Environmental Issues and Need of Sustainable Development in the Earthquake Affected Areas, State of Azad Jammu and Kashmir Pakistan

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The aim of this investigation is to provide an overview of qualitative study of the earthquake affected area toward identification of environmental issues and sustainable development. The results of these studies suggest that Environmental issues and Sustainable Development concepts have often been ignored in relief, rehabilitation and development activities in the earthquake affected areas state of Azad Jammu and Kashmir. This study contributes to our current knowledge of disaster relocation literature and sustainable development of community. Hopefully, the information that is provided here will help guide policy makers, practitioners, and researchers in their applied and academic work and further the understanding of the disaster relocation process and environmental management in future. This could lead to new guidelines for a post-disaster development process. In this regard, the current studies focus on the efforts, initiatives and gaps and furthers our understanding of the significant characteristics of the sense of community in the post earthquake development scenario in AJK, and investigates the methods to strengthen this particular area in the State (Cummings, 1999).

My study is based on a review of the literature of post earthquake development scenario in the State of Azad Jammu and Kashmir and my own personal perceptions. Local peoples are not so much aware of environmental issues and their sustainable development. “Well-managed ecosystems can mitigate the impact of natural hazards. In addition, productive ecosystems can support sustainable development and are important assets for communities in the aftermath of a disaster. For ecosystems to make these contributions, it is essential that they be factored into development efforts in the post-disaster response phase. Not taking care of critical ecosystems after a major disaster can cause significant economic and environmental losses, and impose hardships on already vulnerable communities”(Rieux, Masundire, Rizvi and Rietbergen,2006).

According to (Frazier,1997).“The fascinating two-word phrase, ‘sustainable development’, used in the World Conservation Strategy 1980, by the World Commission on Environment and Development and again in Caring for the Earth by

IUCN/UNDP/WWF 1991, was employed to express profound concern for both humanity and our environment. `Sustainable development' is not just fashionable, it has become institutionalized; and among the countless examples are numerous commissions and organizations which define policy for biological conservation, development, science, technology and society." The World Summit on Sustainable Development 2002 declared that "we the representatives of the peoples of the world, assembled at the World Summit on Sustainable Development in Johannesburg, South Africa, from 2 to 4 September 2002, reaffirm our commitment to sustainable development." At the Earth Summit on Environment and Environment at Rio de Janeiro 1992, the UN agreed that the concept of Sustainable Development is the global strategy for further human development (Steiner, Stark and Huttler, 2000). Kurvey (2003) states that "Developing countries should be concerned with the environmental issues because environmental problems are not exclusively the problems caused by industrialization and riches, but the environmental problems are very much caused by poverty. Environmental damage is not just a threat to national economic and to individual countries but has wider consequences."

Over the last two decades, disaster deaths per year have gone down by around 30%, whereas the number of people affected by disaster has gone up by 59%. World s` imbalance in sharing of resources drive them in the jaws of extreme disaster (Wisner, Walker, 2005). From 1973 to 1997, an average annual worldwide total of 84,034 individuals were killed by natural disaster, and an additional 143,864,855 were impacted in a significant way (International Federation of Red Cross and Red Crescent Societies. 1999). An estimated $500 billion were lost over the past two decades (Mileti 1999). According to (Rajvanshi, 2004), a change in mindset is necessary for sustainable development.

Pakistan is also supposed to be playing a very active role in the world s` Sustainable Development efforts. The Government of Pakistans` National Environment Policy also focuses on sustainable development (Government of Pakistan, 2005). Further, Pakistan has signed the International Convention on Biodiversity in 1992 and ratified it in 1994 (Butt, 2006). The Pakistan Environmental Protection Act 1997(PEPA)

must be enforced. One of the main responsibilities of the Pakistan Environmental Protection Agency is to create public awareness about environmental problems and issues. But, on the other hand, according to (World Bank-Pakistan), "Environmental degradation costs Pakistan at least 6% of GDP, or about Rs. 365 billion per year, and these costs fall disproportionately upon the poor." The level of compliance to environmental law in the country is extremely low (WWF-P, 2007). In Pakistan, only few petitions have been filed against the violation of environmental law and there is not any strong lobby which highlights the real environmental issues and convinces the Government to take action against these (Down to Earth, 2008).

The area of "Azad Jammu & Kashmir is fascinating land of people, languages & culture (AJK Govt, 2008)." Azad Jammu and Kashmir State cover 13,297 sq. km territory (AJK Government, 2004). An estimated 42.62% of the total geographical area of the state is occupied by forest cover and is a major source of revenue generation for the state government, contributing approximately 50% of the total revenue governmental receipts (Butt, 2006, Termizi and Rafique, 2001).

