

Environmental Problems: Causes and Solutions

- Editors -

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ROLE OF ENVIRONMENTAL EDUCATION, INEARTHQUAKE DISASTER MANAGEMENT IN MAHARASHTRA;A DATA BASED STUDY

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Abstract:- Maharashtra is prone to various disasters such as drought, floods, cyclones, earthquake and accidents etc. While low rainfall areas of the state are under the constant risk of droughts, high rainfall zones of eastern and western Maharashtra are prone to flash floods and landslides. To cope-up with such disasters, our education system can play a vital role in making the students mentally prepared and trained to such natural disasters. It can be done through N.S.S. ,N.C.C and Scout Guide and other such activity which can do the capacity building given in 2005 Act. Environmental education is now being witnessed as an apparatus and a process that permits involvement and learning by people of all age, require two-way communication instead of the old standard of a one-way flow of records, from teachers to pupils. The content and substance of environmental education is also undergoing review and change. Reorienting education as a tool towards

sustainable development. Students are the Keys of future they can be designated according to the future disasters and their management.

Key words:-Earthquake,Disasters, Disaster management education ,Database,

1] Introduction - The Environmental Education Act of 1970 (P.L. 91-516) established an Office of Environmental Education within the Department of Health, Education, and Welfare to award grants for developing environmental curricula and training teachers. According to this act it is the prime duty of educational system to develop Environment protection and awareness based curricula for students and training programs for teachers.

Education and training is an integral a part of capacity building within the disaster management discipline as trained personnel respond far better to different disasters and can take proactive measures of mitigation and prevention (IDKN, 2009) ,India Disaster Knowledge Network (IDKN) is a a web portal, that gives a broad array of resources and services, like knowledge collaboration, networking, maps, emergency contact data system and a number of other other valuable information associated with natural disasters

India is susceptible to number of natural and man-made disasters.58.6 per cent of the landmass is susceptible to earthquakes, 12% of land is susceptible to floods and river erosion; of the 7,516 km long coastline, on the edge of 5,700 km is susceptible to cyclones and tsunamis; 68 per cent of the cultivable area is susceptible to drought and hilly areas are in danger from landslides and avalanches. Helplessness to disasters/ emergencies like Chemical, Biological, Nuclear

origin also exists. Heightened vulnerabilities to disaster risks are often associated with expanding population, terrorism, urbanization and industrialization, development within high-risk zones, environmental degradation and global climate change to making sure clarity about roles and responsibilities of the State, District and native authorities.

Disaster is an occasion or series of events, which provides rise to casualties and damage or loss of properties, infrastructures, environment, essential services or means of livelihood on such a scale which is beyond the traditional capacity of the affected community to deal with. Disaster is additionally sometimes described as a catastrophic situation during which the traditional pattern of life or ecosystem has been disrupted and extraordinary emergency interventions are required to save lots of and preserve lives and or the environment”.

Disaster management is that the discipline of handling and avoiding both natural and manmade disasters. It involves preparedness, response and recovery so as to reduce the impact of disasters. All aspects of emergency management deal with the processes went to protect populations or organizations from the results of disasters, wars and acts of terrorism. Disaster management doesn't necessarily avert or eliminate the threats themselves, although the study and prediction of the threats is a crucial a part of the sector. The basic levels of emergency management are the varied kinds of search and rescue activity. Broadly disasters can broadly be divided in to five types

1] Natural disasters :- Floods, earthquake, tsunamis and typhoons etc.

2] Environmental Emergencies :- Industrial accidents or large forest fires etc.

3] Man-made Disaster:- Disasters caused by chemical or industrial accidents.

4] Pandemic Emergencies:- These emergencies involve a sudden onset of a contagious disease like Plague, Spanish flue, Haiza, Corona etc.

5] Complex Emergencies:- Complex emergencies include conflict situations and war.

Disaster management as a subject in social sciences has been introduced in the school curricula for Class VIII, IX, and X by the Ministry of Human Resources Development (HRD), through the Central Board of Secondary Education (CBSE) for empowering the younger generation from the disaster preventive aspects. This is done in accordance with Disaster management act 2005. The same thing should be followed by all states and even the state boards also. The management of disasters comes under Home affairs Ministry.

