

ROLE OF NGOS FOR PROMOTION OF DISASTER MANAGEMENT EDUCATION IN KASHMIR

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Abstract:

Due to centuries-long natural and man-made calamities, Kashmir is largely unknown for the hazards it poses. People both within and outside the valley talk frequently about its scenic beauty but are not rightly aware of its horrifying disaster profile, and the big losses. As such adequate awareness on disaster is one of the prime fields of education. Though Govt. has the responsibility to take care of the disaster threats but it has many limitations therefore given the huge threats the work of Govt. needs to be supplemented. This paper aims at exploring the role of NGOs to optimize the efforts to educate the common masses to face disasters systematically to promote a disaster resilient society and to reduce losses on account of disasters. Like other states in India, Kashmir also is developing a new culture of NGOs to supplement Government efforts in different fields. NGOs have a wide reach & faster response to situations because of many factors and so can be very effective to sensitize the issues of disaster management and educate & prepare the common folk to handle the situations betterly, hence it is a topic of essential reference.

Keywords: *Disasters, Threats, Accident Prevention, Environmental Management, Kashmir.*

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Introduction:

Jammu & Kashmir has a horrifying hazard profile. The two main natural agents of destruction are earthquakes and floods which have been striking Kashmir frequently from long times. Other agents of disaster include:- Avalanches, Snow Blizzards, Landslides, Draughts, Wind storms, wild Fires and Cloud bursts **Shah, et.al (2016)**. Aside from natural catastrophes, there have been several man-made disasters in Kashmir, such as the spread of cancer, lengthy civil unrest, and contagious diseases such as Covid 19, which have resulted in significant destruction of both material goods and lives. Thus, the valley is a region that is prone to multiple disasters. The above threats have been having huge adverse impacts /effects on the life & property of the valley from the times of known history. So, even though it is a paradise of the subcontinent but at the same time it is also the valley of sorrows. As an essential requirement to mitigate the disaster losses in future, role of NGOs is indispensable. It is in this context that we specifically aim to attempt a brief review of the few agencies of disaster and the supplementary role of NGOs in mitigating the losses.

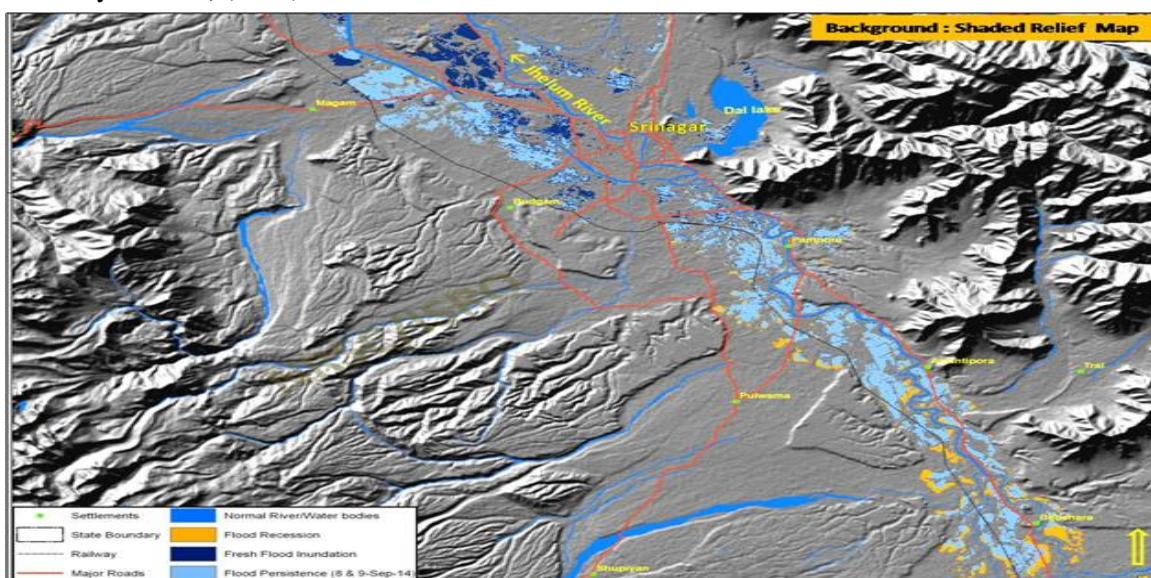
Methodology: In the current study, we compiled data from several non-governmental organizations (NGOs) trying to promote Disaster Management Education in Kashmir. Literature from Google Scholar and other databases, in addition to pertinent books and periodicals, were reviewed. Thus with the help of secondary data the topic under reference was evaluated and conclusions were drawn.

