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Socio-Economic and Political Perspectives of Disaster: A Case Study of Flash Floods in Goa

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KEYWORDS	ABSTRACT
Socio-Economic perspective, Political Perspectives, Flash Floods	*Natural disasters are the nature's way to maintain the balance as some people believe, while others consider it a punishment by the almighty for the sins committed by the humans. Within this framework, the factor that remains throughout is the will power and mental health of humans. Dealing with, and overcoming a disaster can be effective only if the people affected show a high spirit of cooperation. The aim of the study is to assess the socio economic and political aspects of a natural disaster and its management in the state of Goa. This study was done using the random sampling technique. The victims and survivors of flash floods were interviewed. The study analyses the causes of flood, Effects of the flood, socio economic participation, role of social media and political aspects. Co-operation is the key to deal with any situation and this can be built only if there is a good bond between the government and its people. Goa being a small state has successfully preserved that bond and the speed at which the state recovered from the flood is the proof.*

Introduction

Natural disasters have been a bane and a boon for mankind since the beginning. One can observe the creation of various natural beauties as an outcome of earthquakes and volcanoes which created mountains, valleys, waterfalls, along with giving access to various minerals while, on the other hand, it also caused destructions at an unfathomable scale. Over time, we have seen the unshaking faith of humanity who has strived its way through all natural calamities. Consider the example of the Japanese, who have developed technologies along with a strong psyche to tackle the frequently occurring earthquakes on their land. Natural disasters are the nature's way to maintain the balance as some people believe, while others consider it as a punishment by the almighty for the sins committed by humankind. of humans. Dealing with, and overcoming a disaster can be effective only if the people affected show a high spirit of cooperation.

Background

This study was conducted on the aftermath of the most severe flood ever seen in Goa. As people were preparing to celebrate the auspicious festival of Nag Panchami, the meteorological department declared an orange alert in the state as a warning for incessant rains that were to follow. The state

of Goa has a huge coast line and has never encountered a flood to such an extent. There were some minor flooding incidents due to cloudbursts and water logging, but the floods that affected a major part of Maharashtra due to incessant rain also affected some regions of Goa, which were under water for almost 10-15 days, causing massive destruction of life, properties, livestock and agriculture. On the 4th of August heavy rainfall was experienced in the state causing flooded roads and overflowing water from the riverine drainage system and. This study focusses on finding the causes behind the floods and also assesses the various socio-economic and political elements that played a key role in this disaster management.

Aim

To assess the socio economic and political aspects of natural disaster and its management in the state of Goa.

Objective

1. To analyse the causes and effects of the Flash floods in Goa
2. To get insight into the role of society in managing the disaster.
3. To analyse the political and economic aspects of the situation.
4. To study the role of social media in the process of disaster management

Sampling and Methodology

We used the random sampling technique: six-seven people from each village were interviewed in depth, which included victims/survivors and rescuers. General interviews were also conducted with the local villagers who played a role in rescue and providing aid to the sick. Villagers were interviewed at first as the primary source of information. Secondly, the members of organisations who played a key role in the rescue and aid of the needy. Secondary sources of the study were newspapers, news channels, as well as other studies conducted in the regional languages.

Geographical Background of the flood-affected region

The areas which experienced the maximum impact of the flood are Sal, Dodamarg, Dabhal and Borim. These villages and the surrounding smaller villages base their economy on agriculture, and their prime source of income is the farming vegetables, beans and rice. These areas receive an average rainfall of 80 – 100 cm annually. There are many small rivers that flow very close to these villages and support farming activities. The rivers are also used for transport purposes. There are few state and national highways that pass through these villages, connecting them to the big states like Maharashtra and Karnataka, and where many goods from and for Goa are transported. The villages are surrounded by hills from at least 3 sides, and in some cases from all sides. The rivers flow from Maharashtra where the Tilari dam was built to meet the water needs of the surrounding areas.

