

Socio-economic Implications of Managing Disaster

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ABSTRACT

The diversified geophysical, climatic and demographic conditions combining together make India one of the most disaster prone countries of the globe. Eastern Uttar Pradesh, is the most densely populated part of the State and have highest area under Flaster (Flood + Disaster). This part of the state is frequented with several severe Flaster and almost 44 per cent of the area is always got inundated. Disasters are an unwanted event which badly affect the life and property both and creates a ground to warrant emergency and external assistance. The study was conducted in the Narharpur village of C.D. block Barhalganj, district Gorakhpur. Locale of research was selected purposively in light of maximum recurrence of flood and flood disasters in the selected village of eastern part of U.P. Ex-post facto research design with PRA technique was used for the collection of data and information. With these tools an effort has been made for comparative study on the basis of response of affected farmers towards relief work undertaken by GOs, NGOs and SOs. The state of Uttar Pradesh which has one fourth of total flood prone area of the country suffers heavy damage annually due to flood disaster. Eastern Uttar Pradesh shares half of the total flood affected area of Uttar Pradesh, hence, damage of life and property is very common here due to flood. The comparative study of NGO and GO with SO towards relief work were undertaken by them during flood period had revealed that GO had provided structural and fund loving supports whereas as the SO and NGO had provided humanitarian support to reduce down damage. The findings had clearly indicated that the adaptive behaviour, individual approach and community level support were key to reduce flood disaster risk and damage.

Key words: Flaster; Government Organizations (GOs), Non- Government Organizations (NGOs); Social Organizations (SOs);

Disaster are catastrophic situation in which the day-to-day patterns of life are, in many instances, suddenly disrupted and people are plunged into helplessness and sufferings and as a result, need protection, clothing, shelter, medical and social care and other necessities of life. India's vast geographical area and its diversified geophysical, climatic and demographic conditions combining together make her one of the most disaster prone countries of the globe. Among various natural disasters the flooding is the most serious disaster due to its vary nature, extent and magnitude of damage. It causes damage to the crops, property, loss of human and animal lives, paralyzed communication and transport system etc. Eastern Uttar Pradesh, is the most densely populated part of the Uttar Pradesh and have highest area under Flaster (Flood + Disaster). This part of the state is frequented with several severe Flaster and almost 44 per cent of the area is always get inundated.

In view of above it is indicated that the disasters are unwanted events which badly damage life and property which induces sufficient ground to warrant emergency

external assistance. It was also indicated that only an agency is not just sufficient to assist the affected people rather the situation which need a large scale collaborative approach from different agencies. Those agencies should act as a partner to help the need rather than a competitor for getting name and fame. Therefore an attempt was made to carryout a comparative study on the basis of responses of affected people (farmers) about relief work undertaken by the Government Organizations (GOs), Non-Government Organizations (NGOs) and other Social Organizations (SOs) towards flood disaster. The present study was conducted to judge the relative effectiveness of these three organizations on different selected relief works. It was also attempted to judge organization approach in flood disaster mitigation.

METHODOLOGY

In light of the above objective the case study method of scientific investigation was adopted. The study was conducted in the Narharpur village of C.D. Block Barhalganj, district Gorakhpur. Locale of research was

selected purposively in light of maximum recurrence of flood and flood disasters in the selected village of eastern part of U.P. Therefore, Ex-post facto research design with PRA technique was used for the collection of data and information. The parameters used under the study were evacuation, daily needs, dwellings, grain preservation methods, medical facility, mobility transport facility, educational facility, communication facility etc. through ranking matrix, mobility map; transect walk, mapping, seasonality mapping, time line etc. of various PRA tools. The collected data has been presented activities wise as under.

RESULTS AND DISCUSSION

Evacuation facilities : Flood disaster had brought damages in the large area and the area was separated from outer world as well as it kept the occupant devoid of all basic amenities of life, Evacuation had needed a lot of independent but integrated efforts by the external agencies, where the Government agencies, NGOs and social organizations were ranked by the respondents.

Table 1. Ranking Matrix on Evacuation Facility

S.No.	Criteria	Organisations		
		GOs.	NGOs.	SOs
1.	Providing Warning Notice	1	2	3
2.	Providing information for evacuation	3	2	1
3.	Physical assistance in evacuation (Manual help)	3	2	1
4.	Transportation assistance	3	1	2
5.	Shed for displaced	2	3	1
6.	Logistic support	2	1	3
7.	Security arrangement	3	2	1

Effective evacuation had been identified seven criteria which had reflected the effectiveness of GOs, NGOs and SOs. The Table-I of ranking matrix states that the Government Organization had got highest rank for Providing Notice followed by NGOs and SOs. This trend among the respondents may be due to the possession of infrastructural facility by different organizations. More so, the GOs had developed warning system hence was more effective, whereas the NGOs and SOs had disseminated the warnings which were provided by GOs. While in case of “Providing information for evacuation” SOs had got highest preference followed by NGOs and GOs.

