

The Struggle Between Life and Death: A Case Study of Panapur Flood, District Saran, Bihar, India

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Abstract

The flood is one of the natural calamities that are the outcome of anthropogenic activities by humans. It is largely defined as the overflow of water on normally dry ground. The most common reasons are overflowing of river in short span of time, breaking of dam, or heavy rainfall. The most deadly flood that occurred in the history of Panapur is the flood of 2020 which worsened the condition of the native inhabitants. The most fragile section of society was pregnant women, elderly people, children and animals. The local inhabitants experienced fear of death from very close, submerging of houses in water, rampant rainfall, snake biting, lack of drinking water and food worked as the catalyst in worsening the condition. There was the rampant destruction not only of infrastructure but also of the wildlife. Large chunk of population lost their animals in the furious flood. Dear, pig, snake, and many other wild animals washed away from the forests of Nepal to Panapur block during flood. Many wild animals lost their lives in this nature's fury, villagers somehow managed to save lives of eight floating deer and 32 wild pigs. People left from different corona infected state to take shelter in native village in month of April and May were left disillusioned due to the flood of July 2020. As officially reported eight people washed away and died during flood. The further unrest came when the prices of fodder surged up to 14/kg.

This paper studies the impact of flood on inhabitants of Panapur block, Saran district, Bihar, India. This study is based on primary survey using sampling techniques. Six villages have been selected for survey. Result have been analysed and it was found that people lost their economy, crop, shelter, pet animals, forest, dignity and humanity. They are left under the utter disillusionment. They became homeless, helpless, hopeless and health less.

Key words: Corona, Economy, Shelter, Animal and Crop

Introduction

A flood is a natural calamity that occurs due to various reasons like anthropogenic activities, heavy rainfall and is defined as an overflow of water that submerges land that is generally dry. Bihar comes under flood prone area; the major reason behind this is heavy rainfall, lowland and the water coming from Nepal due to which level of river water rises. The year 2020 considered to the most uncertain year of the decade due to the pandemic and it was much more uncertain for the population of Bihar as the majority of earning population of Bihar resides in cities like Delhi and Mumbai. The recent flood of Bihar in 2020 left thousands of people under utter disillusionment. The recurrent floods in the districts of Bihar brought sorrow to the families residing in the remoter areas and migrant labors. The rising covid-19 cases in the urban centers robbed people to be particular manual labours of their employment which triggered migration. The migration and recurrent floods in

Bihar left thousands homeless and prone to various diseases and the irony of the situation is that amongst the flood affected population larger section of was migrants who migrated to their native lands for the sake of safe shelters. The triggering factors that made condition even worst were the rising cases of covid 19, repetitions of flood and heavy rain. This research paper deals with the plight of people of the Panapur block under Saran district of Bihar. Panapur block was worst affected this season due to torrential raining and the constant level of rising water of River Gandak. Flood of 2020 had a very striking impact on economic growth of state as well.

This research paper highlights the condition of population of Panapur block due to the recurrent flood of 2020 and it also discusses the plight of the double sufferers like migrant labours. This paper discusses how Covid-19 and recurrent flood acted as the catalyst

for mental, social and psychological displacements. The research methodology includes the study of various secondary and primary data collected from the flood affected regions.

This paper tries to highlight that how when nature shows its wrath it's difficult to escape from that, coming to the literally point it depicts that how the recent flood of Bihar was the struggle of life and death for the inhabitants.

Literature Review

The Food and Agriculture organization of United Nations reports that "floods are particularly disastrous for the world's poor, the majority of whom live in rural areas and rely on agriculture for their food and income" [1]. FAO argues that large chunk population in flood prone areas struggles to find an alternative for what gets lost or damaged, such as seeds, tools, livestock, animal feed or fishing gear. The water that gets stagnant that often renders fertile land useless, and makes it difficult for the people to maintain livestock, which ultimately without proper shelter, veterinary care or adequate feed, easily fall prey to disease or starvation. The report by Bihar state Disaster Management authority highlights the fact that topography of Bihar is marked by various perennial and non-perennial rivers, some of them originates from Nepal and carries sediments that gets deposited on the plains [2]. The major three months of monsoon contributes the majority rainfall of the region which ultimately increases the water level of the rivers causing flood. According to the statistics of Bihar state Disaster Management authority 73.63% of the geographical area of North Bihar is considered as flood prone areas. Reports also highlights that out of 38 districts, 28 districts get flooded most of the times and out of these 28 districts 15 districts comes under the category of worst affected area which often suffers huge loss of property, lives, farmlands and infrastructure. It has been observed that flood events badly affect the agriculture sector and the GSDP of state in almost similar fashion. Majority of rural population belong to the lower socio-economic strata of the society. Small and marginal farmers, landless labour, and petty traders dominate the rural economy of the state, which suffers from extreme poverty conditions due to recurrent losses due to floods [3].

