

It is hightime for Odisha to draw long term plans to tackle natural disasters (Cyclones): An introspection

Lokanath Suar¹, Prabir Pattnaik²

¹ Ph.D Scholar, Assistant Professor in Law, G.M. Law College, Puri, Shree Vihar, Odisha, India

² HOD and P.G. Department of Law, SOA National Institute of Law, Utkal University, Vani Vihar, Bhubaneswar, Odisha, India

Abstract

The state of Odisha is hit by major cyclones in every alternative year. With this, every year natural disasters like cyclone, floods, droughts, earthquakes, lightening and heat waves kill thousands of people and destroy billions of dollars of habitat and property. It is a fact that the state administration have learnt lot of lessons from the past disasters, but still the administration is yet to recognize itself to combat the natural disasters. Whilst, nature cannot be regulated and natural event or disasters cannot be avoided, it could be introduced comprehensive long term strategies to prevent natural disasters and to mitigate their effects on human life, infrastructure and properties. What the administrations need to do is to design a long term strategy for disaster management. The disaster management Act was enacted in 2005 to streamline the mitigation of natural disaster, but for its proper implementation the government must reorganize its support agencies.

Keywords: cyclonefani, national disaster management policy, disaster management act 2005, Odisha disaster management authority

Introduction

The people of Odisha have been very frequently facing natural disaster such as drought, flood, cyclone etc. These natural calamities have put direct and indirect impact in the state's overall development. The poor Odia people bear the barunt of it who are more prove to vulnerability in such situation. The effectiveness and commitment of the Government in managing disaster through rescue and relief operation should be extended in integrating natural disaster managements which concerns in the overall development prospective of the state as the state is prove to tropical cyclones, tsunami, high wind, heavy rainfall, storm and a larger part of the state comes order earthquake risk zone along with flood river erosion and seasonal droughts. These natural disasters are continuously affecting the agriculture growth which is the rain stake of the poor people of the state. It disturbed food production, normal life and quality of living even though the cost of living in rural Odisha is one of the lowest in the country. While a large number of industries are coming up in coastal districts along with ports, the ecology and life of people is a matter of concern in the context of natural disasters those are routinely visiting people with a negative cost.

Our Experience from 1999 Super Cyclone

The history of disasters in Odisha has obviously justified the risk of varied disasters in the state. Here in this research article the researcher has given detailed accounts of some of important disasters that have visited the state in recent past. State's preparedness to face them, the efforts of the government and non-government organization in the post disaster period etc. have been studied here. The purpose of the doing the same is to find out the facts whether the government and the people of the state as a whole were well aware of the risks of the disasters or not; whether the

warning of the impending risks was disseminated to the common mass effectively or not; whether the acceptance of the warning of the risk was received by the people seriously or not; whether the strategies of relief, rehabilitation and restoration were perfectly implemented or not and whether the lessons learnt from one disaster helped the disaster managers and policy makers to face the subsequent disaster or not. The first among them was the super cyclone of 1999. The 1999 super cyclone was most damaging, and its severity completely unheard of in the worst ever cyclone of the 20th century. The severity of the storm can be measured by the fact that the second form in the history of Indian cyclones is registered. In 1977 the Indian coast had been struck by a strong cyclone of less severity. Meteorologists estimate that this cyclone is the strongest in Indian history, and the worst than the cyclone in 1971, that has claimed about 10,000 lives in the present district of Kendrapada (Gupta and Sharma, 2000).

A specific and crucial feature of the cyclone system that hit Odisha was its anchorage over 48 hours and its strength, with associated winds in its vertex over 250 km / h. The well-structured cyclone eye and walls were visible in satellite photos, which were obtained until Oct 31 (the central calm region in the case was 49 km in length). Indeed, this is an extraordinary feature, as the cyclones system typically weakens and dies in the absence of an energy flow through surface winds filled with humidity as they pass across the earth. Thanks to the anchoring of the cyclone system on the coast, the wind in the sea held moisture on it; it was heavily rained hundreds of kilometers long through the cyclone circulation. The real weather trigger of the cyclone staying stuck for a long time on the coast, as it blocked its northwest movement through a wide atmosphere system. It remained uncertain and a significant scientific research subject must be undertaken. While a

cyclone's origin and the exact nature of the cyclone, including its strength build up and landfall can be observed and tracked well ahead with the satellite images, it is a function of its contact with the atmosphere and weather forcing. That made it very difficult to predict a cyclone's course, land and life. In addition, if the system is weak, its actions and movement are influenced by the prevalent atmosphere factors around the cyclone. However, as soon as the system gets more active and cyclone begins to affect the atmosphere more strongly than the surrounding systems. It is reiterated that a succession of severe natural disasters wrecked havoc in Odisha during the year 1999. It was worst devastating, the worst over cyclone of the 21st century and its intensity totally unheard of before.