Some of the Main agents of disaster in Kashmir:

Floods in Kashmir:

Because of the bowl shape of the valley and the short course of the main river Jhelum and its tributaries, as well as heavy rainy seasons often during late summers saturating their carrying capacity, Kashmir has been facing the wrath of floods in its densely populated low-lying areas (notably in Srinagar, Awantipora, and Sonawari), While the higher catchments of all Jhelum streams have historically been prone to flash floods.

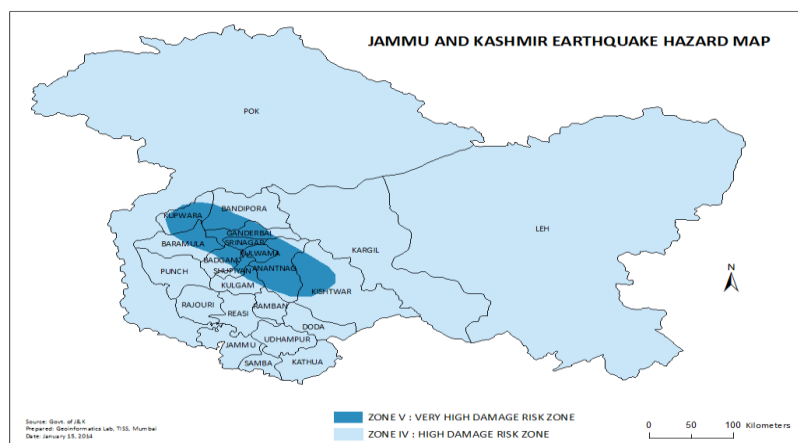
We have recently referenced a huge flood in 1841, which, according to Lawrence (1895), caused significant damage to life and property in the Valley. Another terrible flood, according to Lawrence, happened in 1893, when constant rainfall for 52 hours produced a major catastrophe. Ten years later in 1903 Kashmir suffered another flood which converted whole of Srinagar into a lake. This flood was deemed the greatest ever recorded. The valley experienced no big floods over the next quarter of a century, owing primarily to lessons learned from earlier disasters and preventative measures implemented by the then-governing bodies. Another huge flood devastated the valley in 1929, destroying much of Kashmir's bottom half. Soon after Indian partition, in 1950, Kashmir had a terrible flood that killed almost 100 people and caused massive property damage. Another big flood occurred in the region from August to September 1957, engulfing practically the whole valley. The then PM of the State, was quoted, saying “the floods recorded in J&k were the highest ever recorded in the state and the damage caused by them was colossal.” A second "Glacial" flood struck the state two years later in July 1959. This one was possibly the worst to ever occur at the time, as four days of nonstop rainstorms pounded the Jhelum and the valley, causing flooding in Srinagar. Flood scale was massive causing 289 deaths, injuring 403 persons and killing more than 90,000 live-stock **Malik (2014)**. Although the state had floods in the ensuing three decades, the 1992 storm was unparalleled in its ferocity. With nearly 200 fatalities from the most destructive floods since 1959, the year 1992 had the greatest rainfall on record **Amir(2023)** . (Map Showing the Inundation patterns in Kashmir valley **Ahmad, (2016)**).



The threat viewpoint of future floods: Over the past few decades, the Jhelum basin's flood susceptibility has gotten worse as a result of the urbanization and concrete landscape development of the majority of the wetlands in the low-lying sections of the Kashmir valley. During floods, the wetlands would behave as a sponge. The last remaining wetlands and aquatic environments are struggling to survive. Due to their invasion and seasonal variations in precipitation and runoff attributable to climate change, wetlands, which have significant links with the hydrological cycle, have seen a decline in their functionality. Over the past fifty years, urban colonies have destroyed seventeen of the twenty wetlands in and surrounding Srinagar, especially in the southern section of the city **Andharia, (2020)**. No alternatives have been developed to serve as sponges during the emergencies. Given these limitations valley is prone to severe floods in future as well. A glaring example of the new scenario is the recent destructive flood occurred in Sep 2014, inundating all of the low-lying areas of Kashmir for almost a month, killing more than 460 persons and devastating 2600 villages, resulting in property loss of thousands of crores **Nadaf, (2020)**.

Earthquakes in Kashmir: Kashmir Valley, located between the Great Himalayan Range to the north-northeast and the Pir-Panjal Range to the south-southwest, falls in high seismic zone iv-v and above, with the majority of its areas very susceptible to severe earthquakes. Like many other disasters this threat is also very common here. Earthquakes occur here due the continuous movement of tectonic plates. and also due to Himalayas being the youngest mountain chain. The Indian Meteorological Department (IMD) created the Seismic-Zonation Map of India, which divides the country into four Seismic Zones: Zone II, III, IV, and V. Zone V is the most seismically active, whereas Zone II is the least. Seismic Zone-IV is roughly linked with seismic intensity VIII on the Modified Mercalli Intensity (MMI) scale, which corresponds to a horizontal ground acceleration range of 51-350 cm/sec², or an average acceleration of 172 cm/sec² in any direction. Seismic Zone-V is usually related with seismic intensity IX and higher. **(Shazan)**.