Objectives

1. To study the flood affected population.
2. To study the impact of flood on food, water and Shelter.
3. Impact of flood on agriculture and animals.
4. To Suggest policy and measures

Hypothesis

Severe flood affected life, dignity and destiny.

Research Methodology

This research is based on Primary data.

Study Area

Panapur

Block is a Tehsil / Block (CD) in the Saran District of Bihar in India. Total area of Panapur is 108 km². Panapur has a population of 1,21,738 peoples. There are 20,414 houses in the sub-district. There are about 65 villages in Panapur block.

Geographical Area and Households of Villages:

Panapur village is located in Panapur Tehsil of Saran district in Bihar, India. The total geographical area of village is 140 hectares. There are about 368 houses in Panapur village. The total geographical area of Dubauli village is 260 hectares. There are about 485 houses in Dubauli village. The total geographical area of Totaha village is 42 hectares. Totaha has a total population of 223 peoples. There are about 35 houses in Totaha village. The total geographical area of Totaha Jagatpur village is 296 hectares. There are about 545 houses in Totaha Jagatpur village. The total geographical area of Turki village is 412 hectares. There are about 628 houses in Turki village. The total geographical area of Dhenuki village is 445 hectares. Dhenuki has a total. There are about 825 houses in Dhenuki village. The geographical area of Laguni village is 222 hectares. There are about 501 houses in Laguni village.

Table 1: Population of the Severe Flood Affected Village

Village	Population	Male	Female
Panapur	2341	1110	1231
Dhenuki	5226	2513	2713
Dubauli	2870	1462	1408
Laguni	3005	1500	1505
Turki	3202	1657	1345
Totaha	223	103	120
Totaha Jagatpur	3652	1729	1923

Source: Census of India-2011

The above data is depicting the total number of population in the village affected by flood in Panapur block of Saran District of Bihar

Table 2: Area and Households of the Severe Flood Affected Village

Village	Area in Hectare	House	Area per House in Hect
Panapur	140	368	0.38
Dhenuki	445	824	0.54
Dubauli	260	485	0.54
Laguni	222	501	0.44
Turki	412	628	0.66
Totaha	42	35	1.20
Totaha Jagatpur	296	545	0.54

Source: Census of India-2011

The above data is depicting the area and household that comes under the flood prone areas. Total area of Panapur is 140 hectares and the number of houses in Panapur village is 368 with 0.38 area per house in hectare. Total area of Dhenuki is 445 hectares and

the number of houses in Dhenuki village is 824 with 0.54 areas per house in hectare. Total area of Dubauli is 260 hectares and the number of houses in Dubauli village is 485 with 0.54 area per house in hectare. Total area of Laguni is 222 hectares and the number of houses in laguni village is 501 with 0.44 areas per house in hectare. Total area of Turki is 412 hectares and the number of houses in Turki village is 628 with 0.66 area per house in hectare. Total area of Totaha is 42 hectares and the number of houses in Totaha village is 35 with 1.20 area per house in hectare. Total area of Totaha Jagatpur is 296 hectares and the number of houses in Totaha jagatpur village is 545 with 0.54 area per house in hectare.

Table-3: People took Shelter during the Severe Flood (%)

Village	Relatives	Sheltered on Road	Stayed on roof top
Panapur	11	21	68
Dhenuki	26	38	36
Dubauli	24	42	34
Laguni	21	44	35
Turki	20	45	35
Totaha	64	28	08
Totaha Jagatpur	60	31	09

Source: Primary Survey

As mentioned earlier that this flood has displaced the larger part of population, people became homeless and was forced to take shelters at their relatives' houses. The data depict the number of people who took shelter at various places. 11 people in Panapur took shelter at relatives homes, around 21 took shelter on road and 68 stayed at their respective homes in fragile condition. 26 people in Dhenuki took shelter at relatives homes, around 38 took shelter on road and 36 stayed at their respective homes. 24 people in Dubauli took shelter at relatives homes, around 42 took shelter on road and 34 stayed at their respective homes. 21 people in Laguni took shelter at relatives' homes, around 44 took shelter on road and 35 stayed at their respective homes. 20 people in Turki took shelter at relatives homes, around 45 took shelter on road and 35 stayed at their respective homes. 64 people in Totaha took shelter at relatives homes, around 28 took shelter on road and 8 stayed at their respective homes. 60 people in Panapur took shelter at relatives homes, around 31 took shelter on road and 09 stayed at their respective homes. This is the depiction of the fragility and displacement of people due to floods.

