

# THE ROLE OF FOREST DEPARTMENT IN INVOLVING LOCAL COMMUNITIES IN THE MANAGEMENT OF FOREST RESOURCES IN KHYBER PAKHTUNKHWA

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## Abstract

*Participatory approach is recommended for development projects especially for the management of forest resources across the globe. It is considered a panacea to all ills of development and key to success and sustainability. This paper investigates the organizational factors that influence the effectiveness of participatory approach in the management of forest resources in Khyber Pakhtunkhwa, Pakistan. To understand the role of Forest Department in the implementation of community participation in the management of forest resources, this study was conducted in four districts i.e. Swat, Shangla, Dir Upper and Chitral of Malakand Division, Khyber Pakhtunkhwa. The empirical data was collected through individual interviews, focus group discussions (FGDs) and observations. The study found that Forest Department deficiencies such as insufficient and inefficient staff, lack of proper service structure and job security, insufficient budget, lack of incentives and bureaucratic behavior of staff paralyzed participatory approach in the management of forest resources in the study area. The forest department should be equipped with sufficient and efficient human and financial resources for an effective implementation of participatory approach in the management of forest resources.*

## Keywords

Forest Department, Participatory Approach, Forest Management

## 1. Introduction

Participatory approach or community participation has become a catchphrase in current academic circles and development organizations<sup>1</sup>. It was adopted following the perceived failure of the earlier centralized/top-down approach<sup>2,3</sup> and was extended to forest

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management due to the inability of the government to protect forests<sup>4</sup>. Participatory approach refers to the involvement of all local forest user groups irrespective of their caste, gender and property rights in the management, protection and conservation of forest resources<sup>5</sup>. It has been given different name such as Public Participation<sup>6</sup>, Public Involvement<sup>7</sup>, Joint Forest, Management<sup>8</sup>, Co-management<sup>9</sup>, Community Participation<sup>10</sup> and People's Participation<sup>11</sup>.

Participation approach was recommended for the management of degraded forest resources when industrialization revolutionized the world at the cost of natural resources including forests. The drive towards industrialization had particularly negative repercussions for developing countries. For instance, it improved health facilities that increased life expectancy and led to high birth rate as well as decreased death rate and infant mortality which caused high population growth. Such factors ultimately overburdened natural resources<sup>12</sup>. Apart from this, industrial revolution used forest resources as raw material which triggered pollution, soil erosion, chemical adulteration of food items and environmental issues. The natural resources were exploited to achieve economic development, boost up per capita income and Gross National Products (GNP) without concern for its environmental consequences. This exploitation of natural especially forest resources caused the loss of fertile land as well as air and water pollution and environmental degradation. Therefore, scholars, planners and policy makers realized the sensitivity of the issue challenges that led to the emergence of the concept of sustainable development. It was particularly the report of World Commission on Environment and Development (WCED) commonly known as Brundtland Commission<sup>13</sup> defines Sustainable Development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (p. 8). The idea was transformed into a policy objective during the Rio Earth Summit in 1992<sup>14</sup>. The Summit paved the way for the universal acceptance of Sustainable Development as a steering paradigm integrating economic growth, social development and environmental protection as interdependent and mutually supportive elements of long-term development. Furthermore, in September 2000, the United Nations' declaration about Environmental Sustainability as one of the eight Millennium Development Goals to be reached by the year 2015 further propelled sustainable development into policy circles. For achieving the goal of environmental sustainability, the United Nations intervened to ensure the elements of sustainable development into all countries' policies and programs to halt/address environmental degradation through the development and conservation of natural/forest resources.

Natural forest resources are now considered the gift of nature and their overexploitation for short-term economic gain is considered against the ecological principle of nature. Realizing the importance of natural resources, Daly<sup>15</sup> suggests that the use of natural resources should be balanced with their reproduction rate. Another economist Solow<sup>16</sup> focuses on the welfare of forest dependent communities and recommends that a reasonable part from the economic output of natural resources to be spent on providing education and health facilities, infrastructure development and well-being of resource-dependent communities. In addition, such benefits are required to be extended to the whole community without any discrimination. Similarly, Lodhi & Makki<sup>17</sup> hold that, being valuable asset, forest resources should be properly managed and conserved.