The majority of Kashmir V (11% of the state's area) is covered by Seismic Zone V, which includes the districts of Srinagar, Ganderbal, Baramulla, Kupwara, Bandipora, Budgam, Anantnag, and Pulwama, as well as parts of Jammu division such as Doda, Ramban, and Kishtwar, where approximately 50% of the state's population lives.



A historical description Earthquakes in Kashmir:

Earthquakes have a dreadful past in the Kashmir valley. In the past, the valley's property and lives have suffered significant harm from earthquakes (Bilham et al. 2010). Some of the events of recent past earthquakes with severe magnitude (Wang, 2016) :

4th April 1905 Mw 8.0;

22nd June 1945 Mw 6.5

2nd September 1963 Mw 5.3;

20th February 1967 Mw 5.5

3rd September 1972 Mw 6.2;

16th January 1973 Mw 6.5

23rd August 1980 Mw 5.4;

8th October 2005 Mw 7.6

Future Threats:

Given its very adverse geographical location falling under seismic zone V, the experts are projecting huge catastrophic seismic events in the immediate future, in Kashmir. How devastating the earthquakes in future, in the valley, may be, can be visualised from the losses of the previous earthquakes and the proneness to the earthquakes. One of such events of recent reference is earthquake of 2005 with 7.6 magnitude, also felt in the adjacent states as well as the adjacent countries, which destroyed northern portion of the valley causing deaths of about 80,000 people and loss of thousands of crores rupees (Rossetto, 2009).

a. New dimensions of disaster management in the valley. The scientific advancement has enhanced the pace of economic development all over the world but in a bid to improve the economic standard the humans all over the globe, have ignored the social & environmental considerations exposing the green planet to many sever dangers. Besides the sever natural hazards there have been some man-made disasters which have also crept-in and wrought havoc in the Valley specifically from the last over two decade. Some of the severely affected areas of concern in Kashmir are:-

b. Significant alteration in the land cover and land use. Within the Himalayan (Abode of snow) mountain region having adequate snow reserves and the well laid out natural drainage system, Kashmir has been land of bewitching natural beauty with exotic fauna and flora.

Spatial Distribution of Major LULC categories In J&K (Hussain, 2018).

Category	Area Sq. Km	%
1. Built Up	545	5.3
2. Agri Land	965	9.5
3. Forest	19938	19.98
4. Grass lands	476	00.45
5. Wastelands	53054	52.00
6. Water bodies & wet Lands	1773	1.75

7. Snow Glaciers 15939. 15.73
8. The valley of Kashmir besides an exotic forest cover of above 8000 sq kms, has a land mass of another 8000 square Kilometers. This had facilitated into an elegant agricultural which kept the valley self-sufficient in food and fodder till recent past. Nonetheless, the land cover and use of the area have drastically changed (LULC). Because LULC changes are primarily unplanned in the developing world and show up as environmental and ecological degradation, water scarcity, and worsening global food security, they have become one of the most urgent issues the world is currently experiencing. The previous several decades have experienced LULC changes of this kind throughout the Himalayan region, making the land here less productive or unproductive. This is extremely concerning for the region's sustainable development. (Rashid, 2020).

Throughout the 27-year study period, agriculture has lost 278 km² (–5%) of its total area, accounting for the largest share (19.80%). In contrast, horticulture, a human-induced land use class, has experienced a sharp increase, rising from 176 km² (3.2%) in 1990 to 409 km² (7.49%) in 2017, indicating an addition of 233 km² to its land area. From 133 km² in 1990 to 208 km² in 2002 and then to 313 km² in 2017, the built-up class, which includes residential and commercial subclasses, has likewise seen an increase in area. Natural land cover categories like barren/rocky, sparse/scrub, and moderately dense forest have increased slightly as a result of minor changes in the dense forest cover, which increased from 834 km² in 1990 to 780 km² in 2017. These categories had previously shown positive change, increasing by 52 km², 26 km², and 11 km², respectively. Plantation area decreased significantly during the research period, from 438 km² in 1990 to 301 km² in 2017 (Siddique, 2007).

