people for forests and also for forest management. Like they train them for how they can planted new trees and how they can take care for them and they help them to make nurseries. They train them how they can make new things from trees (chaallll) and tress stem. They also gave them platform for sale their handmade products which is very helpful for poor people for the reduction of poverty.

4.12 Perceived Aspects of Poverty

Most of the NGO's and Welfare Organizations which are working in Pakistan focusing on Poverty reduction, they are trying to provide the basic necessities of the people in order to improve their living standard. NGOs have focused not only towards Forests protection but also poverty reduction as already mentioned above. When the people were asked about the aspects of poverty, they said that poverty is, basically, spread in wake of unemployment and low levels of income, insufficient health facilities and food insecurity. They did not believe that exploitation of forest was also the reason for aspect of poverty.

Table 13: Perceived Aspects of Poverty

Aspects of poverty	Num of responds	Frequencies	Mean	Percentage %
Unemployment	120	108	4.44	90%
Income Insecurity	120	115	4.23	95%
Insufficient health	120	92	3.82	79%
Insufficient educ.	120	72	3.58	60%
Food insecurity	120	105	4.33	86%
Poor access to physical infrastructure	120	75	3.67	62%
Degraded Forests	120	68	3.56	56%
Degradation of soil and water resources	120	53	3.46	43%

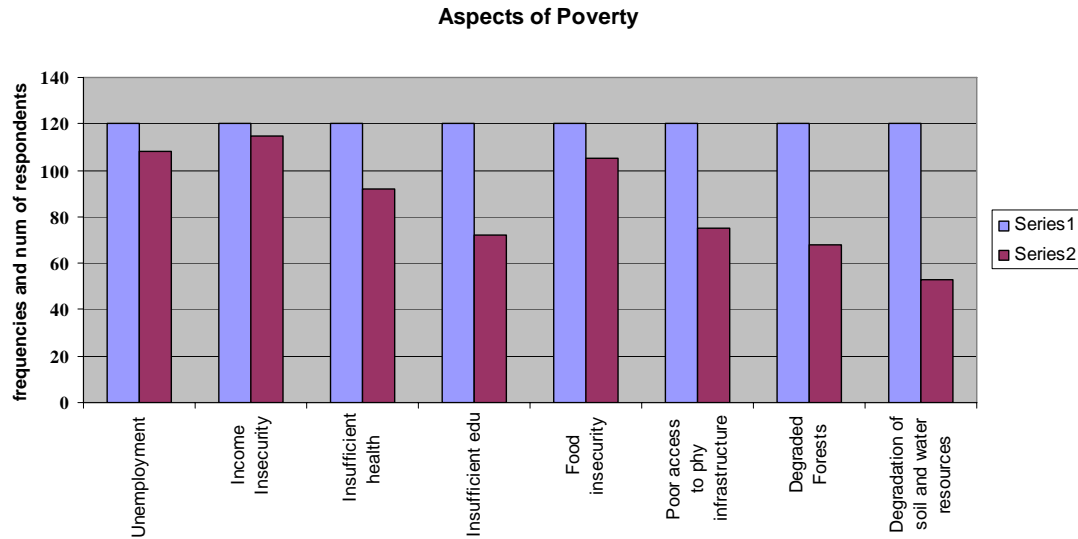


Figure 6: Perceived aspects of poverty

Table 14: Perceived Effect of Forest Improvement on Poverty at Local Level

Project 1			Project 2			Project 3			Overall		
Response	f	%	Response	f	%	Response	f	%	Response	f	%
Yes	38	95.0	Yes	34	85.0	Yes	31	77.5	Yes	103	85.8
No	2	5.0	No	6	15.0	No	9	22.5	No	17	14.2
Total	40	100	Total	40	100.0	Total	40	100.0	Total	120	100.0

The data presented in Table 14 indicate that as an overall response 85.8% of the respondents said that improved forest would lead local communities to a world of less poverty. They said that forests provide us numerous benefits like control soil erosion, flood control, pastures for livestock, climate regulation and the most important wood for cooking and heating etc. Therefore, with the improvement of forests all these allied benefits would receive to the local communities. Only 14.2% of the respondents said that improved forests are not an alternative to reduce their poverty through some other means.

