

Post Super Cyclone Orissa: An Overview

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Exactly a decade has passed since the devastating super cyclone hit Orissa on 29th October, 1999. The super cyclone had a wind speed of more than 300 Kmph. and it centered over coastal Orissa for three days with a torrential downpour and a tidal surge of about 6 metres which swept coastal low lying areas for a distance of about 40 to 50 km. inland. All the adult members of the State, particularly in the coastal region, have direct or indirect experience of the intensity and the effect of this cyclone. Many have seen the wrath of Nature and the miseries it inflicted on this fateful day or on the days followed. The Super cyclone which originated as a "depression" on 25th October, 550km. east of Port Blair, moved northwest wards and intensified into a "cyclonic storm" on 26th October morning and moving further northwest wards, intensified into a severe cyclonic storm on 27th morning when it was 750 km. from Paradip. The system moved further northwest wards and deepened into a super cyclonic storm on 28th October with an estimated wind velocity of 260km. per hour. IMD predicted its landfall between Puri and Balasore. It crossed Orissa coast on 29th October near Paradip, remained centered around it for nearly 36 hrs and weakened only after 31.10.99 further moving Northerly towards Balasore coast. The super cyclone affected 1.89 crore people in 128 blocks, 46 urban local bodies, 2399 gram panchayats and 17993 villages in 14 districts of Orissa. 8243 human lives were lost, 4.45 lakh livestock

perished. Crops in 18.43 lakh hectare damaged. The total loss of infrastructure was estimated to be Rs.6243.96 cr.

29th October, the day when super cyclone first hit the state, has been observed as the National Day for Disaster Reduction and Orissa Disaster Preparedness Day. Only ten years in the long history of human existence may be too short a period, yet compared to the total life expectancy of a generation, it is not that less. Now it is time to look back and look into the lessons learnt and our actual preparedness in abridging the critical gaps we had then. It was not just another disaster in this part of the Globe. Due to its intensity and extensive damage caused, it had taught a good lesson to many including the Policy makers, Administrators, Disaster Managers and other Stakeholders. The most prominent of the lessons are: First, only Government machinery is not sufficient to handle the disasters of higher magnitude. Other stakeholders, civil society organizations and the vulnerable community itself can play very effective role in mitigating the disasters. Second, the traditional world view that Relief is a charity and the conventional approach of Relief, Reconstruction and Rehabilitation are no more acceptable in this century and need a change in approach and orientation. Thirdly, there were critical gaps in our infrastructure,

* Death toll was high in areas close to coast due to absence of safe shelter buildings.

* As telecom and electricity lines were cut off, there was no alternative power back up, and a fail safe two-way communication network with the field.

* Relief lines were either cut off or blocked due to uprooted trees. No man (trained or skilled) and machine (power saws) were available to clear the relief line immediately. It took weeks to clear the high ways even, not to speak of other arterial roads.

* No trained personnel on Search and Rescue techniques were available at the grassroot level to deal with the emergency of such a magnitude.

* Disposal of carcasses of large numbers (about 4.45 lakh) and unclaimed dead bodies was a herculean task at that time, particularly in absence of trained and dedicated volunteers. Since the entire community was severely affected, even some villages in Erasama area had drastically lost population due to death or missing, hardly there was anybody to come forward for this work voluntarily.

* There was no mechanism at the State level to monitor the aids and relief from our state agencies and charitable organizations.

These lessons gave rise to brainstorming at all levels which resulted in a series of follow up actions. Orissa State Disaster Management



Authority (OSDMA), earlier known as Orissa State Disaster Mitigation Authority, an autonomous organization dedicated for disaster management with operational flexibility in place of bureaucratic rigidity came into existence in Orissa in 1999, immediately after the Super Cyclone. This was the first organization of its kind in the entire country. After Bhuj Earthquake in 2001, Gujarat State Disaster Management Authority (GSDMA) was set up. It was only in 2005, the National Disaster Management Authority (NDMA) was formed.

Slowly and consciously, emphasis was shifted from conventional approach of Relief, Reconstruction and Rehabilitation to Planning, Prevention and Preparedness. Relief was recognized as a right, not a charity.

As an alternative to Indian Armed Forces and to create a specialized and skilled Force for Search and Rescue operations, Orissa was pioneer in setting up of a dedicated response force namely Orissa Disaster Rapid Action Force (ODRAF) in 2002 with dedicated Jawans from the State Armed Police, trained in modern Search and Rescue techniques and latest equipment. Five units of ODRAF are functioning at Jharsuguda, Koraput, Cuttack, Chatrapur and Balasore. Each ODRAF unit has been provided with 66 types sophisticated equipment required for





disaster management including road clearing equipment, branch cutter, tree pruner, concrete cutter, RCC cutter, boat, inflatable tower light, generator, forklift, hydraulic rescue kit, collapse structure search and rescue (CSSR) kit and medical first responder (MFR) kit, ambulance, manikin, high discharge submersible pump, flexi tent, flexi water tank, mountaineering equipment, commando search light, diving equipment set, breathing apparatus with gas mask and chemical cartridge, etc. Five more ODRAF Units at Paradip, Bhubaneswar, Baripada, Rourkela and Bolangir are being set up. NDMA has also set up one unit of National Disaster Response Force (NDRF) at Munduli, Cuttack.