Water bodies exhausted: Due to population explosion & change in the living pattern by shifting to modern style of living, constructing horizontal instead of vertical residential houses with more floor area as against joint family set up living in houses/shared basis, a big portion of the agriculture land besides land under social forestry cover areas has got occupied under residential segment. Out of 20 water bodies/ marshy lands, 17 have got used for the residential purpose, leaving little capacity for the excess water during summer period, to get accommodated. Thus there has been considerable change in land use land cover which has been impacting adversely our eco –system besides causing ecological degradation.

- c. Excessive use of Chemicals (Fertilizers& pesticides), (Huge Losses and little Gains). Drastic change in Agriculture production sector.

Kashmir has been known for fruits, and flowers, from centuries and has rightly been referred as the ‘fruit bowl’ of the sub-continent.

From 1950s a gradual shift was introduced for promoting cash crops to boost J&K economy. Horticulture sector received a priority for Kashmir and as a result there has been almost over four- fold increase in the horticulture cover here. The foundation of the economy of J&K is the horticultural sector. Both the UT economy and J&K's economic development greatly benefit from horticulture. Around 33 lakh people in Jammu and Kashmir depend on horticulture as their primary source of income, while seven lakh households

either directly or indirectly work in or are dependent on the industry. Horticulture contributes significantly to SGDP, accounting for roughly 9.5%.The growth graph of the horticulture business in Jammu and Kashmir has showed a huge jump, with 10,000 metric tones of output in 1950 to 25,000 metric tones of production in 2020, with an approximate turnover of Rs.8000 crore (Bhatt, et.al... 2017).

Apple and walnut exports have been designated as coming from the Jammu and Kashmir Union Territory (UT). J&K produces 90% of the nation's dry fruit and 70% of its apples. At the moment, horticulture occupies 332704 hectares in Jammu and Kashmir, with 118542 hectares in the Jammu region and 214162 hectares in Kashmir. Just apple farming occupies 164141 hectares of this total. In a bid to get quality fruit, the growers are using excessive pesticides in their orchards. The list of pesticides mainly include fungicides, herbicides, and insecticides. In reference to Kashmir, Dr. Nazir V. C. SKAUST revealed in a recent seminar with the house that more than 90% of the 4080 MT of pesticides used in apples are used only for disease and pest management.

India consumes 1% of the world's production of pesticides. As can be seen from the following facts, J&K ranks fourth in the nation for overall pesticide consumption, has the greatest pesticide consumption per hectare, and spends five fifths of its production costs on crop protection, all of which contribute to the region's growing demand for the hated chemicals as can be viewed from the following figures.

Quantum of Annual Fruit protection Chemicals used in Kashmir

		Quantity: MT Tech. Grade					
Year		2017-18	2018-19	2019-20	2020-21	2021-22	
33	Jammu& Kashmir	2430	2459	2198	3352 4080 !	!	4086

Directorate of plant protection and Farmers welfare:

Ministry of Agriculture GOI has stated that, Orchardists usually apply 20 to 30 kg of insecticides per hectare in an apple orchard. Our goal is to use only two or three kg of it. In Europe, where apples are produced in large quantities, this is not the case; in Kashmir, pesticides make up 55% of manufacturing costs. (Dar, et.al.. 2022). The quantity of pesticides used has increased more than ten fold over last 50 years when the production increased just four fold while overall quality of the fruit has deteriorated.

Adverse effects of excessive use :

Overuse of pesticides has been a major threat to the environment and ecosystem in recent decades. It has catastrophically contaminated every element of our ecosystem, including soil and water bodies, and it has also raised concerns for human health. Due to the overuse of pesticides, there are almost 26 million poisoning

cases worldwide each year. Of these, only three million are hospitalized, two million result in deaths, and roughly seven million involve chronic illnesses. In India, nearly 20,000 persons perished from pesticide self-poisoning in 2015–16. Since 1981, there has been a gradual increase in suicide deaths, which slightly decreased in 2001 as a result of the nation's general high rate of pesticide suicide. The usage of excessive pesticides has reached a point where it is negatively affecting medical costs and maintaining stagnating productivity and well-being in humans. Farmers that lack knowledge and expertise use pesticides carelessly, disregarding scientific advice. The substandard quality of the pesticides they employ makes them extremely risky, and roughly one-third of the pesticides they use are bogus or substandard. There are several negative environmental effects associated with using these insecticides. Economic evaluations of products typically do not include the invisible costs associated with pesticides.(Bhat, et.al..2020).

D. Cancer cases show alarming rise in Kashmir, a serious benign threat. Particularly deadly in J&K, this multi-headed sickness is a global issue. In only the previous four years, Jammu & Kashmir has reported over 5,000 instances of cancer. There were 12675 of such that were recorded in 2019, 13012 in 2020, 13354 in 2021, and 13395 in 2022. (Kaur, et.al..2023).