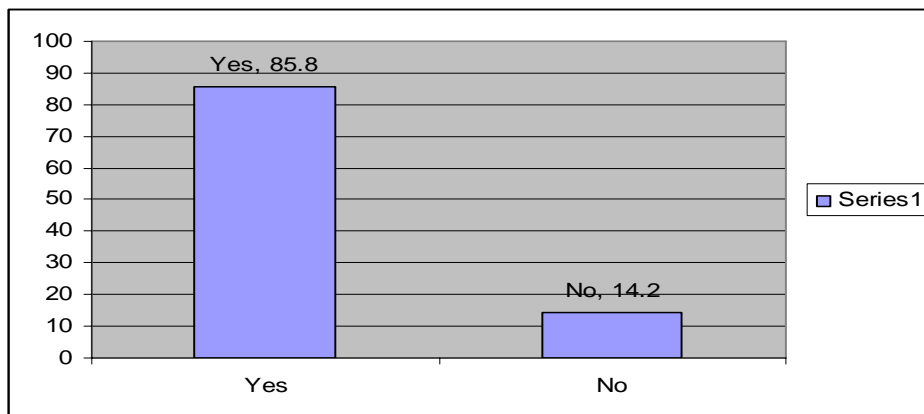


Figure 7: Perceived Effect of forest improvement on Poverty at local level

4.13 Perceived Effect of Poverty on Forest Improvement at Local Level

Respondents were also asked about their opinions that poverty of local people has negative impact on forests. Their responses were rated on a six-point scale from 0-5. The data showing effect of poverty on forest improvement at local level has presented in Table 15.

Table 15: Perceived Effect of Poverty on Forest Improvement at Local Level

Project 1			Project 2			Project 3			Overall		
Response	f	%	Response	f	%	Response	f	%	Response	f	%
Yes	34	85.0	Yes	10	25.0	Yes	18	45.0	Yes	82	68.3
No	6	15.0	No	30	75.0	No	22	55.0	No	38	31.7
Total	40	100.0	Total	40	100.0	Total	40	100	Total	120	100

The data presented in Table 15 indicate that as an overall response 68.3% of the respondents said that by reducing poverty of local people forests can be improved because in this way their dependency on forests would be reduced. Schickhoff, (1995) in a study about degradation of natural forests in some areas of Western Himalayas also observed that degradation of forests is a long term process and is greatly influenced by socio-economic status of the area. There were 31.7% respondents who refute that by

decreasing poverty of local people forests can be improved. They said that local people are not actually involved in deforestation process. Therefore, whether their poverty may be reduced or not, forests would not improve.

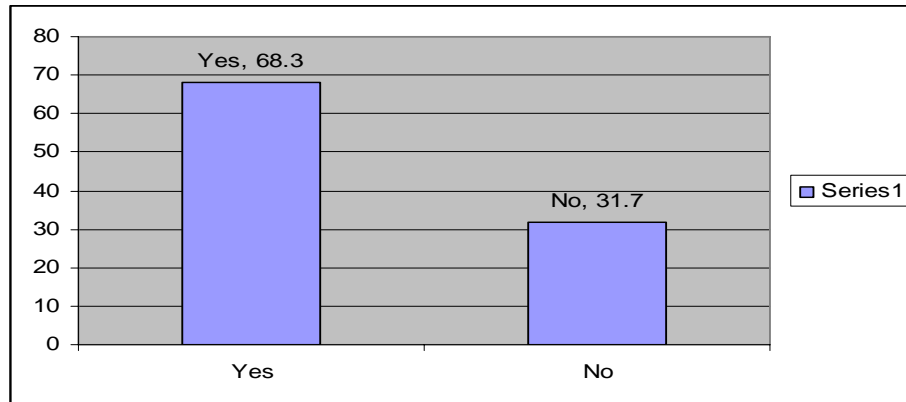


Figure 8: Perceived Effect of Poverty on forest improvement at local level

4.14 Perceived Effect of Forest Improvement on Poverty at Local Level

Respondents were asked that either improved forests would contribute towards their poverty alleviation or not. Their responses were rated on a six-point scale from 0-5 and has presented in Table 16.

A respondent said that if we want to save our forest we should reduce poverty at the area and should give better livelihood. Create opportunity for people employment and should facilitate forest department also with high pay and jeeps.

Another respondents said that we know the importance of forest and are well informed that how it is demolishing but when we have no money for our basic livelihood, this situation compel us for wood cutting on a small or on a large scale, its also depends on situation. Durr (2002) found that forest dependent communities are among the poorest segments of society, heavily relying on the natural environment for their livelihoods. Degradation of the forests affects the natural environment and hence rural livelihoods, most seriously to ‘the poorest of the poor’.