To manage natural/forest resources efficiently, local people should be involved in the protection and conservation of resources. The idea of involving people in the conservation and management of financial, natural and other forms of capital are commonly referred to as participatory development. Participatory development is formally defined as “transforming the prevalent discriminatory societal and power structures; empowering marginalized groups to carry on their decisions by themselves; decreasing their reliance on outside agents; organizing them into strong community-based organizations and enabling them to utilize their local knowledge for the solution of their local problems”<sup>18</sup>. In simpler terms, it means that instead of making grand theories and implementing centralized programs for societal development, the voices of local community (men and women) should be given priority while devising any plan or program for their advancement.

## **2. Forests in Pakistan and Factors Responsible for the Degradation of Forests**

Forests have latent and manifest productive, protective, regulative and socio-cultural functions. These are in addition to the major forest products and its direct economic benefits. Forest resources play key role in the protection of soil and water resources and preservation of ecological balance<sup>19</sup>. Apart from this, forests prolong the existence of dams and reservoirs and also protect the irrigation channels. Similarly, forests sustain the supply of wood and its products<sup>20,21</sup>. Owing to such functions, forest depletion is one of the serious issues for Pakistan as about 39000 hectares of forests are depleting per year. The deforestation rate in Pakistan was reported 1.5 percent annually between the years of 1990 and 2000<sup>22</sup>. The high degradation of forests shows the incapability of the Forest Department to manage forest resources.

Therefore, woody biomass presently disappears at a rate between 4 to 6 percent annually which is considered the second highest rate in the world. Therefore, it is realized that if the present trend of deforestation continued, the total woody biomass of the country would be consumed within 10 to 15 years<sup>23</sup>. It is worth mentioning that the annual projected income from deforestation in Pakistan is about US\$ 28-36 million<sup>24</sup>. According to Rodgers et al.<sup>25</sup> the annual estimated cost of remediation for forests is nearly US\$ 157.40 million.

Furthermore, overpopulation and high growth rate are the factors considered responsible for the degradation of forest resources. To fulfill the needs of the bulging population, the forest resources are overexploited; it has increased deforestation. On the basis of the current exploitation rate, it has been assumed that the total existing forest resources of Pakistan would be consumed very shortly. The high rate of deforestation has become a challenge not only for Pakistan but also for developed and developing countries. However, this is not a new phenomenon as large forests were exploited to meet the needs of the rapidly increasing population during the colonial and post-independence period. Most of the forests were cut down for agriculture purposes to satisfy the demand for food for the growing population. The process of deforestation was further strengthened by the complexity of ownership and land tenure system which caused mistrust between different stakeholders. The local communities of Hazara were deprived of their right and privileges through the Hazara Forest Act 1936 that led to the “bureaucratization” of forest resources. Through the promulgation of this act, the British government got control over the forest resources in Hazara by excluding local people. According to the proponents of top-down approach the local people are incapable to manage the forests resources; therefore, government (Forest Department) has the responsibility to protect/manage forest resources. The forest owners and right holders, on the other hand, criticize the managers (Forest Department) for the high rate of deforestation. Forests are the main source of providing energy for local domestic use while the increased population exerts pressure on forest resources. Local forests fulfill one-third of national energy requirements by supplying about 3.5 million cubic metrics of wood<sup>26</sup>. In fact, more than 75 percent of households use wood for their cooking and heating in Pakistan while 90 percent of rural population is dependent on forests for their needs. Similarly, rural people are dependent on livestock for their livelihood; forests are the main source of fodder for their livestock. Therefore, forests in Khyber Pakhtunkhwa are considered to be exposed to over-grazing. It is recognized that 82 percent of forests in the northern divisions (including Malakand) of Khyber

Pakhtunkhwa are affected by over-grazing. Furthermore, ban on harvesting timber for commercial purposes, after the floods of 1992, ironically aggravated the problem of illegal cutting. As a result, deforestation increased due to illegal activities almost in all regions of Khyber Pakhtunkhwa, including Malakand division. The processes of royalty payments to the local right-holders delayed or stopped due to the ban which caused an increase in illegal cutting. Therefore, the frustrated local communities preferred to sell their royalty rights at nominal charges<sup>27</sup>.