The ageing population, sedentary lifestyles, tobacco product usage, poor diets, and air pollution are among the risk factors for cancer, which is a multifaceted disease. The ministry notes that it is not available how many cancer cases are attributable to industrial and water contamination.

In terms of males, colon cancer (16.4%) and lung cancer (13.2%) were the most frequently reported cancers, with stomach cancer accounting for 25.2% of cases. In terms of frequency, the most common cancers reported by females were colon cancer (16.8%), breast cancer (16.1%), and stomach cancer (10.4%). Almost three-fourths of cancers in men and more than half of malignancies in women were caused by tobacco use.

In Kashmir, the number of cancer cases has increased significantly, according to the doctors at SKIMS' Radiation Oncology department. They note that while lung cancer is the most common type in men, breast cancer is rapidly becoming more common in women. The institute's physicians referred to the rising cancer rate as a "cause of great concern." (Wani, et.al..2019)."

Pesticides linked to brain cancer in Kashmiri orchard farmers

Every year, orchard farmers use millions of tons of pesticides, insecticides, and fungicides (such as mancozeb, chlorpyrifos, captan, dimethoate, phosalone, etc.) to treat the plants, fruits, and foliage. It is concerning that Kashmiri orchard producers are experiencing an increased trend in the occurrence of primary malignant brain tumors.

According to analysis, 90.04% (389 out of 432) of the patients were people who worked on orchard farms, lived there, or had children who played in orchards and were exposed to high concentrations of several neurotoxic and carcinogenic chemicals for more than ten to twenty years. Serum cholinesterase (SCE) levels were greater (<6334 U/l) in approximately 31.9% (124 out of 389) of these from both sexes who were less than 40 years old and had early onset exposure. Pesticide exposure did not affect the 9.96% of patients (43 out of 432). However, only 119 patients out of 457 controls had a history of pesticide exposure, while 338

had no connection to pesticides. Out of 389 patients, 28.3% (110 out of 389) included 7 members of 3 families, and 71.7% (279 out of 389) were males.

All 389 patients with malignancies associated to orchards had higher grade tumors than those without pesticide-related tumors. In tumors exposed to pesticides, the death rate was 12%. Of the 389 patients, 31.9% had higher SCE levels (124 out of 389), whereas only 45.3% had lower levels (176 out of 389) in relation to orchards. There appears to be a connection between pesticides and brain cancer, as evidenced by the significant case/control odds ratio (OR) of 0.28, hospital control SCE OR of 1.1, and family control SCE OR of 1.5. (Bhat, et.al..2010).

Thus growing trends in cancer in valley with no specific treatment should be a matter of wider concern.

Growing rise in drug addiction:

Till very recent past, drug addiction was an unknown issue in Kashmir. There was a small segment of the society which was addicted to liquor or hashish (Charas) and such minute section was highly deplored segment looked down upon by the society as outcasts. As a consequence of the prolonged civil strife which began in 1990s started to generate many social and economic problems for the Kashmir society including disturbance in educational pursuits, unemployment of the youngsters, health issues besides disturbing of ethical & morale values of the society. By the turn of 20th century serious reports began to emerge about the growing trend of drug addiction in the valley which by 2020s have become alarming.

The administration of Jammu and Kashmir had previously stated that at least 6 lakh people in the area suffered from drug addiction(Ray,et.al..2013). Authorities have noted that J-K is close to the "Golden Crescent," a moniker given to the opium-producing nations of South Asia, including Afghanistan, Iran, and Pakistan. Eighty percent of the world's opium was created by drugs from the "Golden Crescent," which was also thought to be the main supplier for the black market.

The spiral nature of the issue is attested to by the patient-intake records at the upscale rehabilitation center, the Institute of Mental Health and Neurosciences (IMHANS) Srinagar. In 2016, there were 489 drug abusers who reported to the institution; by 2019, that number had skyrocketed to 7,420. It fell to 3,536 in 2020, but the COVID-19 lockout is to blame for that. The issue is made more serious by the fact that 90% of drug users are between the ages of 17 and 33.

In a recent brief in the Parliament the Union minister for Social Justice has stated that as per official figure 9 lakh persons (both male & female) in J&K are drug addicts, 1.44 khs using cannabis, 5.34 lakhs using opioid and 1.6 lakhs using sedatives. Govt Medical College Srinagar Psychiatry Department has revealed that Kashmir has surpassed Punjab in drug addiction. Thus Kashmir has turned into a drug hub(Sondhi,2023).

Issues of grave concern and matters of detailed research:

With ushering into a new era of socio-economic development anew culture has emerged in Kashmir but in a bid to achieve better standards of life a race is on in the society at the cost of community considerations. This is more serious in the rural areas where society is excessively dependent on agricultural activities and poorly educated. The Govt approach on educating issues like disasters has very limited channels to sneak into Kashmir society

effectively. It is why that there is very low level of awareness in Kashmir while they bear high costs and run huge risks in the areas of disaster education/management.