4.15 Project Beneficiaries (Local Communities)

The data obtained from the local communities of each project area is analyzed and presented in this chapter.

4.15.1 Biographical Information

Demographic characteristics of the respondents are considered very important because these factors have a strong impact in influencing the attitude, behavior and perception of the respondents. Age, educational background and occupation of the respondents do affect their perception and suggestions regarding different issues. Therefore, it was assumed that these characteristics would help in gaining some valuable ideas and suggestions regarding forest issues. Keeping in mind the importance of these factors, information regarding age, education, occupation and caste of the respondents was collected.

4.15.2 Age

Age is an important attribute, which has a consequence, either positive or negative on the behavior of an individual (Huque & Jamias, cited in Sher 1994). However, the literature shows contrary information on this important factor. Information related to the age of the respondents is presented in Table

Table 16 Distribution of the Respondents According to their Age

Age	No. of Respondents	Percentage
15-25	12	10
26-35	33	28
36-45	52	43
46-55	16	13
56-65	5	4
66-75	2	2
Total	120	100%

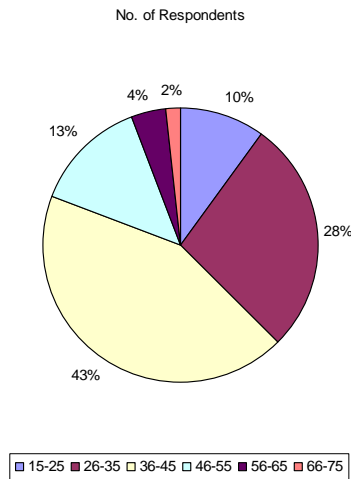


Table 16 indicates that overall 4.2% of the respondents belonged to an age group of 18-25 years, 45% of the overall respondents belonged to an group of 26-33 years. There were 24.3% of the respondents who belonged to 34-41 years age group while 14.9% overall respondents belonged to 42-49 years age group. The data presented in above table indicate that only 11.6% of the overall respondents were between 50-65 years age among them 8.3% of the respondents were 50-57 years old and only 3.3% respondents belonged to an age group of 58-65 years.

Table 17: Mean Age of the Respondents

Mean Age of the Respondents	f	Minimum	Maximum	Mean	Std. Deviation
	120	18.00	65.00	36.208	9.171

4.15.3 Education

Education is considered an important factor in making decisions in the life of an individual. The number of years of formal education completed by an individual is regarded as a significant factor in gaining access to better ideas, innovations and technologies (Ijaz & Davidson 1997; Perraton *et al.* 1983). Therefore, it was assumed that educational level of the respondents would contribute to understanding the differences in the perception of the respondents and would help to strengthen the opinion of the respondents. Educational level of the respondents is presented in Table

Table 18: Distribution of the Respondents According to their Education

Qualification	No. of Respondents	Percentage
Illiterate	46	38.3
Primary	9	7.5
Middle	18	15.0
Matric	32	26.7
Intermediate	9	7.5
Graduation	6	5.0
Total	120	100.0

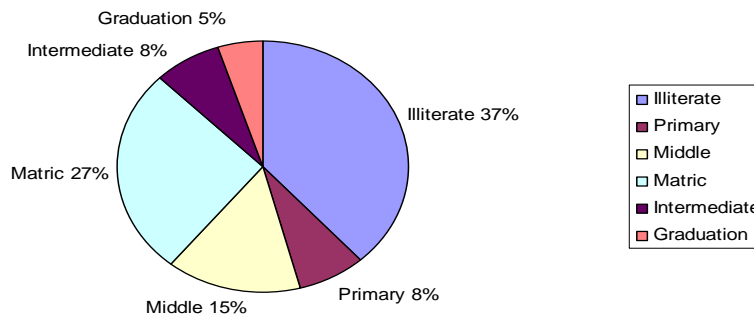


Figure 9: Overall Educational status of the Respondents

Table 18 indicates that 37 percent of the overall respondents had no formal education. There were 8 percent respondents who had education up to 5th class, 15 percent of the respondents had education up to 8th class, and 27 percent of the respondents had

education up to metric while 8 percent of the respondents were intermediate. There were only 5 percent respondents who were graduates. Although, this data indicate that majority of the respondents had education up to metric level and very few respondents had higher education up to graduation. Even this matter is very pleasing that in these remote areas, where educational facilities are very low, literacy rate is relatively satisfactory. The data presented indicates that literacy rate among the respondents was 60%, higher than the national literacy rate 54.0% (Govt. of Pakistan, 2004).