Table 4: People Severely suffered during Flood (%)

Village	Elderly	Ailing people	Pregnant women
Panapur	42	31	38
Dhenuki	72	84	91
Dubauli	78	86	93
Laguni	75	84	89
Turki	55	42	32
Totaha	85	85	88
T o t a h a Jagatpur	88	86	87

Source: Primary Survey

Natural calamities like flood majorly harm those who are much fragile to conditions like these for example elderly, ailing people and pregnant women. Around 42% elderly people, 31% ailing people and 38% pregnant women suffered from these recurrent floods in Panapur. 72% elderly, 84% ailing people and 91% pregnant women in Dhenuki suffered from flood related displacements. Around 78% elderly people, 86% ailing people and 93% pregnant women suffered from these recurrent floods in Dubauli. 75% elderly, 84% ailing people and 89% pregnant women in Laguni suffered from flood related displacements. 55% elderly, 42% ailing people and 32% pregnant women in Turki suffered from flood related displacements. Around 85% elderly people, 85% ailing people and 88% pregnant women suffered from these recurrent floods in Totaha. Totaha Jagatpur witnessed 88, 86, 87 percent of displacement of elderly, ailing and pregnant women.

Table 5: Loss during severely flood (%)

Village	Crops	Animal
Panapur	100	12
Dhenuki	100	45
Dubauli	100	55
Laguni	100	54
Turki	100	42
Totaha	100	75
Totaha Jagatpur	100	70

Source: Primary Survey

The villages in Panapur block suffered major setback in terms of agrarian loss, around 100 percent of the crops got damaged due to heavy rainfall and lack of appropriate storage. Many domestic animals got dislocated and submerged in water. Around 12% animals lost their life in Panapur, 45% in Dhenuki suffered from flood. 54 % of animals in Laguni got drowned into water and 55% lost their lives in Dubauli. In Turki 42% and in Totaha 75% animals got dislocated or maybe died. Around 100 percent houses suffered from flood, water logging and there was huge loss of infrastructure as well.

Table 6: Food and water scarcity during flood (%)

Village	Food	Drinking Water
Panapur	32	60
Dhenuki	82	92
Dubauli	84	94
Laguni	85	93
Turki	60	89
Totaha	85	95
Totaha Jagatpur	84	94

Source: Primary Survey

It is well established fact that whenever any disaster hits the first problem that rises is the scarcity of food and water. Food and water are two essential things for survival, but villagers under Panapur block witnessed this scarcity of food and water in the ravaging flood of 2020. Panapur experienced around 32% of food scarcity and 60% water scarcity whereas Dhenuki experienced 82% food scarcity and 92% percent of drinking water scarcity. Dubauli suffered from 84% of food scarcity and 94% of drinking water scarcity, Laguni had 85% food scarcity and 93% of drinking water scarcity. Turki witnessed 60% lack of food and 89% lack of drinking water. Totaha suffered from 85% of food scarcity and 95% of scarcity of drinking water and Jagatpur Totaha suffered 84% and 94% food and drinking water scarcity.

Natural calamity like flood does not only affect humans rather it cause great destructions for animals. Animals lost their shelters and got displaced and there was almost 70 percent scarcity of fodder and food for animals continued for four months. Rainfall and flood destroyed fodder which ultimately caused great destruction. All villages under Panapur block witnessed this kind of destruction [4-14].

Conclusion

Flood is a perennial problem in the Panapur block of Saran district with devastating impact on the livelihood of people. Flood affects and damages life and property for several years. Population of Panapur block belongs to the lower socio-economic strata of the society in majority. They are Small and marginal farmers, labours, and petty traders dominate the rural economy. People suffer from extreme poverty due to recurrent floods.

Suggestions

In spite of the government's measures of flood management, households continue to live with severe condition to their life and assets. It is possible to avoid floods, if flood preparedness developed. Flood impact can be minimized with appropriate planning and management. Construction and maintenance of embankments of river banks, land spurs and other necessary flood protection works is to minimize the negative consequences of flood impacts. The awareness as well as participation of the community at risk of flooding should be raised. Integrated understanding of people in response to emergency situations is needed. Flood affected people need to be developed and trained for primary response. Continuous de siltation of River Ganga and River Gandak is most important to protect people from flood in Bihar. Finally Government of Bihar as well as Government of India should assess the impact of Faraka dam (Faraka Dam on Ganga River in Bihar) on continuous flood.

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