2] Earthquake

An earthquake (also known as a quake, tremor or temblor) is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves.

Earthquakes in Maharashtra are showing major alignment along the West Coast and Western Ghats region. Seismic activity are often seen near Ratnagiri, along the western coast, Koyna Nagar, Batas and Surry areas of Thane district. The striking characteristic of this narrow region is its

alignment with the recent spring belt. The off-coast activities are related to submerged faults along the West Coast of Maharashtra. In north Maharashtra, the seismic activities near Dhule, Akola, Jalgaon and Amravati might be thanks to movements on the faults present within the area related to the complex system of Narmada, Tapi and Purna. In north-east corner of Maharashtra, the earthquake activities in Nagpur and Bhandara districts could also be related to Deolapar thrust or sheared and faulted zones of Ramtek and Sakoli Basins.

Table. 1: Natural Disasters in Maharashtra during 1990-2005

Sr. No.	Type of Disaster (Year)	Location/ Area	Affected Population (in million)	Loss of Human Lives (No.)	Loss of Crops and Public Property (Rs. Billion)
1	Earthquake (30 Sep, 1993)	Marathwada in Maharashtra, Karnataka and Andhra Pradesh	0.20	7611	3.10
2	flood (July 2005)	Maharashtra (Konkan Region)	---	900	----

Inaccessible activities are experienced near Beed, Nanded, Ujjani and Solapur in eastern Maharashtra. These activities could also be thanks to movements on local faults within the basement. Seismicity is additionally seen near Bhatsanagar and Suryanagar.

Recently, isolated activities also occurred in Latur, Dharashiv districts in southeast Maharashtra.

National Center for Seismology (NCS) is the nodal agency of the Government of India for monitoring of earthquake activity in the country. NCS maintains National Seismological Network of 115 stations each having state of art equipment and spreading all across the country. NCS monitors earthquake activity all across the country through its 24x7. With this we have State Seismology dept guiding to Collector of every districts.

The steps to be taken by the citizens of India are given by Govt. of India are as below:-

Source: CSO (1997) and NIUA (2000), Indiastat 2005

In the above given two incidents of earthquakes in Maharashtra 7611 and flood calamities 900= 8511 Citizens'. lost their lives .

4] Enrollment of preventive measures and disaster management in school education

To prevent such earthquakes is not in ones hand but the precautions can be taken they are in ours hand. We can teach the students regarding the precautions required from student hood to prevent the loss of lifes. Some important precautions are given by Govt. of India Seismology dept. Such preventive steps must be enrolled in Primary school syllabus in India. This will be useful to reduce the calamities and loss of resources. Some important preventive measures for earthquake which are enlisted by our seismology dept. are, before earthquake, during the earthquake

and after the earthquake which are given on website <https://seismo.gov.in>. These given precautions must be enrolled in syllabus of primary school so the students will be well trained. Other many advanced techniques can be used alarming systems will be useful also.

Role of Environmental Education

1] The Ministry of Environment and Forests launched the Environment Education, Awareness and Training Scheme in 1983-84 to reinforce people's understanding regarding the human- environment relationship and to reinforce skills and capabilities to guard the environment and improve it.

2] Environmental education may be a process that permits individuals to explore environmental issues, engage in problem solving, and take action to enhance the environment.

3] As a result, individuals develop a deeper understanding of environmental issues and have the talents to form informed and responsible decisions

4] Disaster management comes under Ministry of Human Resources Development (HRD), under this there is National Disaster Management Authority, abbreviated as NDMA, is an apex Body of Government of India, with a mandate to lay down policies for disaster management formed in 30 May 2005.

5] Other agencies are as State Disaster Management Authority (SDMA) At the State level, the SDMA, headed by the Chief Minister, and there is a District Disaster Management Authority (DDMA) The DDMA will be headed by the District Collector, Deputy Commissioner etc.

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