

2013

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ASSESSMENT OF DRM EFFECTIVENESS RESPONDING TO VERY SEVERE CYCLONIC STORM “PHAILIN” IN ODISHA

A survey report



*Empowered lives.
Resilient nations.*

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Executive Summary

In Odisha, the GoI-UNDP Disaster Risk Management (DRM) Programme was implemented in 23,208 villages under 3,202 GPs of 155 blocks and 58 Urban Local Bodies under 16 districts. The Project was implemented through Odisha State Disaster Management Authority (OSDMA) from 2002 to 2009. The program aimed at reducing vulnerability to natural and manmade disasters through community preparedness.

The strength of disaster mitigation and management depends on the level of community involvement. UNDP’s Disaster Risk Management (DRM) programme had been able to mobilize volunteers through the initiative. This sense of civic engagement has proven an asset during the recent Very Severe Cyclonic Storm – “Phailin” in Odisha occurred on 12th October 2013.

The impact of Phailin was not limited to its landfall at Gopalpur in Ganjam District with massive destruction of public & private infrastructure in the district but also have tremendous impact in other 17 districts of the state, affecting more than one crore population. In the secondary effect, there was heavy to heavy rain continued up to 25th October, 2013, which caused severe flood in 10 major river systems of the State, affecting all the cyclone affected districts once again and continued the suffering of the people remain stranded in shelter places.

Unlike, the Supper Cyclone 1999, and to ensure Zero Casualty, State Government took advance step to ensure evacuation of people from all vulnerable locations of the 17 affected districts, which was treated as the largest evacuation process, ever conducted in the country before any disaster.

The World Bank appreciating the effort of State Government and OSDMA explained that *“Successfully evacuating a million people in not a small task. This cannot be merely achieved by kicking the entire state machinery into top gear for 3 to 4 days following a cyclone warning. This has taken years of planning, disaster risk mitigation infrastructure, setting up of evacuation protocols, identification of potential safe buildings and most importantly, working communities and local organisations in setting up volunteer teams who all knew exactly what needed to be done.”*

Critically analysing the above statement, it cannot be denied that the Disaster Risk Management (DRM) Programme was one among of the other government initiatives, which covered a largest areas of the state, in the last decade, to influence the communities, Civil Society Organisations, PRI members as well as government machinery on several disaster preparedness measures on a consistent manner for 8 years.

It will not be over exaggerated to say that the outcomes of the Disaster Risk Management (DRM) & Disaster Risk Reduction (DRR) programme, got tested in responding to the “Phailin” in Odisha.

So, this survey exercise focussed on collating evidences of DRM effectiveness, gaps and further suggestions / recommendations from various levels and prepares documentation for future reference and further development.

The survey was carried out through extensive visits to 9 most affected districts of the state which included meeting with key officials at State and District Level and visits to the program areas;. Information was collated in relation to DRM Program goals and objectives.

The inputs are received from the State Relief Commissioner’s Office, OSDMA, other State Government Officers, and District & Block Administration and largely from the selected communities of the affected districts, have been taken into account in preparing the draft report.

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Acronyms

BDO- Block Development Officer
BMC – Bhubaneswar Municipal Corporation
CBDP- Community Based Disaster Preparedness
CBO – Community Based Organisation
CDMO- Chief District Medical Officer
CDMP – City Disaster Management Plan
DDMP- District Disaster Management Plan
DMC – Disaster Management Committee
DMT – Disaster Management Teams
DRDA – District Rural Development Agency
DRM – Disaster Risk Management
DRR- Disaster Risk Reduction
EOC- Emergency Operation Centre
ESF – Emergency Support Functioning
GoI- Government of India
GP- Gram Panchayat
GPDMP –Grampanchayat Disaster Management Plan
IAG- Inter Agency Group
IDRN – Indian Disaster Resource Network
IMD – Indian Metrological Department
IRCS –Indian Red Cross Society
MCS- Multipurpose Cyclone Shelter
MDRF – Mayurbhanj Disaster Response Force
NGO – Non Government Organisation
ODRAF – Odisha Disaster Response Force
OPRF – Odisha Phailin Response Forum
OPRF- Odisha Phailin Response Forum
OSDMA- Odisha State Disaster Management Authority
PPT- Paradeep Port Trust
PRI – Panchayat Raj Institution
SC- Scheduled Cast
SDMP – State Disaster Management Plan
SOP- Standard Operating Procedure
SP- Superintendent Police
SRC- Special Relief Commissioner
ST – Scheduled Tribe
UEVRP – Urban Earth Quake Vulnerability Reduction Programme
ULB – Urban Local Body
UNDP –United Nations Development Programme
URR –Urban Risk Reduction
VDMP – Village Disaster Management Plan

Chapter-I

1. Introduction:

Odisha is vulnerable to multiple disasters. Due to its sub-tropical littoral location, the State is prone to tropical cyclones, storm surges and tsunamis. Its densely populated coastal plains are the alluvial deposits of its river systems. The rivers in these areas with heavy load of silt have very little carrying capacity, resulting in frequent floods, only to be compounded by breached embankments. Though a large part of the State comes under Earthquake Risk Zone-II (Low Damage Risk Zone), the Brahmani - Mahanadi Rivers and their deltaic areas come under Earthquake Risk Zone-III (Moderate Damage Risk Zone) covering 43 out of the 103 urban local bodies of the State. Besides these natural hazards, human induced disasters such as accidents, stampede, fire, etc, vector borne disasters such as epidemics, animal diseases and pest attacks and industrial / chemical disasters add to human suffering.

During the last decade, the State has faced one or other forms of disasters like flood, cyclone, tornado or drought every year. From 1891 to 2000, 98 nos Of cyclones/severe cyclones had crossed the Odisha coast. This is more than that of the coast of West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra, Goa, Gujrat & Kerala. Following data on crossing of cyclones/severe cyclones in Indian Coast can help appreciate the situation better.

Most of the cyclones cross coast of Odisha, followed by Andhra Pradesh and Tamil Nadu and then West Bengal. Balasore district is more vulnerable to landfall.

**Total number of Cyclonic Storms (CS) /
Severe Cyclonic Storm (SCS) crossing different coasts (1891-2000)**

State	Total No.
West Bengal	69
Odisha	98
Andhra Pradesh	79
Tamil Nadu	62
Karnataka	02
Maharashtra & Goa	18
Gujarat	28
Kerala	03

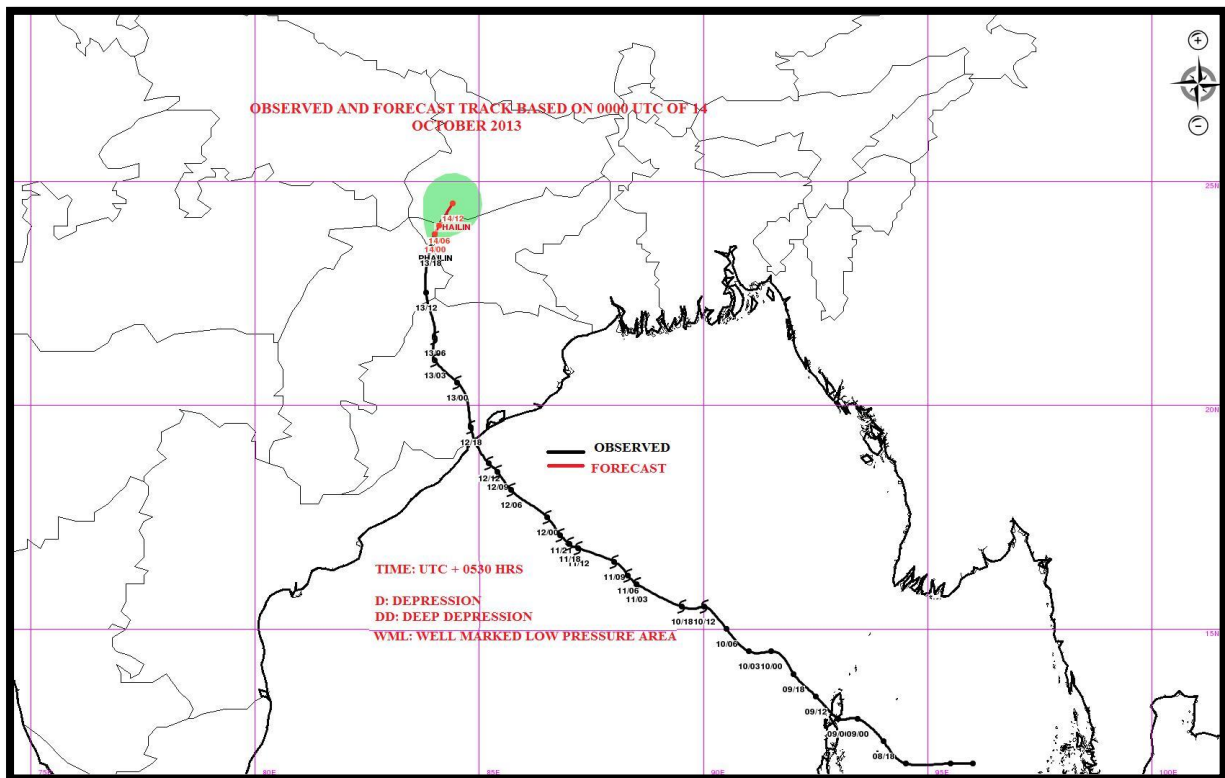
[Source: IMD]

Generally, two cyclone seasons i.e. one during pre-monsoon period (April, May & June up to onset of monsoon) and another post monsoon (October to December) prevail for the coast of Odisha.