Causes of the Flood

As said above the prime cause of the disaster was the incessant rainfall due to climatic disturbance in the Arabian sea. The mountainous region of the Sahyadri range on the Goa-Maharashtra border experienced a rainstorm on the 4th of August. This cloudburst resulted in the sudden increase in the water flow of the rivers that usually carry the water towards the Goan region and down to the Arabian sea. The rivers commonly known as Mandovi and Zuari in Goa find their origin in the Sahyadri. This

sudden downpour increased the water flow to the Zuari river, which gets a part of its water from the Tilari dam. The analytical reports suggested that the Tilari dam was not in good shape and was not 100% functional and strong. As the water flow to the dam increased, the water level reached to almost 98% of the dam.

Considering that the water would overflow the dam at any point and also that the dam wasn't in a shape to work effectively, the authorities released a pre-notice to the villagers warning them. As the rain would not stop the authorities had no option but to open 3 gates of the dam at the initial stage, which was the beginning of the flooding of the regions at the bottom of the dam and surrounding the rivers. Even then, after keeping the gates open for 1 full day, the rainfall did not stop and the dam was again on verge of overflowing. At the outset of that the authorities were forced to open more gates of the dam, that led to the flash flood leaving no time for the villagers to evacuate. There were 2 smaller dams before the villages which were also flooded due to release of water from the main Tilari dam. The rivers overflowed and the water covered the villages, where the water level rose by almost 8 foot above the ground in some places.

Other sources say that this water overflow was obstructed by choked drains and water pass ways, which usually allow the smooth flow of rain water away from villages in to the sea. Due to accumulated waste and plastic, the drainage system turned ineffective in carrying the water, which led to the blockage and saturation of water in the surrounding area. The speeding water from the dam also carried along with it many big coconut trees and tree branches, which got stuck blocking the water flow. On the subtle note it was also said that illegal constructions in the marshy areas that usually absorbed surplus water led to the flooding together with the forest cover cut off to make room for new settlement areas. Last but not least, the mountains surrounding the villages also acted as a barrier to the flow of water like a natural dam of sorts. All the above causes were responsible for the flooding of the regions, the cloudburst and the dam being the main of them.

Effects of the Flood

As it happens in all floods, there was a huge loss of personal as well as public property in the affected areas. Many people were carried away by the rushing water and their bodies were not found later. Livestock such as cows, buffaloes, goats, hens drowned as they were tied to poles and the owners were unable to set them free. Most of them were carried away by the water. The destruction of houses was impressive, and public buildings such as schools, panchayats, temples etc were also overwhelmed by the fury of the waters. Wild animals were seen dragged off by the water, many of them venomous as well as non-venomous snakes. Schools were closed for a long time as there was water in the classrooms and other government machinery like panchayats etc remained ineffective officially. Electricity poles were damaged to a great extent leading to no power supply for days incapacitating rescuing squads during night time.

Many people whose houses were on the hilly areas did not realise that the water level had risen overnight, until the next day, when they woke up in the morning: "the village below was not visible" said one of the victims. They had to climb up the hill behind them and get down on the other side to a different village to save themselves. In addition to flooded villages, transport was interrupted as the major highways were flooded as well. This blocked the vehicles that brought milk, vegetables, and other necessary items to Goa. There was shortage of milk throughout the state as the only local milk producing company, "Goa Dairy," could not meet the demands of the whole state. Vegetable prices

were sky high, though the only relief was fish was available as the local fisherman risked their lives to go to the sea, maintaining continuous supply of fish.

Socio Economic Aspects

When we talk about disaster management, there are many advancements in the field over time. Various courses and training programs have been started by various organisations to promote the effective management of a crisis. In Goa when the flash floods occurred most of the rescue missions were conducted by none other than locals with no official training. The only reason why they were successful was due to their will and courage generated by the care towards those who were affected. People used small row boats as a mean of transport to go through the flooded region to rescue people who were trapped. Rubber tyres were used as floaters for those who could not swim. Many prepared rope nets hanging from tall trees to allow those who were being carried by the water to catch onto and then pull them up. Many risked their lives to dive underwater and release animals that were tied in their cowsheds. People contacted police stations and fire stations to come to aid those stuck on trees or higher grounds. Various car squads with 4-wheel drive jeeps used their resource to pull out cars that were stuck in the mud and water due to the sudden flooding. Many people left their houses without taking along any valuable. Due to floods jewellery and other valuables were seen floating around in the water. The people who found it collected it at the local schools and police stations and the items were duly returned to the owners. It was observed that none of the misplaced jewellery and valuables were stolen or lost. Many people helped recognise other people's ornaments and made sure they were delivered to them. People of other villages prepared food and sent tiffin for those who had found shelter in public places. The locals made sure there was ample food supply and no one was left hungry or starving.