The super cyclone brought the people and the environment in touch with the impacts of 3 naturally occurring hazards (1) storm surges, (2) strong torrential rain and (3) high winds. Three forms of impacts have occurred: (1) physical damage (2) saline inundation and (3) flooding. However, given the severity of the damage, the question that is immediately recalled is the following: what went wrong to minimize the harm done by the super cyclone? There was not any proper alerting system or what went wrong in disseminating the alarm. As a matter of fact, we might suppose that for these natural disasters, we were not well qualified, well-trained, and well-designed. Such strategies were flawed and unsuccessful in mitigating natural disasters.

As the experience shows, the district administration has done the utmost to disseminate it to marginalized citizens even before 29 October, since the alert was issued. But the alert was not explicit and accurate, as people say. The warning was taken lightly by men. Many thought that it was better to remain at home during the evacuation time. Throughout the time there were only badly constructed school buildings, not enough. On 29 October, the Army and the Air Force were called, but due to bad weather they could not work until 31 October. The army's relief efforts were disrupted by flash flood. The neighbouring states A.P and others helped Govt. of Odisha in emergency rescue and relief operations.

The Govt received initial relief, from the CARE India and Andhra Pradesh. In order to facilitate relief work and protection of law and order, paramilitary / police units from other States were deployed. A significant number of local, regional or international NGOs took part in the rescue and relief activity subsequently. The amount of assistance that was provided from outside Odisha was so high that a major problem emerged with the management of relief distribution. A central relief co-ordination centre was set up in the state capital to co-ordinate the relief work and a NGO co-ordination cell was also set up to co-ordinate the NGO activity. In order to obtain the incoming relief documents to the territory, special arrangements were made in the railway station and airport. According to Odisha Relief Code, the State administration issued relief to the disaster victims. Both control rooms were running 24 hours a day, either at the state headquarters or on district level. Three critical roles were included for the disaster management, such as:

- a. Rehabilitation, under the remit of different State Departments, of critical installations.
- b. Coordination of relief and privatization programs involving non-state government agencies.
- c. Damage assessment in the various districts concerned.

There was no communication network in place but just one satellite call at the office of Chief Minister, the Army had conducted one of the most important rescue operations in Indian history, dubbed "Operation Sahayata.". During this period the HAM radio sets were set by the Andhra Pradesh Government. V-sat telephones and C-Dot 6 telephones were sent by the National Remote Sensing Application Centre, Ahmedabad have done some excellent work in getting information from the inaccessible ares. In the cyclone areas involved, an unparalleled small and large NGOs and civil society organisations made their contribution to the relieving and recovery effort. A rough estimate indicates that more than 100 such Organisations supplemented the efforts of the Governments (ODMM); a network of NGOs. The State Govt. also set up a special cell to co-ordinate NGO activities in order to facilitate faster movement of relief to the unreached and difficult areas; plan scientifically for restoration of the livelihood, habitat and social infrastructures in the affected areas; mobilize civil society organizations, national/international community's/ organizations for extending support to the above initiatives. Besides these, the other aim of the cell was to avoid duplication in relief operation by the NGOs.

But the real picture was different. There was no dearth of money to meet the needs of the affected people and the community. But deficiency was felt everywhere and in every activity. There was no proper co-ordination among different agencies involved in the post-cyclone activities. The govt. machinery collapsed to undertake these functions effectively. There were many villages, areas, where relief items did not reach even after seven days of the disaster. In majority of cases, there was massive duplication in relief distribution and no transparency was maintained by the Government and Non-Government Organisations. Due to lack of far-sightedness and even for the sake of relief, organizations went on distributing items to the victims which were not the need of the hour. As regards the rehabilitation of the victims and the community as a whole, there was no specific strategy common to all different organizations adopted different strategies as a result of which chaos prevailed everywhere. There was no follow up action in order to examine whether the rehabilitation packages have yielded good results or not.