It was learnt that death toll was high in Super Cyclone due to non-availability of safe shelter buildings in the coastal village, which could have withstood the intensity of the cyclone and the storm surge. Only 23 cyclone shelters were constructed by Indian Red Cross before the super cyclone, wherein about 42000 people took shelter and saved their life. Taking a clue from the Red Cross, OSDMA has created a network of Cyclone shelters along the Orissa coast to provide safe shelters to the vulnerable people during floods and cyclones. The locations were identified through a scientific survey conducted by Indian Institute of Technology (IIT), Kharagpur with two major postulates i.e. No person will have to travel

more than 2.25 km to get a safe shelter and without crossing a natural barrier. The building is designed to withstand wind speed up to 300 kmph and moderate earthquakes. Its plinth is above High Flood Line (HFL) and standing on a stilted floor, it can remain unaffected in storm surge up to the 1st floor level. So far, 204 multipurpose cyclone shelters, including 65 by Indian Red Cross Society have been constructed in coastal districts of Orissa and have been handed over to the community based Cyclone Shelter Management and Maintenance Committees (CSMMC). 23 more cyclone shelters are under construction. In flood affected areas, 52 flood shelters of similar design are being constructed in 9 flood prone districts out of Chief Minister's Relief Fund. About 149 more cyclone shelters and six shelters cum godowns are proposed to be constructed under National Cyclone Risk Mitigation Project (NCRMP). Community members have been trained in Search and Rescue and First aid techniques and all types of equipment have been supplied to the shelters. In the aftermath of the Super Cyclone, as many as 8890 Primary School and 1152 High School buildings have been constructed in the State, which can act as shelters. To review preparedness and to practice the skills learnt, mock drills are being organized in collaboration with National Disaster Management Authority (NDMA) in all cyclone shelters on 19th June every year.



Speed is the essence of Disaster Management. Dissemination of Early warning and disaster safety tips to the vulnerable community, to the field level disaster managers is very important. Sooner the warning is disseminated, more preparation time becomes available for the community, the field functionaries and volunteers to get ready for the incoming disaster. Another success story with visibility in Orissa is the layers of communication in place for disseminating early warning. A dedicated civil VHF network has been set up at 414 locations covering districts, blocks, some vulnerable tahasils, Gram Panchayats and



other locations. Multi-hazard resistant Emergency Operations Centre (EOC) buildings have been constructed at all District headquarters and the State level EOC has been set up in the Cell

Office of SRC at Rajiv Bhawan. Communication and other EOC equipment have been supplied to State EOC and District EOCs of 30 districts. Equipment like inflatable tower light, branch cutter, etc. have been provided to District and Sub-divisional EOCs and all Cyclone Shelters. Toll free telephone numbers 1077 and 1070, have been installed in District Emergency Operations Centres (EOCs) and State EOC respectively. All the districts have been provided with satellite phones as a fail safe communication tool.

Amateur Radio popularly known as HAM Radio is primarily a hobby and a service in which participants, called "Amateur Radio Operators" or "HAMs," use various types of radio/ wireless communications equipment to



communicate with other radio amateurs for public service, recreation and self-training. At the same time, the HAMs often support the communities and administrators with emergency and disaster communications at the time of need. In the aftermath of Super Cyclone, 1999, HAM Radio was found useful in establishing communication with the affected areas in which HAMs from other states participated in this activity. Based on the said experience, initiatives have been taken to train the volunteers in HAM Radio with technical assistance of National Institute of Amateur Radio (NIAR), Hyderabad in order to enable them to qualify in the prescribed examination and obtain the required license to operate HAM stations in our State. OSDMA has trained 291 volunteers on HAM Radio and has set up 21 HAM Stations.

It is said that if planning is done properly, then 50% of the work is complete well in advance. The Government of India and UNDP assisted Disaster Risk Management (DRM) Programme





has been implemented in 23,263 villages under 3,210 GPs of 155 blocks and 58 Urban Local Bodies under 16 districts of the State. Disaster Management Committees (DMCs) have been formed and Disaster Management Plans (DMPs) have been prepared in all the districts, blocks, Gram Panchayats and villages under the programme.