The State had experienced two cyclones consecutively in October 1999 causing wide spread and unprecedented damage to life and property in 14 districts. The first severe cyclone occurred on 17-18 October 1999 and the Ganjam district was the worst affected. 11 days after this cyclone, a Super Cyclone devastated the Odisha Coast on 29th October 1999.

A brief note on Very Severe Cyclonic Storm (VSCS) "PHAILIN" occurred on 12th October 2013:

The Very Severe Cyclonic Storm (VSCS) "PHAILIN" hit Odisha coast on 12.10.2013 and the landfall point was Gopalpur in Ganjam District. The wind velocity was recorded to be 205-220 kmph. After hitting the Gopalpur coast, the cyclonic storm with tidal waves of 3.0 to 3.5 meter height ravaged the coastal districts of Ganjam, Puri, Khordha, Jagatsinghpur and Kendrapada. Apart from the coastal districts, the adjoining districts namely, Gajapati, Nayagarh, Keonjhar, Kandhamal, Koraput, Mayurbhanj, Bhadrak, Balasore, Jajpur, Cuttack, Bolangir and Angul, have also been seriously devastated by this Very Severe Cyclonic Storm and the resultant flood in some districts. The cyclone was accompanied with torrential rains for 3 days, leading to floods in a number of major rivers. Incessant rains and flood with high wind has also caused serious damage to other districts of the State.



In Ganjam district alone 2812 villages have been affected. Apart from loss of life, power supply, water supply system and communication system were totally disrupted and lakhs of people were rendered homeless. Public and private properties, agricultural crops and horticultural plantations have suffered severe

damage. All surface communication systems, telecommunication, power supply and water supply were totally disrupted. For the first time after the Super Cyclone of 1999, the State has witnessed a **Very Severe Cyclonic Storm** of rare severity.

Following the cyclone, due to heavy rainfall, Baitarani, Budhabalanga, Rusikulya, Subarnarekha and Jalaka rivers witnessed floods / flash floods affecting the downstream areas of mainly, Mayurbhanj, Balasore, Bhadrak, Keonjhar, Jajpur and Ganjam districts. The death toll, due to both the disaster cyclone and flood mounted to about 59. Compared to the super cyclone of 1999, human loss during PHAILIIN was minimal.

Thanks to the efforts put forwarded by the OSDMA, Government and other organisations towards cyclone preparedness, which helped in minimizing the loss of lives. However, loss of property included damaged and collapsed houses, loss of crops, collapsed buildings, overflow of drains caused flood like situation, uprooting of cell phone towers, telephones and electric poles, paralysed the normal life of public of eight districts. `

Chapter-II

2. Objective of the Survey

Considering the emergency situation aroused, due to the Very Severe Cyclonic Storm -“Phailin” in Odisha on 13th October 2013, United Nations Development Programme (UNDP) decided to conduct a survey for measuring the effectiveness of Disaster Risk Management (DRM-2002-09) and Disaster Risk Reduction (DRR - 2009-12) programme outcomes, in responding to “Phailin” and subsequent flood. The objective of the study is to carefully analyse the effectiveness of following aspects, as envisaged under DRM & DRR programme with support of UNDP:

- Emergency preparedness and their effectiveness.
- Use of Disaster Management Plans prepared at state, district and community level.
- Use of Indian Disaster Resource Network (IDRN) for mobilising resources.
- Operationalisation of Emergency Operation Centres (EOC) at state and district level.
- Functioning of early Warning system and its effectiveness, from state to community level.
- Mobilisation of trained volunteers for Warning dissemination, Search & Rescue, first aid, shelter management etc.
- Community Mobilization in preparedness and response phases.
- Go-NGO coordination for Relief and Response activities.
- Institutionalization of the system for involvement of the DMCs and DMTs during actual disasters.
- Role played by elected representatives (PRI members) in evacuation and ensuring emergency stock piling of essential items.
- The preparedness level of the medical facilities.
- Additional plans prepared to ensure safety of women and children.
- Preparedness level at Municipal Corporation of Bhubaneswar.
- The preparedness of SC/ST groups.

2.1. Methodology of the Survey:

The survey conducted to measure the effectiveness of UNDP supported - Disaster Risk Management (DRM) and Disaster Risk Reduction (DRR) programme initiatives, in managing the Severe Cyclonic Storm “Phailin” in Odisha recently. So, to conduct the survey, we had prepared and referred the following matrix to measure the effectiveness at different level, as the programme initiatives were

undertaken starting from State, District, Block, Gram Panchayat and up to the Village levels, as well. Similarly, Urban Earthquake Vulnerability Reduction Programme (UEVRP) & Urban Risk Reduction (URR) programme was implemented at Bhubaneswar Municipal Corporation (BMC). So, the survey was also conducted at BMC level, on some specific achievements at the Bhubaneswar City level.

2.2. Sample Survey: The sample survey was planned especially to collect the information regarding Community level preparedness in selected villages of affected districts and covered under the programme, as well. The villages were selected after necessary consultation with the district and block administrations and based on the impact of the cyclone / flood. The information collected from the respective villages may not reflect the preparedness level of the community in general, but keeping view of the information on the community response especially in evacuation operation, as per the government information, the best practices cited in the report, about specific villages, may be an exceptional example of positive community preparedness.

2.3. Data collection:

- Relevant data/ information on preparedness measures taken at different level by the administration were collected from the respective state, district and local authorities with prior intimation and consultation.
- Secondary sources of information like official websites, media publications and information received through email from respective forum or authorised sources are also taken into reference.
- Information shared by the government authorities, during personal interview are also recorded as the authentic information on the steps taken by respective departments and government bodies.
- Information included observation through transect walks and village mapping, individual interviews with key informants, focus group discussions and some basic survey tools to collect basic quantitative data for comparison purposes.

2.4. Matrix Prepared for conducting the survey:

Level	Programme Component	Major Outcomes of the components	Parameters identified to measure the effectiveness	Process identified
State & District level	Development DM Plan	State (draft) & District DM plans prepared in selected districts.	<ul style="list-style-type: none"> • Availability of updated version of DM Plans • SOPs of key line department authorities • DM plan referred during preparedness and response planning 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities • Follow important instructions and government orders issued for preparatory and response measures.
	Creation of Resource Network	Indian Disaster Resource Network	<ul style="list-style-type: none"> • Updated IDRN database • Referred for resource mobilisation during planning for “Phailin” 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities
	Development of Disaster Management Information Centre	State & District EOCs.	<ul style="list-style-type: none"> • Functioning of EOCs at State & Districts with different ESFs • Warning / Information dissemination mechanism established • Communication and other Equipments availability and their usefulness • Availability of DM Plans 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities • Visit to EOCs and interaction with the Officers in charge • Stock taking of equipments and their functional status • Fetch information from Orders & instructions issued
	Institutionalisation of Disaster Management as per DM Act 2005	Strengthening Disaster Management Authority at State & District level	<ul style="list-style-type: none"> • Meetings conducted and preparatory measures planned • Follow up meetings and major decisions taken and role clarity 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities • Fetch information from Orders & instructions issued,

				meeting proceedings etc
	Capacity building & training programmes for Govt. Officials & Elected representative on Disaster Risk Management	Key Government department officials and Elected Representatives (PRIs) trained separately on preparation of Disaster management Plan department wise and SOPs for respective level.	<ul style="list-style-type: none"> • Role clarity of key department authorities • Availability of department disaster management plans and SOPs 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities.
	Strengthening coordination Mechanism with Civil Society	GO-NGO coordination established for better response during emergency situation	<ul style="list-style-type: none"> • GO-NGO coordination cell established • Frequency of meeting and information sharing process • Volunteers database and Intervention planning 	<ul style="list-style-type: none"> • Attend the Go-NGO coordination meetings and collection of meeting proceedings • Personal interviews with Senior Authorities and key informants • Access websites developed or online information available, if any.
Block & Gram Panchay at level	Preparation of Block Disaster Management Plan	Block Disaster Management plans prepared in coordination with line departments and concerned Gram Panchayats.	<ul style="list-style-type: none"> • Availability of updated BDMPs / GPDMPs • SOPs of key line department authorities • DM plan referred during preparedness and response planning 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities • Follow important instructions and government orders issued for preparatory and response measures.