### 3. Methodology

This study was conducted to investigate the constraints in the involvement of local people in forest management and its impacts on forest resources in Pakistan. As mentioned above, 40% of Pakistan's forests are in Khyber Pakhtunkhwa (KP) Province. These forests are spread over the high mountains of Himalayas, Hidukush and Korakoram situated in Hazara and Malakand Divisions of the province<sup>28</sup>. The estimated forest cover in Malakand Division is about 360,912 hectares, which covers eight percent of the division's area, while Hazara forest cover, at 316,318 hectares which constitutes about five percent of its total area<sup>29</sup>.

To collect data about the institutional factors limiting the effectiveness of participatory forest management, the four districts of Dir Upper, Chitral, Swat and Shangla in Malakand Division (the division having the highest forest cover in the province) were purposively selected for this study where local people were involved in the management of forest resources in the form of Joint Forest Management Committees (JFMCs). JFMCs were institutionalized through "The North West Frontier Province Forest Ordinance, 2002" by the Government of Khyber Pakhtunkhwa<sup>30</sup>. Furthermore, "Community Participation Rules, 2004" were devised for organizing local communities in the form of JFMCs for the protection, conservation and overall management of forest resources. Malakand division is covering 29800 square kilometers area which is 40 percent of the province of Khyber Pakhtunkhwa. It consists of seven districts, i.e., Shangla, Swat, Malakand, Chitral, Dir Upper, Dir Lower and Buner. Out of the total seven districts, four i.e. Swat, Shangla, Dir Upper and Chitral were selected because at the time of the fieldwork, JFMCs had been formed only in these districts while the remaining three districts had no JFMC. At the time of the fieldwork, the Provincial Directorate of Forest Department had established 73 JFMCs the selected four districts of Malakand Division (Government of Khyber Pakhtunkhwa, n. d.). Before the collection of data, it was decided to

conduct fieldwork at those JFMCs that had an active profile and that had been in existence for some time. Keeping this criterion in view, it was decided to select JFMCs which had been operating for at least 5 years and were active. This cut-off point was arrived at after consulting the field-staff of Forest Department, as the newly formed JFMCs might not have been familiar with the process as the older ones. Thus, a total of 12 JFMCs, 3 from each selected district of Swat, Dir Upper, Chitral and Shangla, were purposively selected.

The data was collected from forest-dependent communities residing in or adjacent to forests. A purposive sample of 96 respondents was individually interviewed using a detailed semi-structured interview guide and 08 Focus Group Discussions (FGDs) were conducted. An ethnographic approach was adopted as the researcher visited and interviewed the respondents in their natural and social setting and used multiple tools of data collection such as participant observation, in-depth individual interviews and focused group discussions. The respondents were studied and observed in isolation and groups for getting the actual picture of the phenomenon<sup>31</sup>. The detail of interviewees is given in the table below:

**Table 1: No of In-depth Interviews with JFMCs Members and Staff-Members of Forest Department**

Category of the Respondents	Number of Male	Number of Female	Total
Executive Body Members	24	0	24
General Body Members	24	24	48
Forest Department Staff	21	03	24
<b>Total</b>	<b>69</b>	<b>27</b>	<b>96</b>

Additionally, 8 Focus Group Discussions (2 in each selected district) were also conducted. The interviews were recorded and transcribed thereafter. Ethical protocols were strictly observed in the field while collecting the data. Thereafter, themes were developed out of the primary data and these themes were checked and cross-checked with the available literature.