On October 8, 2005, parts of the Northern reaches of Pakistan were struck by the most devastating earthquake in recent history of the region. The earthquake, measuring 7.6 on the Richter scale, had its epicentre in the of district Muzaffarabad, AJK. The districts of Muzaffarabad Bagh, Neelum and Poonch in AJK were the worst hit areas (IUCN-P An Assessment of Environmental Risks and Needs, 2005). The estimated direct damages caused by the earthquake amounted to Rs. 135.1 billion (US$ 2.3billion) (UNDP, 2005). Natural resources are still under serious stress due to further reconstruction and the rehabilitation process. These activities put additional stress on the physical as well as biological environment in this disaster prone area (ERRA Environmental Strategy 2006). The fledgling capacity of the formal environmental conservation institutions responsible for impact assessment and monitoring has also come under tremendous pressure (ERRA-UN Early plan, 2006). Identified here are some of the following key environmental issues of the area (AJK Government, 2005, ERRA, 2005, IUCN-P An Assessment of Environmental Risks and Needs, 2005):

- Habitat loss and degradation.
- Biodiversity loss and migration of wildlife species.
- Flash floods and continued landslides/Soil erosion.
- Pressure on dwindling natural resources.
- Deforestation for fuel and construction/ Shelter purposes.
- Health hazard due to poor sanitation and inadequate waste/debris management practices.
- Increased transportation of construction material.
- Dumping of debris in dry water courses and on river/streams sides.
- Contamination of water.
- The damages due to heavy silt deposits in the river feeding to the mangla water reservoir.
- Psycho –social risk

ERRA (2006) has developed an environmental strategy 2006-2009 based on the damages assessed in sectors related to environment. The strategy is also based on ERRA's core principle "BUILD BACK BETTER" to address physical, biological and socio-economic environmental issues, but a biodiversity and environmental assessment post-EQ may not be very conclusive essentially due to limited previous baseline biodiversity data from the earthquake affected areas. Now WWF-P is keen to do work on a natural resource damage assessment in AJK (IUCN-P An assessment of Environmental Risks and Needs, 2005). There is a great need to assess in detail the damages caused by the earthquake on the environment, such as the impact on agriculture, pasture land; trees and forests; wetlands, springs and irrigation systems; water quality; ecosystems and biodiversity; protected areas, cultural heritage etc. (IUCN-P Preliminary assessment report, 2005).

In this area, environmental issues are dealt by only the social scientists, but according to (Dunlap and Catton, 1979), sociology has not responded readily to

environmental issues and threats. Generally, people are blind to environmental concepts and ecological constraints, so there is need of an ecological approach to deal with these issues. "Although one could argue that environmental issues might not be the main focus during a disaster, environmental concerns — along with poor governance of natural resources" (Rieux, Masundire, Rizvi and Rietbergen, 2006). There is a confusion of social, environmental, commercial, and political aims (WWF-P, 2007). A range of local, national and international actors were involved in disaster management and mitigation in the aftermath of the disaster whether they considered environment issues primarily in terms of managing and protecting ecosystems. Such issues included the contamination or sudden depletion of water resources, sewage and waste management (including the burying of bodies) and to debris removal. National NGOs and civil society organizations are seen as having a low level of awareness/understanding of environmental issues and a few major international NGOs were cited as having a very good level of awareness (Paristti, 2005). The leading state Environmental Protection Agency AJK-EPA was established in 1997 and also operates in the area to address environmental issues.

The following issues are also responsible in sustainable development activities in the area:

Issue of wilderness and the protection of landscapes:

Wilderness is important in providing undisturbed habitat for wildlife and plants.

Issue of Rarity:

This is an important criterion in both species and habitat conservation (Jarvis, 2000).

Issue of Displacement:

Where environmental constraints are predictable dispersal of animal species also becomes a predictable solution to avoiding such stress. Many animals travel great distances (Jarvis, 2000). Displacement of large numbers of poor people in a disaster can lead to new risks/load to fragile ecosystems (IUCN-P An Assessment of Environmental Risks and Needs, 2005, Winser and Walker, 2005, El-

Hinnawi, 1985, p4).

Issue of Gender:

Women have a large contribution to bring to disaster risk reduction and local resilience, but women's contributions are often ignored (Wisner, Walker, 2005). "Women are more vulnerable during disaster than men because they have less access to resources" (ERRA Livelihood and Rehabilitation strategy, 2006). During disaster women's sanitary needs were ignored. A lack of information and knowledge compounded the difficulties for women (Bukri, 2008).