The important lessons learned from this massive tragedy by the government and the people in general were:

1. While people, even economically well off families living on the coast of Odisha know they were at risk of a disaster, say Cyclone, it was not recognized that it was important to construct the resilience pucca cyclone housing. In this respect, policy policies were not up to the mark. There was therefore no improvement in mitigating the risk of cyclone in communities.
2. Because of the predictability of cyclonic storm forecasts by IMD in previous years, the predictability of super cyclone was always challenged. In addition, the prediction was not accurate, and the popular mass did not understand the distribution of alerts. That's why people have chosen to stay home.
3. While some vulnerable areas – people from the lowlands thought that there were no sufficient cyclone-proof safe places to accommodate them, the change to safer places is better. Although at the time of cyclone 1971 the importance of safe places such as the cyclone shelter was recognized, Govt's efforts to build those

shelters were definitely not satisfactory and the lack of safer spots was the main reason for this great human loss during the super cyclone, 1999.

4. There was no failsafe contact during and after the cyclone threatening the rescue and relief operations of the devoted volunteers living outside the country with rescue and relief operations.
5. The economy, either at state or at community level, was not prepared to face a catastrophe of that magnitude. Even at a time when the whole world was focused on disaster preparedness programs, Odisha was completely invisible in its work on this front. No single comprehensive disaster preparedness plan was available. The ORC (Orissa Relief Code) revised 30 years earlier, concerns relief and recovery rather than provisional steps. ORC is all about relief and rehabilitation. The State government prepared an summary report after the 1971 cyclone and a series of steps to plan potential cyclones. The report was prepared. Very few of the recommendation measures had been adopted by the time the 1999 super cyclone hit.

Lesson from Fani 2019

As we know, Odisha was hit by the cyclonic storm Fani, which brought heavy rain and super-strong winds to life in one third of Odisha. It had destroyed in fourteen districts — Puri and Khurda bore the brunt of the storm, and nine other districts had also been affected, such as Cuttack, Bhadrak, Kendrapara and Jagatsinghpur, Balasore, Mayurbhanj, Keonjhar, Dhenkanal and Nayagarh. 200 km / h winds have hit Puri and entered West Bengal before weakening.

The storm triggered dismay and consternation among people as it revived the ghastly memories of the super cyclone of 1999. In terms of devastation and destruction, Fani may not have been on the same scale as super cyclone of 1999 which killed 10,000, but extent of damage is heavy and no less than what Phailin had caused in Ganjam, Puri and Srikakulam in Andhra Pradesh. Odisha Chief Minister Naveen Patnaik has described Fani as a tragedy of humongous proportions.

It has left an incalculable trail of destruction and damage, with over 40 deaths (unofficial figures place the number at 64). Approximately 1 crore people were adversely affected. Thousands of people were left homeless and over large areas were devastated by road, power and telecommunications infrastructures. Several trees and electric poles were destroyed, power lines snapped, stalked houses collapsed, windows smashed and cell towers destroyed. Thirty days after the storm, confusion was spreading through large sections of the coast and tourism had stopped. Scientists have invented weapons of mass destruction which could decimate humans; but they could not avoid or minimize these natural disasters

The hardest thing, though, lies ahead. The hard job is restoring power, water and communications. The government was currently conducting a loss assessment. Phailin wanted \$1.5 billion in reconstruction. The Fani figure was even more pronounced.

It is commendable that Odisha has done a good job of managing disasters and is well equipped to deal with these disasters in India. Evacuating almost 12 lakhs from 10,000 villages and 52 urban areas to 6,575 cyclone shelters 24 hours ahead of the cyclone has taken a severe approach.

Although the state government has been applauded to handle the evacuation of 1 lakh citizen for protection by the UN and international media, the government appears to be somewhat complacent and lethargic in restoring connectivity, electricity, and water infrastructure. After the Odisha polls were over, politicians were wintering and were dissatisfied with the masses' misery. They are conscious that their best efforts will now have little impact on the election outcome.

Lack of manpower, in particular technicians, engineers, specialists and craftsmen was a big factor to postpone normalization. While the worst effects are Puri and Bhubaneswar, Cuttack was more successful. Yet in Bhubaneswar and Puri government machinery is concentrated while Cuttack is neglected.