**4. Deficiencies of Forest Department**

Conservation policies nowadays focus on the involvement and empowerment of local people in the management of natural (forests) resources<sup>32,33,34</sup>. The hallmarks of real empowerment of local communities are proper motivation and organization of such

communities by the Forest Department. To do so, Forest Department needs to have sufficient (human and financial) resources to materialize the goal of participatory approach in true sense. It is worth-noting that lack of resources may result in the failure of the desired participatory approach. The same was also found in the field wherein the Forest Department had both inadequate human and financial resources, which affected the mobilization and organization of local people to be involved in the management and conservation of forest resources. As a result of improper and poor mobilization and organization, local people developed poor sense of responsibility in taking care of/protecting forest resources. More specifically, the deficiencies of Forest Department that paralyzed the realization of participatory forest management are analyzed below.

#### **4.1 Lack of Specialized and Trained Human Resources**

It is beyond any doubt that involvement and empowerment of local communities in forest management is a daydream if trained staff is not available. Furthermore, the realization of the vision of participatory approach requires well-equipped and trained staff so that local people can be easily and productively mobilized and organized. The forest staff in the field was very poor in terms of their capacities and capabilities. It was also found that most of the Divisional Forest Officers (DFOs) had only five to eight employees in their offices who were not only little in number but also unable to perform official duties and correspondence effectively. They were not fit even in the least degree to motivate, organize and involve the local masses to protect their natural reservoirs. For instance, a DFO in District Dir Upper held that he had limited staff in his office and the available staff had no know-how about the role and importance of involving local communities in the preservation of their forest resources. It may also be noted that the training opportunities were denied to both the newly appointed and already existing staff. Thus, in this backdrop, forests conservation could not be guaranteed. This has also been revealed by Okoye & Ezejiofor<sup>35</sup> in their study that organizations not focusing on the capacity building of their staff members, lag behind in the achievement of organizational goals. It is because training instills self-confidence in staff-members, which enable them to carry out their jobs enthusiastically and skillfully<sup>36</sup>. Majority of the Forest Department (FD) staff-members were of the view that community mobilization required well-equipped and trained personnel, who were unfortunately not available in the study area. Regrettably, in district Shangla, there was not a single male Community Development Officer (CDO) and Female Forest Extensionist (FFE). It is pertinent to note that their

duties were performed by non-specialist staff-members who had no training and skills in philosophy and methodology of participatory approach. As a result, the employees of Forest Department including some of the DFOs knew very little about participatory forest management. For instance, the DFO of district Shangla opined that he had no knowledge about the implementation of participatory approach and the existence of Joint Forest Management Committees (JFMCs) in his district. According to him, such an approach was under consideration and would be implemented very soon. Though it was implemented ten year before the fieldwork yet he had no knowledge of it. In fact, when the implementing department's officer is not aware about the implementation of participatory approach in the field then how can the theory and vision of participatory approach be translated into reality? Furthermore, it was found that district Swat had one CDO and one FFEs while district Chitral had two FFEs and no CDO. The remaining two districts i.e. Dir Upper and Shangla had no specialized staff for the implementation of participatory approach in forest management.

Although a number of studies validate that appropriate training of staff-members is the bedrock for the achievement of organizational objectives and success<sup>37,38</sup>, however, the reality in the Forest Department was altogether different. For instance, to train Forest Department staff-members and JFMCs members, a separate training section (Human Resource Development Directorate) was established, however, it was at a standstill due to inadequate human and financial resources.

It is arguably for the foregoing reasons that one of the members of the executive body of a JFMC (forest owner) in district Dir Upper explicitly stated that only local elites were called by the concerned DFOs to establish JFMCs while common people were not properly mobilized during the process. The local community, hence, often remained aloof and unaware of the existence of JFMCs in their respective localities. In this connection, an older resident of district Dir Upper remarked that forest staff never ever accessed the common people of the area to have consultation with them regarding forests preservations. It was only the influential cadre of the society who were taken into confidence. Further, the forest management staff contended that taking all segments of society on board was time consuming and might delay decisions making owing to the narrow self-interest of the divergent groups.