	Institutionalisation of Disaster Management	All Block, Gram Panchayat and village Disaster Management Committees formed and members trained in selected districts	<ul style="list-style-type: none"> • Existence and functioning of DMCs • Preparatory meetings at DMC level and major decisions taken • Role clarity in preparedness and response planning & implementation 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities • Fetch information from Orders & instructions issued, meeting proceedings etc
	Training & Capacity building of PRI members.	PRI members trained to prepare their GPDMPs	<ul style="list-style-type: none"> • Availability of GPDMP • Role clarity 	<ul style="list-style-type: none"> • Personal interviews with Selected PRI members of affected districts.
	Disaster Management Information centre	Functioning of block control rooms in emergency situation	<ul style="list-style-type: none"> • Functioning of block control room • Warning / Information dissemination process • Coordination mechanism established for emergency situation 	<ul style="list-style-type: none"> • Personal interviews with Selected Block development officers of affected districts and other officers/ staffs deployed in control rooms.
Community/ Village	Formation of VDMCs and DMTs	Village disaster Management committees (VDMC) constituted and Volunteers identified for different Disaster Management Teams (DMTs)	<ul style="list-style-type: none"> • Existence of VDMCs and VDMTs • Role clarity of VDMC & DMT members in handling emergency situations like Warning dissemination, Evacuation, Shelter Management, S& R, First Ad, Relief distribution etc. 	<ul style="list-style-type: none"> • Visit to selected villages & Multi Purpose Cyclone Shelters of affected districts. • Focussed group discussion with villagers, divided into different sub group to fetch information on preparatory measures, based on VDMPs, on various aspects like warning dissemination & Evacuation process followed, Shelter Management, Search &
	Preparation of Village DM Plan	Community Based Disaster Preparedness plans were prepared in with the help of local NGOs / CBOs.	<ul style="list-style-type: none"> • Availability of VDMPs and its regular updation. • Responsibility of making VDMPs functional and updated 	

	<p>Training & Capacity Building of Community members</p>	<p>Special training programmes organised at village level for CBDP process and skill development (like S&R, First Aid etc)</p>	<ul style="list-style-type: none"> • Last training organised, on what aspect and other training details. • Participation details in the last training programme • Role Clarity • Availability S& R equipments & First Aid Box, if any • Special Training organised at Multipurpose Cyclone / Flood Shelters (MCS) 	<p>Rescue, first Aid etc.</p> <ul style="list-style-type: none"> • Individual interaction to capture specific intervention, success stories, innovative approaches etc • Stock taking of equipment available at MCSs and their usefulness.
	<p>Mock Drills</p>	<p>Mock Drills organised at village level after organising skill development trainings on S&R and First Aid</p>	<ul style="list-style-type: none"> • Response drills organised at MCSs • Mock drill at village level and frequency • Updation of VDMPs followed by mock drill and follow up trainings 	
<p>Bhubaneswar Municipal Corporation</p>	<p>Development of DM plan at Urban level to reduce Disaster Risk and training & Capacity development of key line departments, Elected members and volunteers on skill development and</p>	<ul style="list-style-type: none"> • City Disaster Management Plan for Bhubaneswar prepared. • Trainings have been conducted for Govt officials, elected representatives and volunteers of BMC. 	<ul style="list-style-type: none"> • Availability of updated version of CDMPs. • SOPs of key line department authorities • DM plan referred during preparedness and response planning 	<ul style="list-style-type: none"> • Personal interviews with Senior & key line department Authorities • Fetch information from Orders & instructions issued, meeting proceedings etc

disaster management planning			
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2.5. More details about the survey:

- The survey was planned for 22 days, comprising of 6 days for state and city level interaction with various stakeholders, 13 days for district/ blocks/ Village level and last 3 days for compilation of reports based on the data collected from various level.
- Field visits were planned to all the 9 districts, which were mostly affected / highly alerted to affect by the Very Severe Cyclonic Storm “Phailin” and subsequent floods. All these districts were covered under DRM Programme (2002-09) and subsequently, two of those districts (i.e. Kendrapara & Ganjam) were covered under DRR programme (2009-12).
- Following are the details of the places visited during the field survey of 13 days :

Name of the District	Sample Block visited	Sample Villages visited
(1) Puri	(1) Krushnaprasad & (2) Bramhagiri	(1) Arakhakuda
(2) Jagatsinghpur	(3) Balikuda	
	(4) Ersama	(2) Nardia
(3) Balasore	(5) Soro & (6) Bahanaga	
	(7) Remuna	(3) Inchudi
(4) Mayurbhanj	(8) Betanati	(4) Nakhara
	(9) Badasahi	(5) Salagaon
(5) Bhadrak	(10) Basudevpur	(6) Brajanandapur
(6) Kendrapara	(11) Marshaghai	(7) Parakula & (8) Pikirali
(7) Ganjam	(12) Ganjam Sadar	(9) Purunabandha
	(13) Gopalpur NAC	
(8) Cuttack	(14) Niali	(10) Bishnupur
(9) Khorda	(15) Baliana	(11) Prataprudrapur

- During the field visit to above districts, we have interacted with the authorities of District Administration, other department heads, Officers in charge of District EOC, NGO cell, Block Development Authorities, PRI members, Volunteers and Individuals at Community level to get their feedback.
- Focused group discussions were organized in the above listed villages to capture the preparatory measures taken at community as a whole and individual level. A questionnaire, in this respect was developed, which is attached in the appendix.
- Similarly, a check list was also prepared to capture different initiatives taken at different level, starting from State to Community level, during individual interview at various levels with respect to the survey matrix and programme contributions. (*Attached as Annexure-IV*)
- State and city level interaction held in following Government Departments and Organizations:
 - Special Relief Commissioners (SRC) office.
 - Odisha State Disaster Management Authority (OSDMA).
 - Bhubaneswar Municipal Corporation.
 - State Inter Agency Group (IAG).
 - Odisha Phailin Response Forum (OPRF).

Chapter –III

3. Survey Findings & Conclusion:

The survey findings are based on the questionnaire of the terms of reference shared by UNDP. Accordingly, it is divided into three sections i.e. state & district level, Bhubaneswar Municipal Corporation and Community level. In each section, the assessment is based on the programme component as explained in the programme document and outcomes as per the annual and last progress reports.

The findings in this chapter reflect the observations made by the survey team during visits to the field, meetings with key officials and study of available statistical information as well as documentation carried out as part of the project.

3.1. State level:

1. Following the warning from the India Meteorological Department (IMD) on 8th October, 2013 about the cyclonic storm, named as “Phalin”, the first preparatory meeting was called at the OSDMA level on 9th October, 2013 by Dr. Tarra Datt, Additional Chief Secretary, Revenue & Disaster Management and Managing Director, OSDMA at 9.00 am in the morning. Again at 11.45 am, a state level meeting was convened involving all the officials of OSDMA and State Relief Commissioner’s Office to discuss the preparatory measures required up to the community level.

On the same day, at 12.45 pm, Hon’ble Chief Minister, Odisha, discussed with the Collectors of probably affected districts and instructed to make necessary arrangements for incoming cyclone.

On 11th October, 2013 at 10.45 am, an inter departmental meeting was held for cyclone preparedness under the chairmanship of Minister, Revenue and Disaster Management.

2. The State Disaster Management Plan (SDMP) prepared by the time, was referred during the preparedness phase. SDMP which contains the detail response plan for each key departments of the State was also referred by respective departments to start with their preparatory measures and chalk out specific action plans, with reference to the Standard Operating Procedure.
3. State Emergency Operation Centre (SEOC) is functioning in the office of the Special Relief Commissioner at Rajiv Bhawan, Bhubaneswar on 24x7 basis round the year. The State EOC was fully functional with all its communication equipments and found useful for coordinating with District EOCs and other departmental control rooms.

However, Emergency Support Functioning (ESF) concept envisaged under DRM programme at the State EOCs are not operational but the respective departments have opened the control room at their level and coordinate with the state control room as and when required.

Similarly, the District Emergency Operation Centres (D-EOCs) are found full functional with Emergency Sections of District Administration. Again the ESF

concept and presence of representatives from key line departments to coordinate respective sectoral activities are lacking.

A critical observation made in all the District EOCs, visited during the survey, that there is a demand of one dedicated, disaster management professional is required to systematically prepare the DDMPs, coordinate the relief and response activities with Civil Society Organisation during emergency period and preparedness activities in normal period. This support has been felt necessary after the withdrawal of District Project Officers working under DRM and/ or DRR programme.