Only a handful of trained officials of the Government will be capable enough to handle the disaster of a Super Cyclone magnitude. To overcome the shortfall, OSDMA has created an army of volunteers at different levels and imparted trainings on different skills of disaster management. 446 DMC members at district level, 4259 members at block level, 49220 members at Gram Panchayat level, 244213 members at village level have been trained on preparation of Disaster Management plans and use of the same at emergencies. Similar training Programmes have been taken up for capacity building of PRI members (315 PRIs at state, 538 at district and 7982 at block level), NSS Programme Officers and volunteers (563 at state level and 4082 at district level), NYKS Officers and volunteers (60 at state level and 1001 at district level), and NCC and Scouts Guides (3715) under DRM Programme.

Basic Training on Shelter Management has been given to the CSMMC members of all

cyclone shelters and 50 volunteers of shelter based Disaster Management Teams, per shelter have been given training on First Aid and Search and Rescue techniques (25 volunteers in each category per shelter) in collaboration with St John Ambulance and Civil Defense Organization respectively. Similarly, Civil Defense Units in the State have been strengthened and training equipment have been provided.

Urban Earthquake Vulnerability Reduction Programme is being implemented in Cuttack, Bhubaneswar and Sambalpur towns. The City level Disaster Management Committees, City Preparedness Committees and City Enforcement Committees have been constituted. Sensitization programmes for Corporators and Councilors have been conducted. Civil Engineers of Cuttack and Sambalpur have been sensitized in earthquake resistant design and construction of buildings. Training on earthquake resistant design and construction practices have been organized for Masons in Cuttack, Bhubaneswar and Sambalpur towns. Training on earthquake resistant design and construction of buildings has been organized for the civil engineers in all the districts.

First 72 hours is known as the golden hour of Disaster Management, for the vulnerable community itself has to face the wrath of nature as the First Responder, before any external agency reaches to intervene. Hence capacity building of the vulnerable community, strengthening the task forces, setting up of a network of Stakeholders and civil society organizations, preparation of village level DM Plans, continuous upgradation of knowledge through training and capacity building and follow up practice through mock drills are very important to keep the machinery in an ever ready mode. OSDMA has been doing that very successfully for last 10 years.

every incident/ disaster, a team of Officers are deputed to the disaster area to set up an incident command post and to assist the district/ local administration to manage the emergency scientifically and systematically. The principles of ICS have been successfully practiced by OSDMA in managing disasters like Balasore floods in June 2007 and in July 2008 and Mahanadi floods in September 2008, Karomandal Express train accident in 13th February, 2009 and tornado in Rajkanika block of Kendrapara district on 31st March, 2009

Non-Governmental Organizations play an effective role in educating the community members on disaster safety tips and in assisting the administration in managing the disasters. OSDMA has recognized the role of these civil society organizations. ANGO Coordination Cell is in operation in OSDMA to organize and coordinate the functions of different NGOs, INGOs, Indian Red Cross Society and UN Agencies like UNDP and UNICEF. Block level nodal NGOs have been identified to coordinate the activities of cyclone shelter management and maintenance. Indian Red Cross Society, Orissa State Branch has been working with OSDMA in many fields. Training programmes for CSMMCs of Puri district were organized in collaboration with the Concern Worldwide, an INGO. Similar training on school safety plans have been done with SEEDS India and UNDP. In collaboration with Handicaps International and Santa Memorial Trust, specific designs are incorporated and equipment are distributed to selected cyclone shelters for differentially- able persons.

It is a fact that a number of structural and institutional interventions have been done by the Government of Orissa during the past ten years. The coping capacity of the vulnerable community has been strengthened. Civil society organizations have been proactive. Social activism has

increased. Political will and bureaucratic attitude have undergone positive changes for creating a disaster resilient society. Now we are not totally unprepared. Efforts are on to further strengthen our disaster related infrastructure and further update and sharpen our skills on disaster management. National Cyclone Risk Mitigation Project (NCRMP) is in pipeline for implementation under Government of India and World Bank assistance. The major components under the project are Last mile connectivity as Component-A, structural interventions as Component-B and Capacity building and other software activities as Component-C. OSDMA has proposed construction of 149 multipurpose cyclone shelters and six godown cum cyclone shelters, construction of connecting roads to the shelters and Raising and strengthening of saline embankments under Component B of the project to further strengthen our disaster related infrastructures.

Orissa is a disaster prone State and natural disasters cannot be prevented or avoided. What can be done is their impact can be reduced. People have to live with disasters, but with preparedness to face the same and with resilience to endure them. The Super Cyclone was a crusader to have inflicted unprecedented damage, an eye opener to have taught us to rectify our mistakes and a millennium pole star to have directed our activities towards a disaster resilient State. From the very first day of the new millennium, the welfare State has been doing the same to increase the resilience of the people of Orissa by strengthening their coping capacity, by building up their confidence and by facilitating their preparedness. Now we are better prepared to face the disaster of a similar magnitude. xxx

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