It may be noted that women have a key role to play in the participatory approach to ensure a better management of forest resources. However, due to lack of trained female members of staff



(FFEes); women's organization and mobilization was an uphill task because according to a Sub-Divisional Forest Officer (SDFO) of district Shangla people in the target areas were quite patriarchal. Thus, this coupled with lack of female staff-members and commitment on the part of the Forest Department were responsible for lack of women's representation and involvement in the form of JFMCs.

#### **4.2 Proper Service Structure and Incentives for Specialized Staff**

This is an overt fact that proper service structure is indispensable to improve the performance of an organization. Service structure makes the employees satisfied and committed to the cause of an organization. For instance, Yousef<sup>39</sup> argues that in Japan, where workforce has job security, employees are highly committed towards their duties and their performance is consistently optimal. Similarly, Gabcanova<sup>40</sup> acknowledges the role of trained, motivated and loyal staff for the success of an organization. In the case of Forest Department, however, it was found that Forest Department was not only under-staffed in terms of specialized personnel such as CDOs and FFEs but they were also denied proper service structure. For example, some of the CDOs and FFEs had been working as project employees for more than ten years, yet they got no regularization and promotion in the existing hierarchy of the organization. In such scenario, turnover tendencies were high among them and they were always in search of jobs where they could have a safer future. Such mindsets of the employees were manifested in their poor performance and less commitment with their duties. Moreover, considering the prevailing uncertain situation, many positions of the specialized staff were laying vacant since long. Considering the status quo in the study area, districts Swat and Chitral had one CDO and two FFEs respectively. However, the remaining two districts of Dir Upper and Shangla had no such staff. This lack of staff resulted in the disinterest of local communities in forest protection and conservation. In this regard, an acting CDO from district Chitral stated:

“we have no job security and incentives for our specialized employees like CDOs and FFEs. Therefore, these highly trained personnel give preference to other departments to make their future secure.”

It is also worth-mentioning that specialized staff, working in high forest covered districts, had no extra incentives/privileges. Therefore, they preferred posting or transferring to districts characterized by low or no forest cover. For instance, an Assistant Director of Malakand Division expressed that most of the CDOs and FFEs, in order to avoid

extra burden, tried their level best to be stationed in thinly-covered forest belts.

### 4.3 Inadequate Financial Resources

Financial resources are considered instrumental to materialize the objectives of an organization. The adequate financial resources, the better would be the result in terms of forest preservations and vice versa<sup>41</sup>. In the beginning, while introducing community/social forestry, forest sector projects were funded by donor agencies; and a reasonable budget was allocated for the implementation of these activities. After the completion of the project period and adoption by the government such projects had no sufficient financial allocation, and hence, suffered sustainably. Furthermore, to equip the field staff with proper resources/facilities demands for finance that translates theory into practices. Highlighting the inadequate resources an SDFO from district Chitral opined that the available female staff –members (FFE)s could not visit the far-flung areas due to lack of transportation as well as budget allocation for such activities. Hence, the meager financial resources were one of the big obstacles to mobilize and organize local women for forest protection.

Similarly, for arranging awareness sessions, trainings, seminars, workshops and capacity building programs for the Forest Department staff-members, JFMCs' members and general community needed financial resources but there was very little or no fund even for these direly needed activities in the study area. As a result, both the staff and the masses remained poorly trained which made the JFM approach just a daydream. One of the DFOs in district Dir Upper, for instance, complained:

“there is no budget allocation for arranging awareness sessions, seminars, workshops and trainings for staff members, JFMCs' members and general community. While such programs are not only required for the awareness and mobilization of local community but also essentials for the capacity building of the stakeholders”.