Lastly, it is observed that a toll free number (1077) and additional telephone number are available and published through print / electronic media for the general public, to get the updates about the disaster situation and inform about any incident to the administration.

4. Early Warning on the incoming cyclone – “Phailin” was issued to the probable affected districts on 9th October, 2013 i.e. soon after getting the confirm warning from IMD with a specific instruction to ensure the warning dissemination and evacuation of all people from vulnerable locations and living in Kutcha houses by 12th October, 2013.

Similarly, following the instruction from State authority, District Administrations of all the probable districts have ensured the warning dissemination through Public Addressing System (PAS) and evacuation of people, by evening of 12th October, 2013.

5. GO-NGO coordination was established by the OSDMA on 11th October, 2013, followed by a preparatory meeting¹ with participation of representatives of the State IAG and “Odisha Phailin Response Forum (OPRF)”, set up by State level NGOs. So, interventions by different agencies planed for relief and restoration work, are successfully carried out in coordination with respective District Administration. Initially, there was confusion with two parallel NGO forums at state level, like State IAG and OPRF, but in later stage it was mainstreamed at district level after formation of District GO-NGO coordination cell and government decisions to carry out relief work by different Agencies in close coordination with District Administration.
6. The Women and Child Development Department, Government of Odisha issued office order² to all 14 probable affected district administrations for ensuring special attention towards elderly, people with disabilities, women and children as a part of preparedness for the impending disaster. Special directions³ issued to District Social Welfare Officers (DSWOs) for ensuring special care for pregnant, lactating women, Children, old and persons with disabilities during the pre and post cyclone period.

¹ Minutes of the NGO coordination meeting held on 11th October, 2013 and uploaded to the OSDMA website.

² WCD, GoO Office order no. 1100/SWCD dated: 9th October 13 and Order no. 1122/ SWCD dated: 10th October 2013

³ WCD letter no. 1128 & 1130/ WCD dated: 12th Oct, 2013

Special instruction issued to the Collector for rapid assessment of Anganwadi Centres owing to cyclone and protocol to be followed for the vulnerable persons (Women, Children and persons with disabilities) affected by disaster.

3.2. Bhubaneswar Municipal Corporation (BMC) level:

1. The first meeting at BMC level was convened on 9th October, 2013 involving Community organisers and Ward mobilisers for taking sector wise precautionary measures for the incoming cyclone and stock piling of all essentials in 116 authorised slums of the city, who are treated as the most vulnerable.
2. A preparedness meeting called at the Commissioner of Police level on 10th October, 2013, where the preparedness measures required by BMC were meticulously discussed. The meeting was attended by the Collector, Khorda, Commissioner, BMC, E.E, PHED and other key line departments of the Bhubaneswar city.
3. Areas were distributed among the State Fire Service personnel and State Police Personnel to be in readiness with their equipment for immediate clearance of road after cyclone and it was censured by the morning of 13th October, 2013.

3.3. Community/Village level:

4. Village Disaster Management Plans, prepared under DRM programme, was not found in any of the sample villages of 9 districts, during the focused group discussion carried out in respective villages⁴. However, 1-2 % of the villagers participated in the focused group discussions have responded that they were involved in the meeting called by the facilitating NGO during the programme period, process of VDMP discussed but after that they have not seen any plan handed over to the villages.
5. But during the discussion at Parakula Village of Marshaghai block, Kendrapara district and Purunabandha village of Ganjam Block, Ganajam district, where GoI-UNDP DRR programme was implemented during 2011-12, the list of Disaster Management Committees and DMT members name found printed in the flex and available with the Secretary of the Cyclone Shelter. Again the copy of the VDMP was not found. Hence, VDMPs were not referred by the Villagers during the preparedness phase of the "Phalin".
6. Warning dissemination from the state to community level was ensured through district & local administration, NGO/ CBOs, PRI members and community volunteers. Apart from all these effort, media played a vital role to spread the message among the rural and urban people through news channel and daily news papers. Some villagers, even claimed that they were getting updates from their near and dears over mobile phones. A large number of people of the 9 surveyed villages agreed that they had been informed by the government through Public Addressing System like Mike announcement before one day i.e. on 11th October, 2013 for "Phailin" but no information on subsequent flood.

⁴ List of villages, where focused group discussions carried out, are available at page-10 of this report under Chapter-II

7. Announcement was basically on incoming cyclone and to evacuate the vulnerable places and move to the nearest safe shelters like Cyclone/ flood shelters, school & Panchayat buildings or any Pucca building available in their villages by evening of 12th October, 2013, positively.
8. More than 50 % of the people participated in the FGD during the survey, expressed that they came to the shelters or safe places, as convenient to them, on 12th October, 2013 of their own after getting the warning of severe cyclonic storm and watching the wind speed.
9. 3-4 % of the people in all above villages expressed that they had under gone either Search & Rescue or First Aid training and participated in the mock drill, but during 2006-2008. But anyhow, they could able to management emergency situation aroused due to recent "Phailin" with their limited knowledge. Hence, most of the villagers feel that similar training programmes should be organised at least twice a year.
10. Villagers are found more curious about the skill building activities like Evacuation, Search & Rescue and First Aid training because of the recent response activities carried out for "Phailin" and they realised that these skill based trainings are necessary to save their life. Hence, it would be more effective to start Training & Capacity building activities along with the recovery activities.
11. Special provisions like ramps and retrofitting in toilets for disabled persons are found in Cyclone shelters constructed by OSDMA. Pregnant women, old persons, persons with disability were also took shelter in the Cyclone /Flood shelter but due to overcrowded of villagers in all shelter places, special provisions for them could not be possible. However, Villagers managed to give priority for their safety and special care by providing space for seating and sleeping. Some villagers claimed that they get cooked food in the shelters during their stay for 1-2 days and some claimed they got dry food like biscuits, flat rice and gur.
12. Medical teams were found in villages of most affected districts by cyclone/ flood like Ganjam, Puri, Mayurbhanj, Balasore etc.
13. Villagers either brought their livestock/ pet animals to the safe shelter places or left them untied to move to the safe places of their own.
14. There is no such institutional mechanism developed for involving Village DM committee and DMTs during disaster period, except the constitution of Community based Cyclone Shelter Management committees and DMTs at all 135 Cyclone shelters constructed by OSDMA. Subsequently, trainings and response drills ware organised on a periodical manner. So, the villages having Cyclone / Flood shelter constructed by OSDMA have got this benefit.

Chapter-IV

Overview of the Impact of “Phailin”⁵

The damages caused by the cyclone were mainly due to gusting action of wind with unprecedented velocity of up to 220 kmph and torrential rainfall from 11 to 13th October 2013. Due to storm surge up to 3.5m, large areas were inundated in Ganjam, Puri, Jagatsinghpur, Bhadrak, Kendrapada, Khurdha and Balasore districts. Baitarani, Subarnarekha, Budhabalanga, Rushikulya and Jalaka rivers experienced floods as a result of torrential down pour during 11th to 14th October 2013. Even the interior districts of Gajapati, Nayagarh, Bolangir, Keonjhar, Mayurbhanj, Sundargarh, Jharsuguda and Cuttack also reported heavy cyclonic rain and flash floods.

As per report received from Collectors, 132.35 lakh people in 171 Blocks, 44 Urban Local Bodies, 2164 GPs and 18374 villages in 18 Districts have been affected. 44 persons have lost their lives due to cyclone and the floods thereafter.



⁵ Source of Information: Memorandum on Phailin & subsequent flood – Revenue & DM department, Government of Odisha.

The standing crops in 6.71 lakh hectares have been damaged. The fishing communities have been severely affected due to huge loss to their boats and nets. The poor artisans have lost their looms, equipment, accessories and raw materials.

The farmers have lost their livestock and sericulture farms. Some other districts also suffered from damage of houses and crop due to the wind and heavy rainfall activity of the cyclone.

Massive and unprecedented damage has been caused to public properties like canal/ river embankments, roads, bridges, culverts, drains, water works, tube wells, LI points, electrical installations, telecommunications infrastructure, Government buildings etc.