Most VIPs could stay in Bhubaneswar because of that. In Cuttack, the financial capital of Odisha and its main business centre, a little extra effort could have restored with electricity and connectivity. More engineers, workers and technician from unaffected areas or neighbouring states would have been asked by the government in advance. These personnel and technical workers would also have been sent in large numbers by the central government.

There is a big lesson to be learnt from this natural disaster. It revealed how vulnerable, helpless and clueless humans are in the face of nature's fury. Those who are arrogant, conceited, wedded to self-aggrandisement and think of themselves as bigger than others or nature sublimated their egos. Many may believe that nature's fury causes more damage to human beings. But the reality is that human beings are causing more damage to Earth by indulging in wars, causing deforestation, and industrializing without restraint. The more humans try to make their life comfortable in unnatural ways, the worse will be nature's reaction to these. The use of air-conditioners and refrigerators, and excessive use of vehicles leads to environmental pollution and degradation and trigger global warming. The rise in global temperatures has serious consequences on the livelihood of masses. It is leading to melting of ice and rise in sea level. If this process is not halted, survival of humanity is at stake. But it was different from the real picture. No funds to meet the needs of the people involved and the society was in short supply. Yet everywhere and in all things the deficiency was felt. The numerous organizations involved in post-cyclone operations were not adequately organized. There were a number of towns, places that even after seven days of a disaster did not reach for help. For the majority of instances, the allocation of aid was significantly doubled and the government and non-profit organisations did not uphold accountability. Because of the lack of far-sight and also in order to provide relief, organisations distributed items that were not required for the hour to the victims. With regard to the rehabilitation of the victims and of the entire community, no specific strategy common to all the various organisations, which has resulted in confusion, has been adopted by various strategies. To order to determine whether or not the recovery kits achieved positive results, no follow-up action was taken.

Need of Long-term Plans

The National Disaster Act and Policies say that community-based disaster preparedness must be promoted and youth and women should be encouraged to promote voluntary

work in natural disaster management along with media / community services providers. However, it was evident that community engagement, Panchayati Raj institutions (PRIs), civil society and other disaster involvement were involved. There has been an impression that the Govt officials are capable enough to manage everything without much public involvement. The Govt machinery and few unaccountable media have created panic among public by quoting the prediction report of weather department / IMD and by that the black marketers and dishonesty business men took the advantage of the situation by cheating people through artificial hoarding of essential commodities which has been a major financial burden for wage earners of fixed income groups who are not getting any dearness allowances.

It is always the people belonging rich and poor in coastal regime, slum dwellers, homeless and inhabitants of interior regions, fisherman community, scheduled casts and scheduled tribes, become worst sufferers and always prove to suffering during natural calamities of any nature due to lack of adequate coping mechanism. The human casualties happen with mostly the poor who are homeless and staying in thatched house. During flood, cyclone, landslides, rain and earthquake people die due to fall of walls of clay houses or mud houses. Recently, it was noticed due to Hudhud impact heavy rainfall occurred in the districts of Koraput, Ganjam, Gojapati, Malkangiri, Kendrapada and Puri. The poor and the tribal people in these districts have suffered a lot. The more vulnerable primitive tribal such as Bonda and others in the remote areas of backward districts got disturbed with loss of shelter and livelihood due to wind and heavy rainfall.

Often disaster victims are seen to be unable to seek compensation from the Government in good time to repair their homes and start livelihoods for reconstruction and rescue, and in some tribal and southern Odisha rivers, Govt machinery is confronted with the problems of naxalism during the disasters. There is also an implicit managerial apathy. We typically note that there are many committed individuals. Those who work tirelessly to protect the victims without any self-interest. They sacrifice their precious lives in their noble efforts on certain occasions. These details must be provided to the volunteers' families by the national disaster management policy.