Other researchers also endorse the same. For example, Faizi<sup>42</sup> reveals that without proper mobilization, organization and capacity building of the local community, the involvement and empowerment of local people is an uphill task. It is pertinent to note that to ensure forest preservations, the members of JFMCs should be equipped with proper skills, like conflict resolution, record keeping and report writing, etc.

Provision and attainments of such skills also demand for handsome financial resources.

Moreover, under-budgeting resulted in formation of JFMCs characterized by the underrepresentation of the marginalized segments of society. Resultantly, JFMCs also had poor performance in the management of forest resources. It may be, therefore, said that handsome financial resources are needed to translate the vision of participatory approach into reality. However, the Forest Department got meager funds which were hardly enough for its routine business. Hence, the employees as well as local masses could not be upgraded according the modern-day-needs and to ensure the involvement of local poor people in the protection and conservation of forest resources.

#### **4.4 Bureaucratic Behavior of FD Staff**

The behavior of employees in an organization affects its activities and productivity. It was found that in the study area bureaucratic behavior of Forest Department staff retarded the implementation of participatory approach in forest management and failed to involve local communities in Joint Forest Management programs. The staff, which was trained and experienced in traditional top-down approach, had specialty to exclude local communities from forests, while participatory approach believes in the involvement and empowerment of local people in forest management<sup>43</sup>. In the absence of proper trainings for the employees of executing agencies, participatory approach failed even to change the outlook of the FD staff<sup>44</sup>. It was observed that due to lack of trained personnel, the implementation of participatory approach was assigned to other staff members Divisional Forest Officers, Sub-Divisional Forest Officers and Regional Forest Officers who had their training and experience in the implementation of top-down approach - which was bureaucratic in nature and totally based on the exclusion of local community. Therefore, they could not involve local people in Joint Forest Management according to its true spirit.

#### **4.5 Lack of Clear Rules and Regulations for the involvement and Empowerment of Local People**

It was observed that there were no proper rules and regulations/policy for the formation of JFMCs in the study area. It was not clear as to who would be given membership in executive body of JFMCs. Similarly, it was also unclear as to what will be the responsibility of chairman, secretary and finance secretary? In most case one person controlled all businesses of the organization. It was explained by a chairman in his interview in district Dir Upper that “our

forest has no financial value therefore no one is ready take any responsibility in JFMC". Similarly, it was found that there was no proper definition of empowerment. The local elites utilized forest resources to the extent they needed. There was no workable Joint Forest Management Plan for managing forest resources.

## **5. Conclusion**

Participatory approach has so many benefits, however, the literacy rate in the study area is very low. Hence, mobilization, organization and capacity building of local people is pre-requisite for their involvement and empowerment in forest mangement. Apart from socio-cultural constraints, Forest Department had no resources (human and financial) for such activities. Specialized personnel such CDOs and FFEs were not available in the study area, having the highest forest cover. The available specialized staff had no proper service structure and job security. There were no trainings for the staff-members, JFMCs member and community members. Therefore, participatory approach cannot be implemented until these organizational issues are resolved.