4.15.4 Caste

Caste of the respondents is an important attribute in highland area of North West Frontier Province because many people in these areas are seasonal migrants and some are permanently residents. Awais, (2004) had discussed the attributes of Gujar caste living in highland Ares. These are the people mostly of poor-economic status and are living there from centuries. Some of them are known for their migratory characteristics in search of food and employment while majority of them has started settling down in the areas by developing communities.

It was assumed that caste of the respondents would help to know their residential status in the area. Information related to caste of the respondents is presented in Table 19.

Table 19 Distribution of the Respondents According to their Caste

Caste Type	Project 1		Caste Type	Project 2		Caste Type	Project 3	
	f	%		f	%		F	%
Awan	6	15%	Swati	25	62%	Awan	13	33%
Keral	30	75%	Gujar	15	38%	Karel	27	57%
Mughal	4	10%						
Total	40	100	Total	40	100	Total	40	100.0

Table 19 show that respondents belonged to five type of castes Awan, Gujar, Keral, Mughal and Swati. The overall data indicates that there were 13 percents Gujars, 44 percent Keral, 3 percent Swati, 19 percent Awan and 21 percent Mughal in the entire sample.

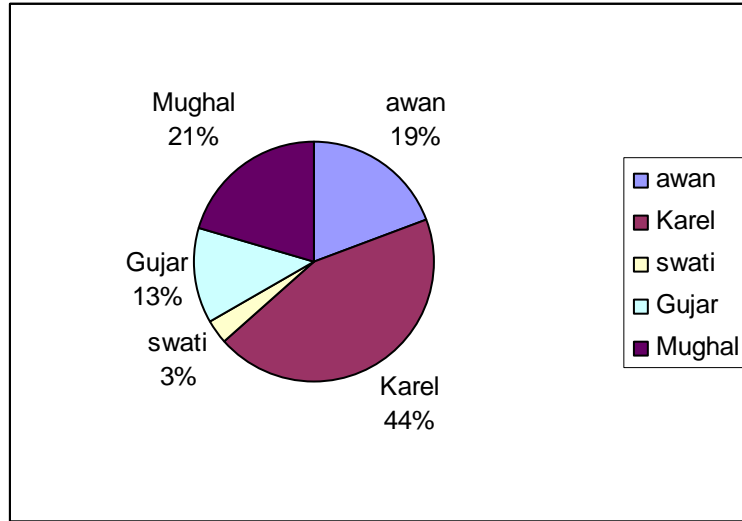


Figure 10: Caste of the Respondents

4.15.5 Family Size

Family size of the respondents is also an important indicator that will significantly influence the perception and suggestion of the respondents. Therefore, keeping in view the importance of family size respondents were asked regarding their family size (total family members). The data obtained is presented in Table 20.

Table 20 Distribution of the Respondents According to the Size of their Family

Family members	Project 1		Project 2		Project 3		Overall	
	f	%	F	%	f	%	F	%
2.00	1	2.5	0	0.0	0	0.0	1	.8
3.00	1	2.5	3	7.5	0	0.0	4	3.3
4.00	3	7.5	2	5.0	8	20.0	13	10.8
5.00	12	30.0	8	20.0	12	30.0	32	26.7
6.00	6	15.0	12	30.0	10	25.0	28	23.3
7.00	5	12.5	10	25.0	8	20.0	23	19.2
8.00	5	12.5	2	5.0	2	5.0	9	7.5
9.00	2	5.0	1	2.5	40	100.0	3	2.5
10.00	3	7.5	1	2.5	8	20.0	4	3.3
12.00	2	5.0	1	2.5	12	30.0	3	2.5
Total	40	100.0	40	100.0	10	25.0	120	100.0

f= frequency, % =percentage

The data presented in above table indicates that overall respondents had large families. There were only 14.9% respondents who had relatively small families (2-4 family members). There was a majority of respondents (76.7%) who had large families (5-8 family members) and 8.3% of the respondents had very large families (9-12 family members). Respondents were not asked about their family types that either they are living individually or jointly. However, the data obtained regarding family size indicates that most of the respondents lived as joint families because they had enough family members.