Extent of Damages

Abstract of extent of damages due to cyclone & floods is indicated below:

Sl.	Name of the districts	Blocks Affected (Nos.)	Villages Affected (Nos.)	ULB Affected (Nos.)	Population Affected (Nos.) due to flood & cyclone	Human Casualty due to cyclone	Human Casualty due to flood
1	2	3	4	5	6	7	8
1	Angul	8	589			1	1
2	Balasore	11	1725	4	1140309	3	5
3	Bhadrak	7	179	1	145000	1	2
4	Bolangir	5		1		1	
5	Cuttack	14	800		1553722		
6	Deogarh	3	140	1			
7	Gajapati	7	1528	2	48030		
8	Ganjam	22	2812	18	1502000	10	3
9	Jagatsinghpur	8	1230	2	900000	1	
10	Jajpur	6	1813	2	630000		
11	Kandhamal	12	124	1	13310		1
12	Kendrapara	9	1592	2	1445891		1
13	Keonjhar	13	263		65123		1
14	Khurda	10	1355	2	2234706	1	1
15	Koraput	2	19				
16	Mayurbhanj	15	854	2	326845		5
17	Nayagarh	8	1582	2	984000		2
18	Puri	11	1769	4	1812775	3	1
Total		171	18374	44	13235981	21	23

Loss of livelihood

Due to cyclone & flood, 3455 traditional craftsmen of 19 districts have been affected causing damage to their equipments and raw materials. 767 handloom weavers have been affected. Similarly, 11111 sericulture farmers have been affected.

Damage to Nets and Boats of Fishermen

8198 boats and 31058 fishing nets have been damaged due to cyclone & floods.

Damage to Sericulture Farmers

157 hectares of Tasar plantation, 308 hect. of standing mulberry crops, 196 hect. of Eri crops of 2536 nos. of farmers have been sustained loss 50% and above due to cyclone & floods.

Damages to Individual Houses

Sl. No	District	Fully Damaged		Severely Damaged		Partially Damaged	Hut Damaged	Cowshed Damaged	Total
		Pucca	Kutchha	Pucca	Kutchha				
1	Bhadrak	0	365	0	400	3700	270	10	4745
2	Cuttack	0	0	14	102	956	88	0	1160
3	Gajapati	0	224	0	2330	24453	170	0	27177
4	Ganjam	15	87634	4380	61020	7830	18326	32550	211755
5	Jagatsinghpur	0	38	0	2205	5242	476	6406	14367
6	Jajpur	0	237	0	1033	6386	873	860	9389
7	Kandhamal	0	34	0	141	99	0	0	274
8	Kendrapara	0	886	0	3369	16661	920	0	21836
9	Khorda	0	520	0	45250	24760	0	0	70530
10	Mayurbhanj	0	340	0	1028	2378	254	0	4000
11	Nayagarh	0	467	0	1348	20478	852	871	24016
12	Puri	0	1144	0	5553	4448	4251	2661	18057
Total		15	91889	4394	123779	117391	26480	43358	407306

Chapter-V

A holistic approach in Disaster Management -Paradigm shift from relief centric to disaster preparedness, management and mitigation

The two successive cyclones in October 1999 - the severe cyclone which hit the Ganjam coast on 18th & 19th and the Super Cyclone on 29th & 30th - damaged the infrastructure in 14 districts of the state and disrupted public life. These two Cyclones ushered a shift in people’s perspectives and policies & approaches of the Government towards management of disasters. In the post-cyclone period, the State Government has endeavored to develop a holistic approach to disaster management, by incorporating into it the growing concern for environment, risk assessment, risk reduction and for ensuring peoples’ participation in creating a disaster resilient Orissa. The intension of the state government to bring in sweeping changes in the disaster management process was quite evident in setting up an autonomous organization called Orissa State Disaster Mitigation Authority (now named as Orissa State Disaster Management Authority) to look after Post Cyclone restoration and reconstruction work along with development of suitable management strategy to manage disasters and mitigate losses. The experience of coping with recurring disasters convinced the government that preparation and promotion of disaster resilience is essential for minimizing losses resulting from disaster.

There are a number of ways to achieve, but in reality there is one that is by far the most important and the foundation for all others. This is the process of creating disaster resilient communities. Approaches in disaster management have shifted the perspective from the prevailing emergency management framework to Disaster Risk Management, which calls for proactive disaster management activities with key role of local communities.

A programme named “Community Based Disaster Preparedness” (CBDP) was launched in the year 2001 with support from UNDP on pilot basis in ten (10) blocks from seven (07) districts of Orissa. After the success of CBDP, GoI-UNDP “Disaster Risk Management (DRM) Programme” was implemented in sixteen (16) districts during the period 2003-2008. The overall goal of the programme is “Sustainable Reduction in Disaster risk in some of the most hazard-prone districts”. The Programme Components included the following:

1. Development of disaster management plans at district, block, panchayat and village levels
2. Constitution of Disaster Management Teams and Committees at all levels with adequate representation of women in all committees and team. (Village / Ward, Gram Panchayat, Block / Urban Local Body, District and State.)

3. Capacity building of Disaster Management Teams at all levels. Special training for women in first aid, psychological first aid, shelter management, water and sanitation, rescue and evacuation, etc.
4. Capacity building in cyclone and earthquake resistant features for houses in disaster-prone districts, training in retrofitting, and construction of technology demonstration units.
5. Integration of disaster management plans with development plans of local self-governments.

A comparison of Pre-Supper Cyclone -1999 with the Pre-Phailin 2013

The Supper Cyclone struck on 29th October, 1999 with wind speed of 300 kms per hour and tidal waves rising 12 meters (30-40 feet) high. The area around Paradeep Port, bore the full brunt of the storm. Twelve districts were affected, the worst being Jagatsinghpur and Kendrapara. Unlike most cyclones, which pass within 8 hours, this cyclone continued for 34 hours wrecking havoc in 40% of Odisha. By October 30th the entire region, including the state capital, Bhubaneswar, was cut off from the rest of the world. The preparedness and destruction can be imagined from the fact then even the state capital, which was 150 kms away from the centre of the storm, was not able to restore power to all part of the city even 11 days after the calamity. Death, disease and destruction were all around.

The super-cyclone had given enough indication of its savage fury long before it struck. For four days the cyclone circulation lay in the Bay of Bengal acquiring monstrous proportions. The Indian Meteorological Department (IMD), which has a separate division for cyclone warning, had sent out warning to Odisha and West Bengal on the super cyclone, 4 days in advance. But the interpretation of the warning to the public was not very specific and clear. The high-tech IMD only benefitted the big companies and institutions like the Paradeep Port, which have their own structures for disaster management. The masses are no way benefitted from such sophisticated technology as it never reached them. The State Government failed to take precautionary measures to save the lives and properties, as a result of which more than 10,000 people killed and there was a sever destruction to the public and private properties. It took almost a week before the state and centre could swing into action to provide rudimentary rescue and relief measures. The food packets air dropped by India Air Force gave only token relief after a week of time.

In the very capital city, Bhubaneswar, even after a fortnight, 25,000 slum dweller families, whose houses were destroyed, had received no relief. Vast areas of Jajpur district were made accessible by road only 10 days after the cyclone, and virtually no relief reached the people till then. Ersama could not be reached even two weeks after

the tragedy. Several villages under two blocks of Ersama and Balikuda of Jagatsinghpur district were still not accessible by road 17 days after the cyclone.

So, it can be easily analysed that the preparedness level for Super Cyclone was so poor in comparison to the current situation. The most important thing was Government had very limited institutional capacities to manage such devastating cyclone in a very systematic approach. Disaster Management was just limited to Emergency Management with Relief and Rescue operation. Preparedness was not even practiced at community level except few initiatives were carried out by Indian Red Cross Society by constructing Cyclone Shelters in most vulnerable pockets of the Coastal districts. 23 Red Cross cyclone shelters along Odisha's coastline, although few in number, played a key part in saving thousands of lives when the super-cyclone struck in 1999. The lesson learnt from the Super Cyclone could only be a major thrust for the State, as well as Central Government to frame up the systematic Disaster Management approach in the country.