## References

- <sup>1</sup> Penderis, Sharon, "Theorizing participation: from tyranny to emancipation." *Journal of African & Asian Local Government Studies* 1, no. 3, (2012).
- <sup>2</sup> Khwaja, Asim Ijaz. "Is increasing community participation always a good thing?" *Journal of the european economic Association* 2, no. 2-3 (2004), 427-436.
- <sup>3</sup> Bwalya Umar, Bridget, and Paul Vedeld. "Joint Forest Management in Katanino, Zambia: Inappropriate Property Regime Change?" *The Open Forest Science Journal* 5, no. 1 (2012).
- <sup>4</sup> Bwalya, Bridget. "Katanino Joint Forest Management Area, Masaiti District, Zambia: Challenges and Opportunities.", (2007).
- <sup>5</sup> Makarabhirom, Pearmsak. "People's Participation in Forest Management in Thailand: Constraints and the Way Out." In *3rd IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region IGES, Forest Conservation Project*, vol. 9. 1999.
- <sup>6</sup> Duinker, Peter N. "Public participation's promising progress: advances in forest decision-making in Canada." *The Commonwealth Forestry Review*, (1998): 107-112.
- <sup>7</sup> McGurk, Brett C. "Public involvement in forest management and planning in Manitoba: The role of stakeholder advisory committees (SACs).", (2003).
- <sup>8</sup> Joshi, Anuradha. Rural Development Forestry Network, *Progressive bureaucracy: An oxymoron? The case of joint forest management in India.*, (Rural Development Forestry Network, Overseas Development Institute: 1999).
- <sup>9</sup> Berkes, Fikret, "Evolution of co-management: role of knowledge generation, bridging organizations and social learning.", *Journal of environmental management*, 90 (5), (2009), 1692-1702.
- <sup>10</sup> Kyem, Peter A. Kwaku, "Promoting local community participation in forest management through a PPGIS application in Southern Ghana.", *Community participation and geographic information systems*, (2002), 218-231.
- <sup>11</sup> Arora, Dolly, "From state regulation to people's participation: case of forest management in India." *Economic and Political Weekly*, (1994), 691-698.
- <sup>12</sup> Schaefer, R. T, "Sociology", (Chicago: Pearson Publications, 2010).
- <sup>13</sup> Brundtland, Gro Harlem, *Report of the World Commission on environment and development: "our common future"*, (United Nations, 1987).
- <sup>14</sup> Wirth, David A, "The Rio Declaration on Environment and Development: Two Steps Forward and One Back, or Vice Versa." *Ga. L. Rev*, 29, (1994), 599.
- <sup>15</sup> Daly, Herman E, "Toward some operational principles of sustainable development.", *Ecological economics*, 2 (1), (1990), 1-6.
- <sup>16</sup> Solow, Robert M, "Notes on social capital and economic performance." *Social capital: A multifaceted perspective*, 6 (10), (2000).
- <sup>17</sup> Lodhi, A. S, and Muhammad Abdul Majid Makki, "A Natural resource management framework for sustainable development, " *Pakistan Journal of Commerce and Social Sciences* 4(1), (2010), 56-68.
- <sup>18</sup> Ali, Johar, *A critique of participatory development in Pakistan*, (PhD diss., University of Hull, 2005), 21.