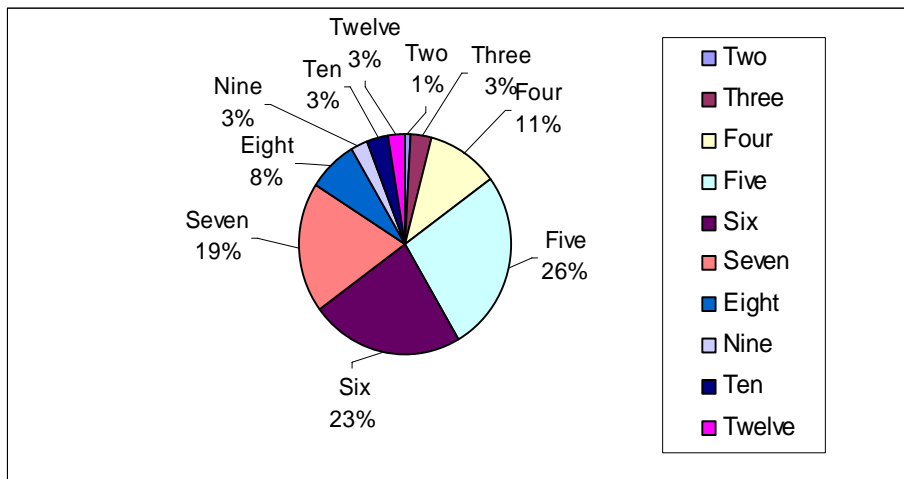


Figure 11: Number of Family members of Respondents

4.15.6 Main Occupation

Occupation of the respondents is an important economic indicator of the respondents representing their dependency on that occupation. It was assumed that major occupation of the respondents would help to assess their dependency on forests. Ultimately, it will help to guess their role in forest management and exploitation. Therefore, respondents were asked about their major occupation. Data obtained in this context is presented in Table.

Table 21 Distribution of the Respondents According to their Occupation

Occupations	Project 1		Project 2		Project 3		Overall	
	F	%	f	%	f	%	f	%
Agriculture	16	40	23	57.5	21	52.5	60	50
Business	6	15	3	7.5	5	12.5	14	11.67
Govt. employer	3	7.5	5	12.5	5	12.5	13	10.83
Private employer	2	5	3	7.5	3	7.5	8	6.67
Oversees employer	3	7.5	0	0.0	0	0.0	3	2.5
Ret. Govt. employer	2	5	0	0.0	0	0.0	2	1.67
Daily wages labor	6	15	3	7.5	3	7.5	12	10
Driving	0	0.0	2	5	2	5	4	3.33
Masons	2	5	1	2.5	1	2.5	4	3.33
Total	40	100	40	100	40	100	120	100

f= frequency, %=percentage

The data presented in Table 21 indicate that most of the respondents' (50%) occupation was agriculture. Although, agriculture was the occupation of majority of the respondents even that they were not completely dependent on agriculture. The majority of the households were not practicing farming for commercial purposes because they had small land for agriculture. They had to adopt some other occupations to meet their family requirements. For this purpose, different members of the family run different business. There were 11.67% respondents who had their own business such as shop keeping, transports etc. It can be depicted from the above data that except agriculture, respondents had no occupation in fair majority. Different respondents had different occupations for example 10.83% of the respondents were government employers, 6.67% private employers and 10.0% of the respondents were found to be dependent on daily wages labor.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary and Conclusion

Pakistan is endowed with natural resources and forests are one of precious assets, but are exploited badly due to many socio-economic factors like poverty, political pressure, and lack of awareness leading towards poor decision making of majority of stakeholders. Despite the fact that numerous forest related projects and interventions in NWFP have been launched and implemented, the rate of forest depletion is still very high as indicated by previous researches. An exploratory analysis of social networks of stakeholders was undertaken because it has more significant implications for the success of a development projects/interventions or policy framework. The main objective of this research project was to identify and analyze social networks of stakeholders, their characteristics, roles, relationships with each other, perceptions and angles of perceptions etc. in the context of selected forest related development interventions (projects). Hypothesis of this proposed research was that there is weak interaction and delegation of decision making to all relevant stakeholders which hinders the progress of the projects/interventions. Under this research theme, the suggested plan of work included both qualitative as well as quantitative research methods. For extracting qualitative data in-depth interviews with key informants and focus group discussions conducted in the research. The variables for the research were forest degradation, exploitation of forests, benefits of forests, aspects of poverty and poverty alleviation and environments. The research outcomes are to understand the interactions of different sections of people and their impact on forests from anthropological perspective. In this research structured interviews carried out from selected sample. Qualitative analysis of data was done through spreadsheets prepared on computer and quantitative data analysis carried out by SPSS.