Issues of accountability and transparency:

"Corruption levels in developing countries may play an important role in affecting the success of conservation projects" (Smith, 2003). Disaster mitigation is also impacted by power and the misuse of power. The misuse of power can be found in the ongoing environment in which disaster mitigation tries to gain a foothold, and in the effects that disaster and crisis have on opportunities for corruption (Wisner, Walker, 2005).

Issue of Ethnicity:

Variation occurs, due to differences in ethnicity, in disaster victims' ability to cope, recover and consider environmental issues (Bolin and Bolton 1986). (Aptekar 1990) argues that ethnic status contributed to victims' psychosocial reactions to disasters." Post-disaster recovery and reestablishment of a sense of community cohesiveness is more difficult for ethnic minorities because of pre-disaster under representation issues" (Garrison 1985).

Issue of Political bias:

Political bias by relief organizations usually translates to people with connections get help, whereas others do not. The social fabric in the areas is extremely complicated and delicate; relief organizations not able to see what are going on in the society (IUCN, 2005).

Major actors involved in Post Earthquake development activities in the area:
ERRA: Earthquake Reconstruction and Rehabilitation Authority(Pakistan) SERRA: State Earthquake Reconstruction and Rehabilitation Authority

EPA-JK: Environmental Protection Agency Azad Jammu and Kashmir
Forest Department Azad Jammu and Kashmir
Wildlife and Fisheries Azad Jammu and Kashmir
Agriculture Department Azad Jammu and Kashmir
Department of Planning and Department Azad Jammu and Kashmir
Social Welfare Department Azad Jammu and Kashmir
IUCN-P:
Asian Development Bank
World Bank:
United Nations System-Pakistan
U. S. Agency for International Development
CARE
ADPC-Habitat for Humanity:
IUCN,
GRID
DFID
Save the Children
UN-Habitat

In any overall conception of good management there will be many biological, social, economic and political issues to be considered (Sist, Fimbel, Sheil, Nasi, and Chevallier, 2003). Many developmental activities are not vulnerable communities-based and development projects should focus on qualitative and quantitative research methodologies to gather data from these vulnerable communities. Qualitative data sources include observation and participant observation, semi structured interviews, questionnaires and photographs. Written data sources include published and unpublished documents, company reports, memos, letter reports, email messages, faxes, newspaper articles and the researcher's impressions and reactions. Qualitative research methods are designed to help researchers to understand people and the social and cultural contexts within which they live and this can be positivist, interpretive, or critical. (Myers, 1997, Patton,1980). "Qualitative analysis encourages the researcher to view the research situation from the standpoint of the people who are being studied, from the folk or 'emic' point of view. Qualitative methods focus on the importance of the quality of the data in terms of meanings and interpretation" (Low, 1987). According to (Denzin, 1989), the qualitative method is useful when one looks into a problem deeply.

The Need for identification of the following Targets during Study and Development:

- Identification of Environmental problems in relation to broader biological and human interactions on the basis of sustainability.

- Recognition of key environmental issues and indication of gaps in current development activities.

- Environmental management and sustainable development approach and their impacts in the area.

- Ecosystem approach to development.

It is the best option to communicate directly with the affected peoples of the area. What do they think? What are their problems? How do they cope with these problems? What is their awareness level? Methods for collecting this diverse information can be divided into three main areas: interviews, observation, and informal/formal, observation/discussion with vulnerable communities and field officials. It is important to work closely with community of AJK during each phase of development and involve them in development and mitigation process. Based on these criteria it is very apparent to get information related to Environmental Issues and need of Sustainable Development in the earthquake affected areas.

Defining and indicating a problem are not as easy as one might initially suppose. Most of the words used in everyday language communicate unclear and unspecific meanings. In science, it is essential to specify exactly what we mean, and do not mean, by the terms we use (Babbie, 1998). Intensive semi structured and structured interview mechanisms follows a pre-planned outline of topics, which are asked in a reasonably consistent manner, relying primarily on open ended questions. One of the primary goals of intensive interviewing is to develop a comprehensive picture of the interviewees' attitudes /problems in his or her own terms (Schutt, 1996). The qualitative interviews engages the researcher more actively with select

residents; listening to lengthy explanations concerning the residents' definition of sense of community, asking follow-up questions tailored to the preceding answers, and seeking to learn (Butt, 2006**).** "Unspoken acknowledgement that the environment is too complex for humanity to address adequately in every sense" (Khalid, 2002).

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