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- <sup>19</sup> Khan, R. A, and R. T. Mehmood, "Potential and prospects of mountain forests." *Mountains of Pakistan: Protection, Potential and Prospect*, (2003), 58-72.
- <sup>20</sup> Mehmood, Iqbal, "Deforestation in NWFP", *National Institute for Public Administration, Karachi (Pakistan). The J* 8, (2003), 75-101.
- <sup>21</sup> Qazi, I. A, "Pakistan: country and forests", *Handbook of Forestry*, (1994), 253.
- <sup>22</sup> FAO, *State of the world's forests – 2005*, (Food and Agricultural Organization (FAO), Rome, Italy, 2005).
- <sup>23</sup> Khan, Shaheen Rafi, Moeed Yusuf, and Riaz Ahmed, "Anatomy of a peoples' rights movement: a case study of the Sarhad Awami Forestry Ittehad (SAFI).", *Islamabad: SDPI* (2006).
- <sup>24</sup> Brandon, Carter, *Valuing environmental costs in Pakistan: the economy-wide impact of environmental degradation.*, World Bank, (1995).
- <sup>25</sup> Rogers, Peter P., Kazi F. Jalal, Bindu N. Lohani, Gene M. Owens, ChangChing Yu, Christian M. Dufournaud, and Bi Jun, "Measuring environmental quality in Asia.", *Measuring environmental quality in Asia*, (1997).
- <sup>26</sup> Government of Pakistan, *Economics Survey*. Ministry of Economic Affairs, (Govt. of Pakistan: Islamabad Pakistan, 2005).
- <sup>27</sup> Suleri, A. Q. "Regional study on forest policy and institutional reform.", *Final Report of the Pakistan Case Study*, (2002).
- <sup>28</sup> Ali, Tanvir, Munir Ahmad, Babar Shahbaz, and Abid Suleri. "Impact of participatory forest management on financial assets of rural communities in Northwest Pakistan.", *Ecological Economics*, 63(2-3), (2007), 588-593.
- <sup>29</sup> Khan, Shaheen Rafi, Moeed Yusuf, and Riaz Ahmed, "Anatomy of a peoples' rights movement: a case study of the Sarhad Awami Forestry Ittehad (SAFI).", *Islamabad: SDPI*, (2006).
- <sup>30</sup> Khan, Shaheen Rafi, Ali Shahrukh Pracha, and Nazima Shaheen, *The quest for sustainable forest management: exploring public-private partnerships in the forestry sector in Pakistan*, (Sustainable Development Policy Institute, 2007).
- <sup>31</sup> Creswell, John, "Mixed methods procedures." *Research design: Qualitative, quantitative, and mixed methods approaches*, 2, (2003).
- <sup>32</sup> Bett, Alice, "Role of community in the conservation of Mt. Kenya Biosphere Reserve.", (2005).
- <sup>33</sup> Faizi, S, "An institutional framework for community participation in protected area management." *Biodiversity*, 7(2), (2006), 16-20.
- <sup>34</sup> Bwalya Umar, Bridget, and Paul Vedeld. "Joint Forest Management in Katanino, Zambia: Inappropriate Property Regime Change?" *The Open Forest Science Journal* 5(1), (2012).
- <sup>35</sup> Okoye, P. V. C., and Raymond A. Ezejiofor. "The effect of human resources development on organizational productivity." *International Journal of Academic Research in Business and Social Sciences*, 3(10), (2013), 250.
- <sup>36</sup> Poffenberger, Mark, ed, *Communities and forest management: a report of the IUCN Working Group on Community Involvement in Forest Management with Recommendations to the Intergovernmental Panel on Forests.*, IUCN, (1996).

- 
- <sup>37</sup> Khan, Raja Abdul Ghafoor, Furqan Ahmad Khan, and Muhammad Aslam Khan, "Impact of training and development on organizational performance.", *Global Journal of Management and Business Research*, 11(7), (2011).
- <sup>38</sup> Falola, Hezekiah Olubusayo, Adewale Omotayo Osibanjo, and S. I. Ojo, "Effectiveness of Training and Development on Employees' performance and Organisation Competitiveness in The Nigerian Banking Industry.", *Bulletin of the Transilvania University of Brasov. Economic Sciences. Series, V* 7(1), (2014), 161.
- <sup>39</sup> Yousef, Darwish A, "Satisfaction with job security as a predictor of organizational commitment and job performance in a multicultural environment.", *International Journal of Manpower*, 19(3), (1998), 184-194.
- <sup>40</sup> Gabčánová, I. V. E. T. A, "The employees—the most important asset in the organizations." *Human Resources Management & Ergonomics*, 5(1), (2011), 30-33.
- <sup>41</sup> Kadam, Ravindranath N, "Financial Management for the Organizational success: Challenge before finance managers." *International Journal of Advanced Research in Management and Social Sciences*, 1(1), (2012), 128-134.
- <sup>42</sup> Faizi, S, "An institutional framework for community participation in protected area management.", *Biodiversity*, 7(2), (2006), 16-20
- <sup>43</sup> Kumar, Sushil, and Shashi Kant, "Bureaucracy and new management paradigms: modeling foresters' perceptions regarding community-based forest management in India," *Forest Policy and Economics*, 7(4), (2005), 651-669.
- <sup>44</sup> Nayak, Prateepk, "Community-based forest management in India: The significance of tenure.", *Forests, trees and livelihoods*, 13(2), (2003), 135-160.