Most of the elders, women who are pregnant, disabled, babies, and cattle are severely affected during natural calamities. The training based on the Community must therefore be designed to address this issue. Equal weather conditions were missing and the use of conventional country boats for evacuation demonstrated that there was little difference in sending communication technologies when handling natural disasters. This has been seen that, without engaging local communities and young people in the spirit of sacrifice, the administration is systematically conducting the rescue operation in a way that affects other people in crisis. Across the areas of disaster primary communications including road connections and transport and access, there have been inadequate public services. There are multi-function cyclone shelters, but little effort has been put into building pucca houses under various housing schemes in cyclone prone areas are particularly suitable for the homeless poor who cannot afford a house and housing policies need to be implemented in order to resolve the challenge of handling natural hazards for disaster-resilient houses and buildings.

As we learn, the hills of Eastern Ghat are a natural barrier for monitoring cyclone effects from the geography. Both the government and the central government will make efforts to establish mangrove forests in the coastal belt of Odisha in order to resist cyclones. Many areas are not yet linked to the railway lines, pucca road and proper communications in our Western, Northern, and Central coasts of Odisha.

In order to promote a mechanism of prevention, preparedness and mitigation, the centre enacted the Disaster Management Act 2005 and established a National Disaster Management Authority led by the prime minister and the National Disaster Management Policy 2009. The State Disaster Management Authority, headed by the Chairman and the District Disaster Management Authority, led by the district collector have been established in conjunction with the centre, but legislation, instrumental arrangements and legal arrangements do not result in constructive schemes. Since 1999, after the super cyclone reported a heavy loss of human life and a greater loss to the pastoral economy, the Odisha disaster management authority has been under the administrative control of the revenue department.

An organisation, OSDMA, was formed for the purposes of monitoring the activities of the NGOs in the affected area and for undertaking on behalf of the State Govt steps for recovery, restoration and disaster preparedness. The central agency has conducted projects to address the shortcomings found during and during the next few years of the super-cyclone. After the super-cyclone, OSDMA conducted the following long-term work to deal with the potential consequences of natural disasters in Odisha. (1) Embankment sector, (2) Road sector, (3) Cyclone shelters, (4) Water supply, (5) Fire service centre, (6) Education infrastructure, (7) DFID – assisted Orissa Post Cyclone Reconstruction of primary school building programme, (8) Restoring Essential Health Care Services under DFID assistance, (9) Lift irrigation programme UFID assistance, (10) Multi-purpose cyclone shelters, (11) Multi-purpose flood shelters, (12) Strengthening communication through VHF, (13) Formation of Orissa Disaster Rapid Action Force (ODRAF), (14) Disaster Risk Management Programme, (15) Social Capital Restoration Programme, (16) GOI – UNDP Disaster Risk Reduction (DRR) programme.

After due consideration, the state government was able to develop the State disaster management strategy with the following concepts in order to achieve long-term success in disaster management in Odisha:

1. Taking a constructive approach to disaster management and foster an individual and institutional prevention and preparedness culture.
2. Following a disaster response multi-hazard approach.
3. Changing from an approach to relief and security to a humanitarian relief policy focused on freedoms and rights.
4. Without strong community participation, sustainable growth cannot be achieved, guiding the Community's risk mitigation initiatives.
5. Investing in development policy and planning, institutionalization as one main component of good governance, effective, well-coordinated and participatory disaster management initiatives.
6. Ensuring consistency and universal implementation in all emergency response phases, including prevention, mitigation, relief and restoration. That can be achieved by the implementation of widely accepted minimum

standards. This would be appropriate to change the requirements with local conditions and customs in mind.

7. Attempting to harmonize all activities with local cultural values in the field of disaster management.
8. Emphasis on Environmental protection.
9. Promoting emergency recovery inter-agency collaboration and cooperation.
10. Including all players involved in the management of disasters and identify their positions at different disaster stages.
11. Creating an atmosphere that allows all stakeholders to participate better.
12. Providing legislative funding for the roles and organizations essential for handling disasters.
13. Creating an emergency response mechanism. View people as essential stakeholders and strengthen community-based disaster response mechanisms.
14. Promoting a culture of volunteering; creating a network of trained volunteers who will be deployed in emergency situations.
15. Recording and using indigenous knowledge, where possible. indigenous knowledge
16. Exchange disaster knowledge and details with all stakeholders and their administrators.
17. Building the network with the OSDMA as the main hub for various disaster management organizations.
18. Establishing an Institute for the conduct of disaster management research, development and training.
19. Considering emergency management an important part of education and curricula.
20. Decentralization of Block / Gram Panchayat/ Municipality disaster management and improve their administrative and functional capabilities as the first disaster relief respondents.
21. Ensuring equal, reliable and predictable delivery of humanitarian assistance.
22. Recognizing women's presence and unique challenges in the disaster situation at all levels.
23. Recognizing the greater vulnerability of physically and mentally impaired children, elderly persons and their design and construction involvement during and after emergencies.