Role of Education:

Educating of masses under the new life styles.

The new life-style which has emerged in the valley is not limited to Urban or sub-urban parts of Kashmir only. In its effort to maintain new life style the rural folk which is not adequately educated resulting in compromises on the vital aspects of prevention, protection and safety standards. Therefore there is an urgent need to aware and educate the masses about the threats and prospective on disaster management. Informal education option as supplement to formal education will prove to be a very useful tool in this regard,. Of the various approaches of modern education Albert Bandura's social learning Theory now referred as Social Cognitive approaches of modern education is relevant to all segments of education and very helpful , particularly relevant to adult learners to mend the persons , environment and Behavior **Grusec (1994)**. Thus through the Social learning theory we can incorporate some of the tacit tenets of peer pressure to achieve the targeted objectives through the NGO route. Some organizations are collaborative for academics and learning, which are being used for effective education.

One of the recent blessings in the social set up development has been emergence of NGOs culture. These NGOs supplement the state activities where ever required. Non-governmental organizations (NGOs) are voluntary, nonprofit, and free from government interference. They work on a range of social and developmental issues.

The NGOs' function in DMEs. : NGOs have a not only an important role but also an effective position in imparting of education on disaster management to promote a resilient society. They can take these challenges efficiently with their adequate human resources despite their financial resources Constraints. Perceiving the threats In light of scientific developments, and dispelling the traditional thinking and practices. The role of NGOs can be described systematically under two segments. Prior to occurrence of a disaster and during the disaster.

Before a catastrophe happens:

1. By supporting laws and procedures that help underprivileged populations, NGOs also significantly contribute to the process of change. When tackling difficult problems that call for cooperation, they frequently collaborate with other businesses, including governmental institutions. This is an essential role of educating people at large making them aware of threats and preparing to face threats as and when they occur. This is called promoting a resilient society.

- a. Pre-disaster activities should include education, training, raising awareness, and creating a Task Force at the local level. Disaster Management Plans, Mock Drills, Vulnerability Assessments, Committees and Teams for Disaster Management, and Cooperation with Non-Governmental and Governmental Organizations
- b. After the occurrence of disaster:- Besides the above state activities, one of the important role of NGOs is to assess the impact of the disasters, prepare reports on adequacy of the preparations and find the weak areas which can be improved upon in future. The role also includes to help Govt. to carry forward the rehabilitation , compensation & recovery programmes of the affected people efficiently. As a result, they

are crucial in the immediate aftermath of disasters, helping with damage assessment, rescue and first aid, sanitation and hygiene, and supporting outside organizations who deliver relief goods.

2. During a disaster:

NGOs' capacity to operate at the local level, establish direct connections with communities, incur minimal costs, and produce positive outcomes is one of their main advantages. As a result, they can better comprehend the problems that people face and customize their services to fit the unique requirements of each community.

During a disaster, the NGOs' job is to encourage prompt action and do their best, given the limited resources available, to save as many lives as they can. The coordination, response, mitigation, reduction, and recovery from disasters are all greatly aided by NGOs.

The NGO response included trauma treatment, family raising, debris removal and habitat restoration, emergency food relief, temporary housing, and emergency medical assistance. A multi-dimensional project involving several scientific, engineering, financial, and social processes replaces a relief-centric approach in the adoption of a multi-disciplinary and multi-sectoral approach. They offer support in areas like shelter, infrastructure, water supply and sanitation, education, health, and sanitation. NGOs participate in disaster response at different levels as well.

Accordingly, the responsibility of non-governmental organizations (NGOs) in times of crisis is to act quickly and use the resources at hand to try to save as many lives as possible. Non-governmental organizations (NGOs) play a variety of roles; some are mainly advocacy groups, while others implement programs and activities. The main roles played by NGOs were supplying relief supplies, setting up health camps, participating in rescue efforts, setting up temporary shelters, and so on. In addition, they may give those in need the tools and know-how to acquire needs of life, so reducing poverty.