Food, Fodder, Water, Fuel and Cloth Supply: It is an admitted fact that food, fodder, water, fuel and cloths are the basic need which are needed for the survival of the human beings. Whereas, during flood the supply of these basic necessities become so scare that it alarm for an urgent external assistance. Hence the role of external agencies were judged with these parameters.

Table 2. Ranking matrix on food, fodder, water, cloth and fuel supply

SNo.	Commodities	Organisations		
		GOs.	NGOs	SOs
1.	Food	2	3	1
2.	Fodder	2	-	1
3.	Drinking water	2	3	1
4.	Fuels	2	3	1
5.	Cloths	2	-	1

The Table 2 of ranking matrix clearly indicates that the role of SOs in providing basic needs was reported most important and effective agency followed by GOs and NGOs. The local SOs were very close to the villagers and had we- feeling, while GOs was treated as a government effort for flood affected people. The NGOs had performed a little in this direction this might be due to lack of assistance from financing agencies for providing such needs. Further, the matrix also reveals that fodder had little supply from the external agencies while field observations found it inadequate also.

Polythene Supply : Flood exposes man, animal and their properties of wetness. Polythene is proved to be beneficial for protecting them from wetness of rainfall as well as of ground wetness. Basically the polythene was needed for Human Shelter, Animal Shelter and for preserving their precious materials, particularly the grain. The external agencies were rated for polythene supply for different purposes.

Table 3. Ranking matrix on polythene supply

SNo.	Criteria	Organisations		
		GOs.	NGOs	SOs
1.	For human shelter	3	2	1
2.	For animal shelter	-	-	1
3.	For grain storage	-	2	1

The Table 3 reveals that polythene was basically supplied for human shelter, among them, where the local was reporter highest facilitator followed by NGOs and GOs. The polythene supply for animals was only ensured by the local SOs whereas there was no supply neither from either GOs or NGOs. As far as polythene supply for Grain preservation and properties was concerned it was mainly supplied by SOs and few from NGOs also whereas GOs did not supply for that purposes.

Medical Facility : During and after the flood-period human beings as well as animal suffer from various health and sanitary problem. It nor only induces pain and uneasiness but also cause heavy loss of life. In such a situation alarms and invites and early external health agencies for assistance which were rated on various criteria related to health services. The Table 4 reveals that for ‘sanitation’,

including disposal of dead bodies (of both human and animals) after receding of flood water. It was reported that the SOs had got highest rank as facilitator followed by NGOs service and lastly by the GOs. The matrix shows that only few attempts of GO were taken up for them. The local SOs had played some role in the treatment of animals provided the case was not so complicated.

Table 4. Ranking matrix on medical facility

SNo.	Criteria	Organisations		
		GOs.	NGOs	SOs
I.	Medical Assistance for human			
(a)	Sanitation (Chlorine tablets, Bleaching powder, Malathian dust etc.)	3	2	1
(b)	Vaccination	1	2	-
(c)	Treatment (medicine and surgery)	2	3	1
II.	Medical Assistance for animals			
(a)	Vaccination	1	-	-
(b)	Treatment	1	-	2

Transportation facility : It is most often that during flood period the village get separated from the outer world. They need transports for various needs, hence different agencies were rated on that basis.

Table 5. Ranking matrix on transportation facility

SNo.	Commodities	Organisations		
		GOs.	NGOs	SOs
1.	For evacuation	3	2	1
2.	For daily movement	2	3	1
3.	For facilitating coming back	2	3	1

The Table 5. reveals that for evacuation and life support system, the transportation facilities were made available mainly by SOs followed by NGOs and GOs. It was reported that to arrange some essential goods and services or for health purpose, the transportation was made available by SOs followed by GOs and then NGOs. As far as facilitating coming back to the native place after flood gets recede was concerned the SOs had taken considerable initiative followed by GOs and NGOs.

Flood Mitigation Measures : Flood mitigation measure includes those efforts which reduces the impact of damage significantly through flood disaster. Such measured were not only taken during the flood period but also during pre and post flood situations. Kirkman (2005) reported that in the light of the natural disasters of 2005, there is need for much better international system for organizing effective response. Various agencies had involved themselves in such measures, their effectiveness were rated through ranking matrix based on participatory appraisal of flood disaster (Table6).

Table 6. Ranking matrix on flood mitigation measures

SNo.	Measures	Organisations		
		GOs.	NGOs	SOs
	<i>Structural Measures</i>			
1.	Check dams	1	-	2
2.	Embankments	1	-	2
3.	Drainage facility	1	-	2
4.	Plinth raising of village	3	2	1
5.	Road demarcation for safe Traveling	2	1	-
	<i>Non-Structural Measures</i>			
6.	Providing constructional design for flood proof buildings	3	2	1
7.	Formation of VDMC	2	1	-
8.	Barh Chawkis *	1	2	3
9.	Training for flood mitigation	2	1	-

**Barch Chawkis are the places equipped with Public Address Equipment Sets for giving warning notice, some first-aid kits, life-saving kits, long bamboo sticks etc*

Participatory appraisal of flood disaster had revealed that various structural and non-structural measures were taken to mitigate the flood disaster. The structural measures like building check dams, embankment and providing drainage facility Government Organisation (GOs) had played major role followed by some noteworthy assistance from SO. Whereas the NGOs had no rank on these measure. The plinth raising of the villages was the villagers' own effort to make the household safer from flood by raising its level above the normal flood-level.