Among different stakeholder of forest related projects, respondents from the project reported the highest interaction among *Jirga* and forest department, while lowest

interaction among forest department and local communities. Respondents from the first project Farm Forestry Support Project reported the highest interaction among NGOs and local communities while lowest interaction among forest department and local communities. Respondents from the third project (environmental recovery program) reported the highest interaction among CBOs and forest department and lowest interaction among NGOs and local communities.

Among different stakeholders, forest department was found most influential, NGOs below than average while local community found least influential in decision making regarding forest management at local level as well at provincial level.

There was a difference in the perception of different stakeholders (donors, implementing agency and implementing partners) regarding economic, environmental and socio-cultural sustainability. Environmental sustainability was the similar priority of implementing agency of the project and other stakeholder (donor agency and implementing partners of the projects) while there was difference in prioritizing economic sustainability by the implementing agency and other stakeholders. Donor agency and implementing partners had economic sustainability as third priority while implementing agency of the project had economic sustainability as second priority.

In order to ensure economic sustainability implementing agency of the project had highest priority to impart trainings to the local communities and had micro credit lowest priority. Similarly, other stakeholder organizations (donors and implementing partners) also had top priority to impart trainings to the local communities and micro credit as lowest priority.

Regarding environmental sustainability the highest priority of the implementing agencies was forest protection and forest regenerations. Similarly, other stakeholders, (donors, implementing partners) had forest protection highest priority and climate moderation as the lowest priority. In order to ensure socio-cultural sustainability implementing agency of the project had empowerment of local communities highest priority while gender mainstreaming as the lowest priority. While stakeholder organizations had capacity buildings, knowledge flow and change in attitude as the highest priority and creation and development of new institutions as the lowest priority.

5.2 Suggestions/ Recommendations

5.2.1 For Implementing Agencies

- i. Implementing agency of the first project should develop strong linkages with local communities of the area and other stakeholder group especially project implementing partners for the success of future interventions.
- ii. Implementing agency of the second project community based resource management project SUNGI should take measures to involve forest department being the most influential stakeholder along with local communities in a coordinated manner for the successful implementation of future projects.
- iii. The implementing agency of the third project forest department should increase interaction with project beneficiaries local communities and implementing partners, local VDC,s for the successful completion of future projects, and should involve true representative of local communities in decision making regarding forest management both at local and provincial level not conversationally but practically.

5.2.2 For Donor Agencies

- i. While involving multi stakeholders in the implementation process, the donor agencies of the entire three projects should ensure that there might be a consensus among involved stakeholder regarding that intervention for future projects.
- ii. The donor agencies of all the three projects should continuously evaluate the activities pursued by the implementing agencies to achieve the intended objective of the projects.
- iii. The donor agencies of all the three projects should remove the difference in the perception of all involved stakeholders. Therefore it necessitates that there should be no difference in the perception of donor and implementing agency and beneficiaries regarding a particular issue or project.

- iv. The donor agencies should clearly analyze those stakeholders to be involved in implementation process. Similarly, the donor agencies should analyze the proposed beneficiaries of the proposed project by the implementing agency before accepting it.

5.2.3 For Local Communities (beneficiaries)

- i. Local communities of the first project should coordinate with the implementing agency DDS, PHKN, and MDO to accelerate the project activities in spite of waiting some unseen help.
- ii. Local communities of the first project should take advantage of nurseries established by the forest department and take part in plantation process along with forest department and FFSP
- iii. There is a conflict among forest department at local communities of all the three projects. Local communities and forest department of these areas blame each other for neglecting their responsibilities. Therefore, it is necessary that this conflict among to influential stakeholders should be resolved on priority basis and it should be done on mutual benefit sharing among forest department and local communities rather than on mutual trust or cooperation.

5.2.4 For Future Researchers

- i. There is a difference in the perception of different stakeholders regarding economic and environmental aspects of sustainable development. All stakeholder organizations (donors, implementing agency and implementing partners) perceive that environmental sustainability is pre-requisite for economic sustainability, while local communities perceive that economic sustainability is pre-requisite for environmental sustainability. Therefore, it calls for future researcher to study that whether environmental sustainability brings economic sustainability or economic sustainability brings environmental sustainability.
- ii. Use the triangulation technique in data collection using both qualitative and quantitative techniques.

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