Paradigm Shift and GoI-UNDP Disaster Risk Management / Reduction (DRM/DRR) Programme:

The two successive cyclones in October 1999 - the severe cyclone which hit the Ganjam coast on 18th & 19th and the Super Cyclone on 29th & 30th - damaged infrastructure in 14 districts of the state and paralysed public life for days. The Super Cyclone (1999) ushered a shift in people's perspectives and policies & approaches of the Government towards management of disasters. Post 1999, the State Government has endeavoured to develop a holistic approach to disaster management, by incorporating into it growing concern for environment, risk assessment & reduction and for ensuring people's participation in creating a disaster resilient Orissa. The last decade saw a paradigm shift from reactive to proactive disaster management. The Super Cyclone made stakeholders understand importance of Prevention, Preparedness and Participation in managing the disasters. heralding the new approach, Orissa State Disaster Mitigation Authority (OSDMA)-later on renamed as Orissa State Disaster Management Authority, registered under the Societies Registration Act, 1860, was set up by the Government of Orissa on 28th December 1999 to look after Post-cyclone restoration and reconstruction works along with development of suitable management strategy for disaster risk reduction. The experience of coping with recurring disasters convinced the Government that preparation and promotion of disaster resilience is essential for minimizing losses resulting from disaster. With paradigm shift from reactive emergency management to proactive disaster risk reduction, there is more stress on pre-disaster interventions -prevention, mitigation and preparedness. While natural hazards cannot be prevented, measures can be initiated to prevent hazards becoming disasters by

making the communities more resistant and resilient. The uniqueness of community based disaster management initiatives lie in its emphasis on the process of transforming the at-risk communities to disaster-resilient communities. Community groups and community organizations in disaster management are essential in sustaining the risk reduction process for the community to meet intended aims and targets. The Super Cyclone of 1999 reinforced the faith in community based disaster management and led to implementation of pilot project of Community Based Disaster Preparedness Programme (2001) and Disaster Risk Management (DRM) Programme (2002-09) with support from UNDP and Government of India. The programme contributed a lot in establishing a strong Community Based approach and institutionalised disaster management process from community to national level. Government of India and UNDP supported Disaster Risk Reduction (DRR) Programme was implemented in Orissa along with other states of India with an objective to strengthen the institutions set up under Disaster Management Act 2005. In Odisha, although the establishment of State Disaster Management Authority set an example for all other states in the country but the district authorities constituted is still need to be further strengthened. The GoI-UNDP DRR programme only contributed to strengthen the District Authorities in only three districts on pilot basis but the same must be replicated to other districts as well.

However, the slow but the steady improvement in Disaster Management capacities with Institutional set up of the State, has shown a legendary performance for effectively handling the recent Cyclonic Storm named as “PHAILIN” with almost magnificent reduced in casualty and economic loss. The level of preparedness and its effectiveness can be realised from the following reports.

Report on State level Preparedness & DRM effectiveness:

Pre-Cyclonic warning:

On 08.10.2013 India Meteorological Department reported about the formation of a Depression over North Andaman Sea. The forecast of IMD was as follows:“ The Depression over North Andaman Sea moved westwards with a speed of 18 Kmph during past 3 hours and lay centred at 1130 hrs IST of today, the 8thOctober 2013 over north Andaman Sea near latitude 12.00 N and longitude 95.50 E about 1350 km east-southeast of Paradip. The system would intensity into a deep depression and further into a cyclonic storm by tomorrow. It would move west North West wards towards north Andhra Pradesh and Odisha coast during next 72 hours”. On getting this information from the IMD, the State Government started closely monitoring the situation. The track of the system i.e.” Depression over Bay “was thoroughly analyzed in GIS at regular intervals on 9th, 10th, 11th and 12th October 2013. The

position and movement of the system was intimated to all the Collectors and to the print and electronic media. On 10.10.2013, the IMD reported through an "Orange Message" that the Deep Depression had intensified into a Very Severe Cyclonic Storm named as "PHAILIN", indicating the threat to Odisha Coast along with track & intensity of the system, basing on NWP model with conventional technique.

Accordingly, all the Collectors were informed about the system well in advance. They were directed to take all precautionary / preparatory measures to meet the cyclone threat.

Immediate response measures taken up by State Government after receipt of the warning from the IMD are as follows:

Preparedness measures taken at state level (Date wise)

Date: 08.10.2013:

- As soon as the 1st cyclone warning was received on 8th October 2013, the Collectors of all the 14 cyclone prone districts such as Ganjam, Puri, Jagatsinghpur, Kendrapada, Bhadrak, Balasore, Mayurbhanj, Jajpur, Cuttack, Khordha, Nayagarh, Gajapati, Dhenkanal and Keonjhar were alerted through e-mail, fax & telephone.
- They were instructed to take immediate steps to activate the preparedness and ensure that the District Administration is fully prepared to meet the possible disaster.
- The Collectors were advised to convene meeting of the **District Disaster Management Authority (DDMA)** to review the status of preparedness of all the Departments & organisations at the district level and below having a role in cyclone disaster management and give necessary directions to take further measures as may be necessary.
- Collectors were asked to ensure that all the officers and staff are in position and those on leave may be recalled.
- The **District EOCs** were directed to activate immediately to function round the clock with adequate manpower, essential equipment and logistics.
- All the Departments of the State Government were requested to take immediate steps to alert their field officers in the cyclone prone districts to take necessary preparedness measures in consultation with the concerned Collectors to meet the possible disaster.
- Special DG of Police, HQRS in charge of ODRAF, Additional Director General of Police, Fire Services and Commandant, National Disaster Response Force (NDRF) located at 19 Mundali in Odisha were kept on alert for eventual deployment of response forces for evacuation, search and rescue operations.
- Collectors were also asked to mobilize district level officers and to alert local police, the telecom authorities and the police communication network.
- **Odisha State Disaster Management Authority (OSDMA)** was intimated to conduct mock response drill in all the cyclone shelters immediately during which besides rehearsal of the disaster management techniques, various

equipments available in the cyclone shelters may be test-used and steps are taken to repair the defective ones.

- The Ministry of Home Affairs, Government of India and the NDMA were also requested to make necessary advance arrangements to keep the concerned authorities in readiness for deployment IAF helicopters/ NDRF force on short notice, if required.

Date: 09.10.2013

- **11.45 AM- The first preparedness meeting for cyclone preparedness** was held under the chairmanship of Dr. Taradatt, Additional Chief Secretary, Revenue and Disaster Management and MD, OSDMA. The following preparedness arrangements were discussed in the meeting for implementation by different departments and organizations.
 - Dissemination of cyclone warning through various channels
 - Arrangement to keep the communication systems operational,
 - Mock Response drill in each multi-purpose cyclone shelters/ flood shelters
 - Test check of various equipment in cyclone shelters including Generator, Water Pump, Inflatable Tower Light and Mechanized Tree Cutters; Steps for repair of defective ones
 - Identification of other school, college and other public buildings as cyclone shelters- Arrangement of Lighting, Drinking Water, Temporary Toilets
 - Readiness of ODRAF, Fire Services, NDRF for search & rescue operation
 - Boats for rescue & relief operation
 - Requisition of vehicles for evacuation/ transport of relief materials.
 - Control of vehicular traffic
 - Availability of stock of rice for relief operation
 - Arrangement for procurement of chuda and sugar/ biscuit
 - Availability of kerosene in cyclone flood districts/ areas
 - Pre-positioning of sufficient stock of fuel
 - Control rooms in different departments and the concerned district offices will be immediately activated to function round the clock.
 - Deputing senior officers to Blocks likely to be affected to take stock of the situation.
 - **Special care to shift the old, infirm, physically challenged, pregnant women, nursing mothers and children to safer places and cyclone shelters much before the occurrence of the disaster**
 - **Stocking of required medicines and arrangements for deployment of mobile medical teams**
 - **Cattle health and supply of cattle feed for the affected cattle population.**
 - Immediate restoration of road communication for movement of relief materials to the affected areas and advance arrangements for the requisition to get JCB, Earth Removers at short notice to clear the road blockades.
 - **Cancellation of Puja Holidays and keeping all Government offices open**
 - Keeping the response forces in readiness

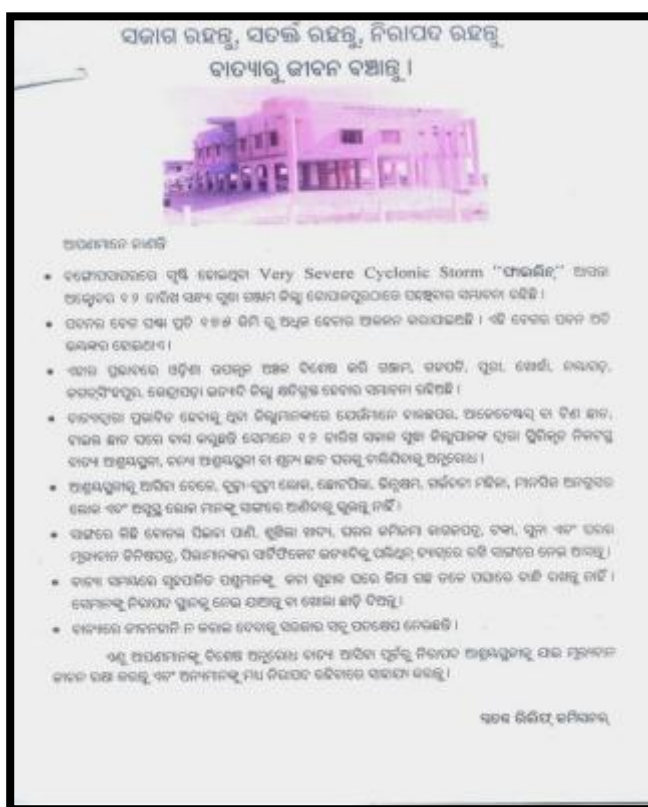
- Coordinating with Government of India for assistance of Defence forces and helicopters for rescue operation and airdropping of food packets.
- Depleting the Reservoirs to manage the flood situation, if any.
- Supply of satellite phones to Collectors.
- Restricting use of unsafe buildings for accommodation of rescued persons.
- Closing all schools and Anganwadi Centres in view of the upcoming cyclone.
- Call back the fisherman who are inside sea and also instructed not to allow any body to go inside sea.
- All Concerned Departments were instructed to attend the Cyclone preparedness meeting at fixed time everyday to take stock of the situation till the cyclone emergency was over.