In this effort they were well assisted by SOs followed by NGOs and least by GOs. Boyce (1991) describe the massive flooded control plan launched by Bangladesh under co-ordination of the World Bank. This plan, which emerged largely in response to unusually severe floods in 1987 and 1988, has the stated aim of higher economic returns from land, property and infrastructure.

The non- structural measures "Providing constructional design for flood-proof buildings" was considered as major innovational effort with the experience and technology. NGOs were involved in flood mitigation efforts who had designed various designs for house construction, fodder room construction, for drinking water innovations in hand pump construction and their uses etc. They had passed it to the villagers and they had got benefit of that. The GOs had also worked out some innovations in this direction.

It was reported that during heavy flood, the roads of even higher elevation submerger under water and movement of people become dangerous due to hidden depth of water and velocity of flowing water. Hence by erecting bamboo and rope tagging, road demarcation were done for safer movement of the people. Such works were

carried out very efficiently by the SOs followed by NGOs. Sometimes it was also carried out by GOs. The awareness about flood damages and its possible solution at local level is highly desirable non-structural measures. It may be carried out giving training to the villagers on flood-mitigation and formation of local groups to fight flood disaster, which may be designated as “Village Disaster Mitigation Chapters (VDMC). In this direction NGOs had performed excellently and had got higher rank over GOs. It is further to note that the Barh Chawkis were also established for helping the affected people. The GOs had played an active role in the establishment of Barh Chawkish was extended by help NGOs to do so cover more and more areas.

Communication Facilit: When village get “marooned” or going to be “marooned” they need communication facilities to make contact with their family members and also for getting warning notice. Following agencies were rated in terms of providing various such facilities. The Table 7. shows that the GOs had top priority in providing communication facilities under emergency condition followed by SOs. Further the NGOs had played decimal role in providing communication facilities.

Table 7. Ranking matrix on communication facilities

S.No.	Measures	Organisations		
		GOs.	NGOs	SOs
1.	Telephone	1	-	2
2.	Mobile phone	1	-	2
3.	Television	1	3	2
4.	Radio	2	3	1
5.	Postal services	1	-	-

Input Supply for Rehabilitation : The rehabilitation means after flood-period, how quickly and smoothly to bring back the normal life in the flood –plain. They need various types of post flood assistance and inputs, it not only includes physical assistance but also the social and psychological assistance. The various external services were rated on the basis of supply of various inputs needed for rehabilitation.

The Table 8. indicates that Flood compensation (partly to meet out house and crop loss) had been provided mainly by the GOs. The NGOs and SOs had no role on this issue. The damaged house of the villagers either had needed repair or fresh establishment. The GOs had played dominant role under Indira Awas Yojana to provide home

to homeless with a pucca room whereas the local SOs and NGOs had helped them in repairing of their house damaged. Boyce, J.K. (1991) revealed that in the recent years, national agricultural research and extension services in developing countries have suffered from declining resources, during a period when problems of small scale farmers had intensified. NGO moved into fill gaps in agriculture research system and many of them developed innovative research and extension programmes.

Table 8. Ranking matrix on input supply for rehabilitation

S.No.	Inputs	Organisations		
		GOs.	NGOs	SOs
1.	Flood compensation	1	-	-
2.	House (IAY) and others	1	3	2
3.	Agricultural inputs	1	3	2
4.	Chlorination of potable water	3	2	1
5.	Social therapy	2	3	1
6.	Psychological therapy	3	1	2

It may be concluded that the GOs had reported rank only where there was money-matter whereas if there was need of moral and emotional support the SOs and NGOs had performed significantly. It is worth to note that SOs had edge over both NGOs and GOs, hence, efforts of SOs be recognized and be strengthened.

CONCLUSION

India due to its vast and varying geo-climatic conditions always frequented with several natural disasters. Among the several natural disaster-flood disaster (FLASTER) causes more and frequent damage to life and property. The state of Uttar Pradesh which has one fourth of total flood prone area of the country suffers heavy damage annually due to flood disaster. Eastern Uttar Pradesh shares half of the total flood affected area of Uttar Pradesh, hence damage of life and property is very common here due to flood. The comparative study of NGO and GO with SO towards relief work were undertaken by them during flood period had reveal that GO had provided structural and fund loving supports whereas the SO and NGO had provided humanitarian support to reduce down damage. The findings had clearly indicated that the adaptive behaviour, individual approach and community level support were key to reduce flood disaster risk and damage.

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