DISASTER AND ENVIRONMENT

Disasters occur when hazards meet vulnerable situations. Natural hazards, such as fires, floods, earthquakes and drought, are part of the natural cycles of the earth. When such hazards impact on vulnerable societies – whether it is an earthquake that collapses buildings, or a drought that kills crops – that society may face a catastrophic situation requiring emergency relief and assistance to save lives and to protect the environment[1].

Natural disasters can have a life-altering impact on the individuals, families and society. But the effect of natural disasters can be felt at the community, city and state level, or many times can impact an entire country. How well the impact of a disaster event is absorbed has much to do with the intensity of the impact and the level of preparedness and resilience of the subject impacted. Just as a natural phenomenon can change the landscape of our personal lives as well as aspects of our community, so too can different types of disasters drastically alter the natural environment[2]. The impacts of disasters, whether natural or man-made, not only have human dimensions, but environmental ones as well. Environmental conditions may exacerbate the impact of a disaster, and vice versa, disasters have an impact on the environment. Deforestation, forest management practices, agriculture systems etc. can exacerbate the negative environmental impacts of a storm or typhoon, leading to landslides, flooding, silting and ground/surface water contamination.

Impacts of Disasters on Environment

Disasters are not random and do not occur by accident. They are the convergence of hazards and vulnerable conditions. Disasters not only reveal underlying social, economic, political and environmental problems, but unfortunately contribute to worsening them. Such events pose serious challenges to development, as they erode hard-earned gains in terms of political, social and educational progress, as well as infrastructure and technological development[5].

The impacts of disasters on environment and development are manifold. Disasters create substantial environmental degradation and ecological imbalance, hinder socioeconomic development and retard the process of improving the quality of life of the people. The interaction of disasters and environment has both short-term and long-term effects. These interaction and interdependencies work in a complicated way, affecting people, ecosystem and bio-diversity[3].

Environmental vulnerability

It includes the extent of natural resource depletion and data on resource degradation. Reduced access to clean air, safe water and sanitation and inappropriate forms of waste management, especially in heavily populated and urban environments, can aggravate socio economic vulnerability[4]. Poorer environmental conditions such as diminished biodiversity, soil degradation or growing food scarcity can easily threaten food security for people dependent on the products of land, forests, pastures and marine environment for their livelihoods. As natural resources become scarcer, the range of options available to communities become more limited, reducing the availability of coping solutions and reducing local resilience to hazards or capacity to recover from disasters. Over a period of time, environmental factors can further increase vulnerability by creating new and undesirable patterns of social discord, economic destitution and eventually forced migration of entire communities.

Environmental Management and Disaster Reduction[6]

Around the globe, land use and land cover changes are eroding the natural buffers that protect communities from hazard risk. These same changes often erode people's capacity to recover from disaster. Other environmental changes, such as anthropogenic global warming, promise to create new challenges to the security and sustainability of communities around the world. There are, however, opportunities to reduce disaster risk, and enhance community resilience.

Environmental conditions may exacerbate the impact of a disaster, and vice versa, disasters have an impact on the environment. Deforestation, forest management

practices, agriculture systems etc. can exacerbate the negative environmental impacts of a storm or typhoon, leading to landslides, flooding, silting and ground/surface water contamination - as illustrated by the 2004 hurricane and storm tragedies in Haiti, and in the Philippines.

Comprehensive understanding of natural systems coupled with the application of management tools such as environmental evaluation and risk assessment can make a major contribution to a reduction of risks and mitigation of any impacts. There is a need to highlight the role that comprehensive environmental management can play in reducing the risk of disasters, and to mitigate the consequences if they should nevertheless occur - both on human lives and on the broader ecology. We also need to explore the link between environmental systems and disasters, and also the synergies between man-made and natural disasters.

The increasing frequency and severity of man-made and natural disasters may well be changing the global environment. All of these threats to the environment have been apparent in recent disasters. Current response to disasters need to be based on the premise that disasters affect the environment when they have direct or indirect effects on ecology and human settlements that last far beyond the scope of immediate humanitarian response. Changing ecological conditions can provoke emergencies by placing concurrent stresses on the environment. Mitigating the effects of disasters are primary components in global efforts to ensure environmental security.

It is clear that further coordination and cooperation on environmental matters depends on the global community's ability to set an environmental agenda for disaster management, and in particular, to pay attention to the environmental conditions that lead to disasters, and to natural resource management for disaster prevention and reduction.

References

[1]http://www.pacificdisaster.net/pdnadmin/data/original/dmtp_16_disasters_environment_8.pdf
[2] http://www.saarc-sadkn.org/theme_env_disaster.aspx

[3] http://ns.bvs.hn/docum/crid/Nov-Dic2003/pdf/eng/doc5454/doc5454-a.pdf
[4] http://reliefweb.int/sites/reliefweb.int/files/resources/Full_Report_2993.pdf
[5] http://postconflict.unep.ch/publications/env_vulnerability.pdf
[6] http://www.gdrc.org/uem/disasters/disenvi/intro.html