Since Goa is a small state it was not difficult to meet with people's food demand. Groups of people together with rescuers sent by the authorities helped clean the villages after the floods receded and also worked in re-settling the locals to their respective houses. Considering the losses endured by the locals in agriculture, livestock and other things, the locals formed organisations that gathered commodities in kinds or cash to provide rice and other necessary items to those were struck most seriously by the flood. By the time the situation was reverting to normal, it was already time for the biggest festival of Goa, the Ganesh Chaturthi/ Vinayak Chaturthi. Considering those affected by the flood would not be able to celebrate it, teachers from many schools contributed money to buy the things needed for the celebration. The estimate was about 1500 Rs per family extended to almost 400 families across the state. The Ganesh idol makers faced huge losses as the water took away some idols with it or had torn them to pieces. The local people showed great spirit of understanding and helped the idol makers in preparing new but smaller ones in a short time and used them for the festival. "The spirit of festivity was doubled" said many locals; in fact, the flood had brought people together to work for the reconstruction of the devastated neighbourhoods and villages, along with stabilising the routine of the village economy.

Role of Social Media

Though we argue about the social media to be a boon or bane, it surely turned a boon during the flood. People used mediums like WhatsApp and Facebook to send photos of the flooded areas so that they could be rescued. Others used social media to warn those travelling on highways and other state roads that were to be stuck due to the flooding. The spread of messages via social media helped prevent traffic in flooded regions along with enabling a relatively smooth transport for people through alternate routes. Google maps were used to send the location of the alternate routes which would

help people travel, and also avoid getting late or being trapped in the flood. Many Riders' groups and jeep groups shared their contact numbers through social media so that people could contact them wherever needed. Some videos were viral of the Tilari dam, which was overflowing at a point and then the authorities had to release the water by opening the gates. These videos played an effective role in alerting the villagers of the lowlands about the impending disaster. Photos and videos through social media helped the extensive, effective and widespread media coverage that caught the attention of the authorities and led them to take charge of the situation. It also made people across the state aware of the situation. The state declared a holiday on 7th August due to the incessant rains which showed no sign of receding. This notice was also forwarded through social media to the entire state within hours. The Chief Minister Relief Fund account was forwarded via social media to the public which was indeed the best use of WhatsApp and Facebook.

Political aspects

The Goa state Chief Minister Relief Fund, as we have said, acted as an account where in people could send money for the relief of the flood affected areas. Various government mechanisms and arrangements were put in place for the rescue operations as well as rehabilitation. The military played a crucial role in the rescue missions. The government also took responsibility of rebuilding the damaged houses for free and repaired the damaged public properties like electric poles, schools, panchayat buildings etc. in a short period of time. The government also assured that a smooth flow of milk and vegetables was ensured within a week by requesting the suppliers to supply the stock through provided alternate routes. The roads that were damages due to rains and fallen trees were cleared and made smooth in a very short period of time. The repair works of roads are still being carried out in the state of Goa, which is expected to complete them by mid-October.

Conclusion

From this unhappy event we understand that there are three important pillars in dealing with any crisis: the society, politics and economy of a region. These three pillars if strong can deal with any crisis effectively. The focus of any disaster management program should strengthen these pillars at the grass root level, so that the locals act responsibly in dealing with any disaster effectively. Moreover, social media groups should be made aimed only to act in such times, to which rescuers and resources are added. Co-operation is the key in dealing with any situation and this can be built only if there is a good bond between the government and its people.

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