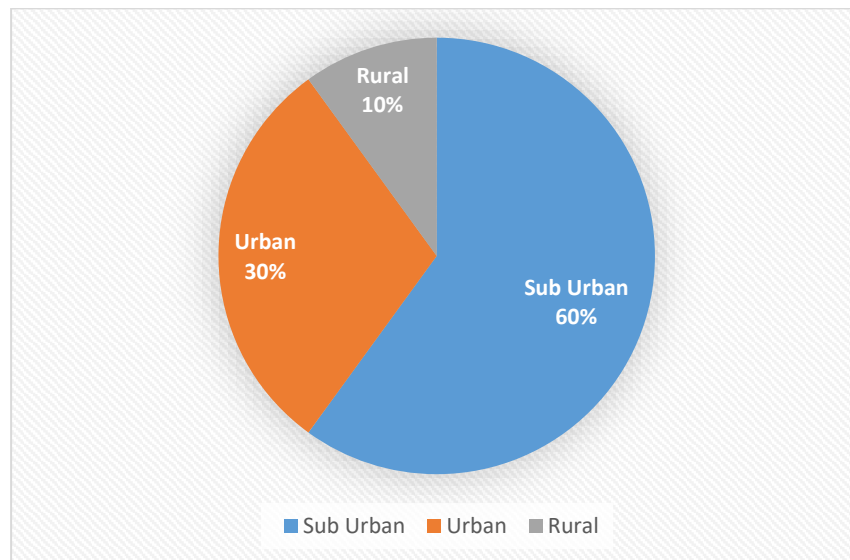
NGOs in Kashmir:

Given the size and spread of disaster threats in Kashmir and the limited out-reach of the Govt, agencies in the valley and the un-even terrain of the valley there is an essential need of effective presence of NGOs here . There are about three hundred fifty registered NGOs in Kashmir. doing multiple functions to promote socio –economic well being of the people of the valley. For a population of about 60, laks the spread of NGOs and their adequacy in Kashmir is as follows **Shameem& Kaur, (2023):-**

Types of NGOs (Total 349)

Functionary	Environmental and Education	Humans/ children welfare & Human Rights	Others (Art Culture, Animal Welfare etc.).
Operational	40	60	19
Advisory	120	70	40

Geographical Area-wise spread of NGOs:-



Analysis & Inferences:

Of the total NGOs of 350 almost 40 % are in the education and environmental segment. Which is an encouraging factor. Both the fields of Education and Environment are very vital segments of our eco friendly society. The spread of NGOs is more in sub-urban areas which is expected to make them effective during emergency periods. However given the un-even terrain of the valley and high risk profile the Spread of the NGO culture has not yet developed fully here to meet adequately the challenges. It is expected to grow gradually over a period of time, given the seriousness of the disaster threats and limitation of resources, the NGOs need to be promoted further here to strengthen the resilience of masses in Kashmir.

Conclusion:

Keeping in view the wide spread risks of the disasters, and their probability of inflicting the huge losses, the limitations of Govt. agencies to tackle these horrifying threats, the advantages of NGOs to supplement the activities of the Government by educating masses to handle the challenges effectively, the role of NGOs is very important. The efforts should be made to strengthen further the network of NGOs in Kashmir. There is a wide range of educational institutions in the valley teaching disaster management thus taking care of young up-coming generations. But there is a huge number of youngsters out of reach of formal teaching institutes who can be educated through NGO route. Social learning theory to incorporate some of the tacit tenets of peer pressure can be used to achieve the targeted objectives with the help of informal educational medium, through the NGO route. There is a demand to build up the ethical and decent values, philosophical thinking, action-oriented steps and virtuous development in the education system. The important point of education should be to train the pupil with righteous values. Rate awareness among local people about disaster preparedness in order to make disaster management process effective.

Table 1: Hazard Profile in Jammu and Kashmir

S. No.	Hazard	Area
1	Earthquakes	Seismic zone V, which is inhabited by about half of the state's population, contains the majority of the Kashmir valley (11 percent of the state's territory), which includes the districts of Srinagar, Ganderbal, Baramulla Kupwara, Budgam, Anantnag, Pulwama, Doda, Ramban, and Kishtwar. Seismic zone IV covers the remainder of the district, which includes the whole Ladakh region and the Jammu division (which makes up 90% of the state's total size).
2	Floods	Floods frequently occur in the low-lying regions of the Kashmir valley, particularly in Sonawari, Awantipora, and Srinagar, as well as in certain portions of Jammu. The higher catchments of the Jhelum, Indus, Chenab, and Tawi rivers are prone to flash floods.
3	Avalanches and snow Blizzards	Avalanches have been documented at Anantnag, Kulgam, Gurez, Kargil, Leh, Doda, Ramban, Kishtwar, and Banihal, among other Kashmiri locations.
4	Landslides	Landslides are common in towns along major highways, including Ramban, Panthial, Doda, Kishtwar, Gulmarg, Dawar, Gurez, Tangdhar, Rajouri, and others.
5	Droughts	Drought has hit much of Jammu division, including Doda, Udhampur, Kathua, and others.