At 12.45 PM, Hon'ble Chief Minister reviewed preparedness measures through video conferencing with the Collectors.

The Ministry of Defence, Govt. of India was requested for deploying 7-8 nos of MI-17 Helicopters at Bhubaneswar airport for air dropping operation in case of necessity.

Date: 10.10.2013

- At 10.45 AM- The inter-departmental coordination meeting was held for cyclone preparedness under the chairmanship of Minister, Revenue and Disaster Management.
- It was decided to prepare one lakh food packets in advance for air dropping.
- ODRAF and NDRF teams were stationed/ deployed at strategic locations to carry out search & rescue operations without loss of time.
- Apart from deployment of the NDRF forces of 3rd Battalion, Mundali, fifteen more NDRF teams were mobilized from other States.
- It was decided to divert manpower and materials of neighbouring unaffected districts to affected districts on requisition of the concerned district administration in case of necessity.
- Similar steps were advised to be taken to shift the livestock to safer places.



- People were appealed through electronic and print media to go to safer places along with their domestic animals, food, valuables and important documents in polythene bags.
- To ensure prompt restoration of power supply, the Energy Department was directed to mobilize manpower and materials to the districts likely to be affected.
- All the Departments were advised to make their own power backup arrangement for their offices as power supply was likely to be stopped during cyclone for safety reasons.
- The Health and FW Department took steps to pre-position adequate quantity of medicines and form mobile medical teams.
- The F&ARD Department took similar steps to take care of the cattle health.
- The FS&CW Department pre-positioned food materials and made arrangements for procurement of dry food like chuda, gur, etc. for distribution among the affected people. The Department also ensured availability of sufficient quantity of POL in districts likely to be affected by the ensuing very severe cyclone.
- The H&UD Department and RD Department arranged for supply of drinking water and disinfection/ restoration of sources. H&UD Department also made necessary arrangement of water pumps for dewatering of rain/ flood water.
- Fuel reserves for at least 7 days were stored for the generators to operate the water supply systems during power failure.
- Works, RD and Panchayati Raj Departments made necessary arrangements for quick restoration of road communication.
- The chain saws of ODRAF units, Fire Service units and cyclone shelters were ready to be used for cutting of uprooted trees.
- Steps were taken to deplete the water level of different reservoirs to accommodate the inflow on account of cyclonic rainfall.
- All the 14 cyclone-prone districts were provided with satellite phones for ensuring communication in case of failure of telephone/ cell phone.
- All Collectors were directed to activate Control Rooms round the clock at Blocks, Sub-divisions and Tahasils.
- The fishermen on sea were asked to immediately come back to the shore.
- BSNL authorities made necessary arrangements to ensure operation of the telephone/ cell phone with backup power system and pre-positioned adequate fuel for operation of generators at telephone exchange/ cell towers.
- Home Department issued instruction for maintenance of law and order and check stealing/ looting of public properties and providing security for transportation of relief materials.
- 5.45 PM- Hon'ble Chief Minister reviewed the preparedness measures.

Date: 11.10.2013

- The Collectors were specifically directed to ensure complete evacuation of people living in low lying areas and in kutchha houses to safer places by 11.10.2013 evening.

- People living adjacent to rivers and creeks up to 20 km upstream from the mouth were also evacuated to safer places.
- About one million people were shifted in the 36 hours preceding the landfall of the cyclone.
- Free Kitchen centres were opened from the night of 11th October 2013 for the evacuated people. The cattle population was also shifted to safety and cattle feed/ fodder arrangements were made for them.
- 9.84 lakh people were evacuated. Subsequently, 171083 persons were evacuated in 3 districts which were severely affected by flood following the cyclone.

Sl. No.	District	Nos. Of people evacuated due to Cyclone	Nos. Of people evacuated due to subsequent Flood
1	Balasore	4185	126842
2	Bhadrak	48202	
3	Cuttack	114306	
4	Gajapati	36960	
5	Ganjam	180000	
6	Jagatsinghpur	101457	
7	Jajpur	91131	6900
8	Kandhamal	13310	
9	Kendrapada	59550	
10	Keonjhar	11825	
11	Khurdha	185291	
12	Koraput	3860	
13	Nayagarh	31565	
14	Puri	102000	
15	Mayurbhanj -		37341
	Total	983642	171083

Shelter level preparedness:

- BDOs were requested to identify Nodal Officers for most vulnerable GPs and cross check all the Cyclone / Flood Shelters (MCS), constructed by OSDMA, for readiness with all equipments like generators, power saws, Tower lights, Megaphones, utensils etc. Coordinate with Secretaries of MCS and Community Mobilised for conducting preparedness meeting with Village Committees and DMT members and inform about the situation to be in readiness.
- All the BDOs of Ganjam, Puri, Khorda, Jagatsinghpur, Kendrapara, Jajpur, Cuttack, Bhadrak and Balasore districts were also requested to provide adequate POL (Petrol & Diesel) to all the Multipurpose Cyclone / Flood Shelters (MCS) for running of Generators, Power saws & Inflatable Tower lights.

- Response drills were organised to check the functional status of all the equipments available and DMT members trained.
- In case Multipurpose Cyclone Shelter is not available, the Schools/ Colleges, Panchayat buildings, Community centres etc available in the village were opened for shelter purpose with power backup system.
- Dry food like flat rice, gur, biscuits etc and rice & al for free kitchen were kept ready in all GP head quarters and shelter places of targeted districts by 10th Oct 13.

Prepositioning of men, machine & materials:

- 28 teams of NDRF and 10 units of ODRAF with necessary equipments were pre-positioned in different strategic locations to combat the situation.
- Army, Navy, Air Force teams were mobilised to face any eventuality after cyclone.

Evacuation of people from all vulnerable pockets:

- To ensure ZERO casualty, the Collectors of Ganjam, Gajapati, Nayagarh, Khordha, Puri, Jagatsinghpur and Kendrapada were directed to evacuate all people living in low lying areas and in kutcha houses to the nearby cyclone/flood shelters or other identified buildings by morning of 12th October 2013, and to ensure that no one stays in a kutcha houses in the night of 12th October 2013 when the very severe cyclonic storm was expected to make land fall.
- Revenue & Disaster Management department requested to all Collectors promulgate Section 34 (C) of DM Act 2005 and asked to evacuate people with force in the event of persuasive steps not working.
- *The Collectors were specifically directed to ensure complete evacuation of people living in low lying areas and in kutcha houses to safer places by 11.10.2013 evening.*
- All vulnerable people living within 5km from sea shore line were evacuated to safe shelter places by 11th Oct 2013.

Section 34 (C) of DM Act 2005 empowers the authority to force people to evacuate where villagers are reluctant to move to safer locations.

State Emergency Operation Centre (EOC) activated:

- State Emergency Operation Centre at SRC office activated round the clock with Officers from Revenue & DM department and OSDMA on duty. Durga Puja Holidays were cancelled and all the departments were opened with high alert.
- Departments like Housing & Urban Development Department, Odisha Power Transmission Corporation, Directorate of Public Health, Panchayat Raj Department have also set up their control rooms with Senior Officers in charge to coordinate with State EOC at SRC office and their field offices.

GO-NGO Coordination established:

There has been a paradigm shifts in our approach to Disaster Management during the last one decade. The shift is from a relief centric to a multi dimensional endeavour involving diverse scientific, engineering, financial and social processes to adopt a multi-disciplinary and multi sectoral method. The role of INGOS and NGOs in this context therefore assumes added significance. Both the DRM and DRM programme promoted the GO-NGO coordination for preparedness, Response and Mitigation activities. Local NGOs played a vital role in community mobilisation and awareness creation during DRM programme. There was a regular meeting of NGOs at each programme districts to assess the progress and finalise strategy for community mobilisation like VDMP preparation, training of Task Force members and organise mock drills at village and response drills at shelter levels. The same NGO Coordination cell established at district level, shown remarkable performances during natural calamities like floods and cyclones in respective districts by providing active support in relief and rescue operation. The District and Block administration got a plat form to mobilise volunteers / civil society organisations not only for the Disaster Management but also for other social mobilisation activities. The District Project Officer, DRM proqramme, placed in the district, played the role of coordinator between District/ Local Administration and participating NGOs/ INGOS. Similar, setup was also established at State level in the name of State Inter Agency Group (IAG) because apart from the GoI-UNDP DRM programme, several other organisations like Red Cross, Oxfam, Save the Children, Handicap International, CRS, Concern India etc have also contributed a lot in the field of Disaster Risk Management and Risk Reduction initiatives in the state. So, the State IAG was established to coordinate with all these organisations and create a synergy for effective convergence for the preparedness and response activities without duplication. The Other purpose of the State IAG was to establish coordination with Government Authorities and extend support for relief and response activities during emergency situation aroused because of any natural calamity. UNDP played a lead role in this coordination process, as professional support under GoI-UNDP DRM/ DRR programme was provided at the highest authority level of the state i.e. OSDMA to district administration, exclusively for Disaster Management.