During the Philin period in 2013, our state government handled the cyclone adequately and received much recognition from the U.N.O. Similar natural disasters will lead to various, unforeseen crises in the shifting course. Therefore, by restricting its participation to the rescue and emergency operation and by obtaining luminosity grants from central and foreign agencies, the State's position should not be limited to the charity organisation. In our recommendation, Odisha, which has proved to be natural catastrophes, should have a clear vision with a certainly integrated approach, in line with the national and international disaster management strategy with the evolving environments of different natural disasters. The state government has to put practical measures in place to align legislation on food security with MNREGS to help handle state disasters in order to address the crisis efficiently. State investment will increase the production of disaster-prone, long-term environmentally sustainable public assets.

Conclusion

The elimination of the danger or exposure of populations to natural hazards is an important aspect of community emergency management. In order to achieve this, long-term preparations are required in the light of possible hazards, such as climate change, that threatens to increase natural disaster severity and frequency in the future. Consequently, the Odisha Disaster Management plan seeks at combining disaster risk mitigation with adaptation to climate change. The aim is to instill disaster-risk readiness in societies to deter, accommodate and recuperate not just preparedness. Researchers have developed weapons of mass destruction capable of decimating people; however, these natural disasters have not been stopped or their consequences mitigated. Luckily, as floods and cyclones occur, we may track them in advance. Nature alerts us and alerts us of potential disasters if people do not act. Economists and leaders of countries are stressing the growth of GDP and the build-up of wealth that can't be done without the not endless exploitation and depletion of natural resources. The use of more cars and the construction of houses are driving GDP growth and increase; but it has tremendous environmental damage. Now is the time to rework this idea. Sufficient wealth is already created; it requires only redistribution. Another lesson is that people should stop using energy and resources or overuse them. The wrath of nature warns us and shows us how important natural resources and energy are to our lives and how miserable and horrible our lives without them. Such a lack of resources will haunt us unless precautionary measures are taken. It will be at risk to survive the whole of the human race. Posterity isn't going to save us.

References

1. Dash Biswanath. 'Lessons from Orissa Super Cyclone: Need for Integrated Warning System', Economic and Political Weekly. 2002; 37(42):19-25.
2. Dash Biswanath. 'Orissa Super Cyclone, 1999: A Case of Inadequate Warning', Asian Disaster Management News, Jan-March 2003 Asian Disaster Preparedness Centre (adpc), Thailand, 2003, 9(1).
3. Dhir KC. 'The Management of two Disasters in Orissa: The Super Cyclone 1999 and the Floods 2001', 2002. available at www.hindustan.net/discus/messages/74/10393.html
4. Govt. of Orissa, Revenue Department, The Orissa relief Code, Bhubaneswar: Revenue Department, 1980.
5. Govt. of Orissa, Revenue Department, "White Paper on Super Cyclone", 1999.
6. Government of Odisha, Odisha Economic Survey, Planning and co-ordination Dept. BBSR, 2015.
7. Govt. of Orissa, Revenue Department, The Orissa Relief Code, Bhubaneswar: Revenue Department, 1980.
8. Govt. of Orissa, Revenue Department, "White Paper on Super Cyclone", 1999.
9. Kundu Subrat. Evaluation Study of Rehabilitation and Reconstruction Process in Super Cyclone, Orissa, report submitted to Planning Commission of India by Gramin Vikas Sewa Sanstha, 24 Paragana, West Bengal, 2007.
10. Odisha Post dt, 2019.
11. State level Programmes for strengthening Disaster Management in Odisha; initiatives by OSDMA, Govt of Odisha.
12. Odisha State disaster Management Plan, 2018, 2019.

13. Rao PP. "Legal Regime for Internationally displaced person"-seminar on Global Environment and Disaster Mangement: Law and Society, New Delhi, Vigyan Bhawan, 2011.
14. NDMA Guideline: [http:// ndma.gov.in](http://ndma.gov.in)
15. United Nations Environmental programme, 2012.