References:

Ahmad, S., Alam, A., & Ahmad, B. (2016). Comment on: "Earthquake geology of Kashmir Basin and its implications for future large earthquakes" by Shah (2013); "Kashmir Basin Fault and its tectonic significance in NW Himalaya, Jammu and Kashmir, India" by Shah (2015). *International Journal of Earth Sciences*, 105, 681-687.

Amir, k. A. (2023): *Kashmir Floods 2014: Recovery to Resilience*, National Institute of Disaster Management (NIDM), Pages 158

Andharia, J. (Ed.). (2020). *Disaster studies: Exploring intersectionalities in disaster discourse*. Springer Nature.

Bhat, A. R., Wani, M. A., Kirmani, A. R., & Raina, T. H. (2010). Pesticides and brain cancer linked in orchard farmers of Kashmir. *Indian Journal of Medical and Paediatric Oncology*, 31(04), 110-120.

Bhat, A., Wani, M. H., Bhat, G. H., Kachroo, M. M., Qadir, A., & Qureshi, I. (2020). Pesticides use in Jammu and Kashmir: Invisible costs & willingness to pay for available alternative measures. *Chemical Science Revi5ew and Letters*, 9(34), 410-417.

Bhatt, C. M., Rao, G. S., Farooq, M., Manjusree, P., Shukla, A., Sharma, S. V. S. P., ... & Dadhwal, V. K. (2017). Satellite-based assessment of the catastrophic Jhelum floods of September 2014, Jammu & Kashmir, India. *Geomatics, Natural Hazards and Risk*, 8(2), 309-327.

- Bilham R, Szeliga, W., Hough, S., Martin, (2010). Intensity, magnitude, location, and attenuation in India for felt earthquakes since 1762. *Bulletin of the Seismological Society of America*, 100(2), 570-584. (Historical earthquakes reported in Kashmir since the tenth century)
- Dar, G. H., Bhat, R. A., Qadri, H., Al-Ghamdi, K. M., & Hakeem, K. R. (Eds.). (2022). *Bacterial Fish Diseases*. Academic Press.
- Grusec, J. E. (1994). *Social learning theory and developmental psychology: The legacies of Robert R. Sears and Albert Bandura*.
- Malik, I.H. *Flood Realities, Development Faults and Perceptions – Natural and Anthropogenic causes of 2014 Flood in Kashmir*. <https://www.researchsquare.com/article/rs-16755/v1>
- Nadaf, A. H. (2020). Framing internal politics in a conflict situation: A study of the 2014 election campaign news in the local newspapers in the Indian-administered Kashmir region. *Media, War & Conflict*, 13(2), 111-132.
- Rashid, I., & Aneaus, S. (2020). Landscape transformation of an urban wetland in Kashmir Himalaya, India using high-resolution remote sensing data, geospatial modeling, and ground observations over the last 5 decades (1965–2018). *Environmental Monitoring and Assessment*, 192(10), 635.
- Ray, R., Dhawan, A., & Chopra, A. (2013). A addiction Research Centres and the Nurturing of Creativity: National Drug Dependence Treatment Centre, India—a profile. *Addiction*, 108(10), 1705-1710.
- Rossetto, T., & Peiris, N. (2009). Observations of damage due to the Kashmir earthquake of October 8, 2005 and study of current seismic provisions for buildings in Pakistan. *Bulletin of Earthquake Engineering*, 7, 681-699. (Preliminary Damage and Needs Assessment by ADB and University of Kashmir).
- Shazan, M., Pandit, K., Sarkar, S., & Uniyal, P. CSIR-Central Building Research Institute, Roorkee.
- Siddique, M. O. H. A. M. M. A. D. (2007). Growth and development of horticulture in Jammu and Kashmir (1947–1997). *Fifty years of Indian agriculture*, 1, 300-309.
- Sondhi, P. A. (2023, February). India's Shadow Pandemic—A Study of Domestic Violence During the Covid 19. In *5th World Congress on Disaster Management: Volume III*. Taylor & Francis.
- Wang, J. J. (2016). Study on the context of school-based disaster management. *International Journal of Disaster Risk Reduction*, 19, 224-234.
- Wani, S. Q., Khan, T., Wani, S. Y., Lone, M. M., & Afroz, F. (2019). Wilm's tumor-collaborative approach is needed to prevent tumor upstaging and radiotherapy delays: a single institutional study. *Indian Journal of Medical and Paediatric Oncology*, 40(03), 409-412

Cite This Article:

Rasheed I. & Dr. Dar M.A. (2024). Role of NGOs for promotion of Disaster Management Education in Kashmir. In *Educreator Research Journal*: Vol. XI (Issue III), pp. 41–53.

ERJ. <https://doi.org/10.5281/zenodo.12927168>