In the recent cyclonic situation, the NGO coordination was successfully and timely established at the state and affected districts in same vigour. Following are the observations on GO-NGO coordination efforts at different level:

GO-NGO Coordination meeting organised at Government level.

- The first GO-NGO coordination meeting was organised under the Chairmanship of the Minister, Revenue & Disaster Management on 11th Oct 2013 at 10.00 am in the conference hall of Rajiv Bhawan, Bhubaneswar.

- Shri U.N. Behera, IAS, Additional Chief Secretary, Finance and Shri S.P. Thakur, Commissioner cum Secretary, Excise & Tourism Department were also present in the meeting, as nodal officers designated by the state government for GO-NGO coordination.
- All the UN agencies, INGOs and NGOs present in the meeting, expressed their area of expertise and readiness to tackle the Cyclonic storm with an extended support to the Government as and when required.
- Government focused on involvement of agencies, INGOs and NGOs in Community mobilisation for warning dissemination and evacuation process in the response phase. Later on, they may start their intervention as per the situation demands and in close coordination with respective District Administration without duplicating the activities.

Inter Agency Group (IAG) Coordination

- Following the coordination meeting organised at Government level, the Inter Agency Group constituted at state level, was activated with the first meeting on 13th Oct 2013 at Red Cross Bhawan.
- Representative of UNDP, UNICEF, DFID, Plan India, Save The Children, Concern World Wide, CASA, CARE India, CRS, Trocare, Action Aid India, Handicap International were among of the participants of the meeting.
- A joint rapid assessment was carried out immediately after the “Phailin” starting from 13th October and shared a report on 21st October, 2013.
- Subsequently, IAG coordination meetings were conducted with participation of its 22 member organisations, especially National, International and UN agencies like UNDP & UNICEF.

Odisha Phailin Response Forum (OPRF):

- Similarly, a NGO coordination cell in the name of Odisha Phailin Response Forum (OPRF) was also setup at DRTC conference Hall of CYSD, Bhubaneswar.
- The forum was basically initiated by mostly State and Local level NGOs but in the later stage some International Organisations were also invited to participate.
- The forum also has also a direct coordination with the State government and on daily basis interacted with all its participating organisations and used to develop a daily report on their interventions and impact of the Phailin in different areas, as reported by the member organisations. The report was published and shared with all concerned on daily basis as well.

However, the Go-NGO coordination established in the state, before and soon after the incident has ensured a coordinated effort for helping the victims

proactively and successfully. The initiative was not limited at the state level, but also reflected in some of the most affected districts like Ganjam, Balasore, Mayurbhanj etc. The most important part of the GO-NGO coordination was facilitating the entire process at state and district level, which was carried out abruptly by the most active organisations like Sphere India, Indian Red Cross, CYSD but both at Government and Non Government level, all were raising the UNDP participation in the entire coordination effort at state & district level. Accordingly, State Government also raised this issue to the UNDP country office in India, to appoint Coordinators at selected affected districts, to facilitate the process.

Interaction with key informants:

1. Shri Mr. Pravat Ranjan Mohapatra, Deputy Relief Commissioner, SRC Office, Rajiv Bhawan, Bhubaneswar:

Shri Mohapatra shared that the preparedness for Phalin was far better than the Supper Cyclone 1999 because since last 14 years the State has achieved remarkable progress in Disaster Management like establishment of OSDMA, continuous effort to increase the capacity of people through various programmes, starting from CBDP to DRM and DRR programme,



development of disaster resistant infrastructure like Multipurpose Cyclone & Flood Shelter, constitution of community based shelter management committees and their training and capacity building, strengthening State and District Emergency Operation centres and establishment ODRAF units with all hi-tech equipments and up gradation of Fire Stations for Disaster Management. State Emergency Operation Centre (EOC), set up in our office was fully functional with all equipments and well connected with all the District Emergency Operation Centres. We got timely accurate warning from IMD regarding the “Phailin”, which help us to take necessary precautionary measures right before the occurrence. State Disaster Management Plan (SDMP) prepared was very much useful to make our effort more focused and to draw a systematic response mechanism. We have issued letters to all the Collectors for updation of IDRN district database during Mar 2013 and a reminder during July, 2013. But the database was not updated by any of the district. Otherwise, it would also have great use for mobilisation of resources from various other districts, which were not affected, either by cyclone-“Phailin” or subsequent flood. Now, we will have to focus on its regular updation.

2. Dr. Kamal Lochan Mishra, General Manager, OSDMA

Shri Mishra, who was earlier working as the State Project Officer, GoI-UNDP DRR programme, shared that Officers working in OSDMA and SRC office, are directly or indirectly influenced by CDBP, Disaster Risk Management and Disaster Risk Reduction Programme to enhance their capacities in Disaster Management. All these programmes taught us the disaster management concept since 2001. The State Disaster Management Plan, which was prepared with technical support of the Ex-State Project Officers of DRM & DRR programme, is of great use for responding to “Phailin”.

3. Shri Mangala Mohanty, Chair Person, State Inter Agency Group (IAG), Odisha:

During an interaction with Shri Mangala Mohanty, Chairperson State AIG and the Secretary, IRCS, Odisha State Branch, shared that the State IAG has been setup with active support of IRCS, UN agencies and other International NGOs for better coordination and knowledge sharing on disaster management. State IAG, which was setup since 1999 Supper Cyclone, has always shown its active support to



State Government in all phases of Disaster Management process. This time also the IAG played a vital role in establiehig the GO-NGO coordination, soon after the first waring issued from State Releif Commmissioner. The first meeting was convened on 11th October, 2013 at 3.00pm in the Red Cross Bhawan to take stock of preparedness level of various member organisations. All the participating orgainsations were requested to disseminate waring with their own system up to the community level. The second meeting was held on 13th October, 2013, just after the cyclone ocured and the decession was taken to carry out a rapid assessment of the situation in the most affected district by involnng the representatives from member organisations. Four teams were constituted and rushed to mostly affected districts like Puri, Ganjam, Balasore and Mayubhanj. The positive collaboration of most of the stakeholders involved in the Cyclone Phailin response has enabled quick coordination and a rapid turnaround to complete the Joint Initial Rapid Assessment, drawing on lessons learned from the previous 1999 cyclone and 2011 floods in Odisha. The pre-cyclone coordination among IAG, INGOs and local NGOs helped to start the process of joint assessment immediately after the disaster. The assessment teams have found a strong justification for a broad humanitarian response and the need for longer term recovery and rehabilitation work. Clear humanitarian needs and gaps have emerged in livelihood, shelter, WASH, nutrition, protection and education; and organizations have committed to a meaningful and coordinated response. Subsequent meetings were organised on 16th, 19th, 22nd and 28th October on a regular basis and coordinated the releif and response activies with direct coordination with state and respective District administrations and NGO

coordination cell established. In the entire process, Dr. Ambika Prasad Nanda, State Programme Officer, UNDP, Odisha was actively involved.

4. Shri Binay Kumar Das, Assistant Commissioner, Bhubaneswar Municipal Corporation:

Shri Das, expressed that after getting cyclonic warning, a preparatory meeting was held at Municipal Corporation level by involving all the Ward and Community Organisers to discuss the steps to be taken as precautionary measures for the incoming Cyclone. The main focus was to evacuate people from all 436 slums in the City, who would have affected a lot, and place them in the safe shelters. 19 shelter places identified in the



city, including all Kalayn Mandaps and Government Schools but it was not sufficient to provide shelter to all slum dwellers. So, the private educational institutions were requested to allow for providing shelter. So, total 168 centres were identified for the shelter purpose. Comparators helped a lot for the community mobilisation. On 10th October, a meeting was called by the Commissioner of Police, involving the Khorda Collector, BMC Commissioner and other key line departments for taking preparatory measures like maintaining law & order, evacuation of people from slum areas, ready for the Search & Rescue operation, road clearance, and restoration of electricity and telecommunication after the cyclone. Fire department personnel were in readiness with all of their equipments like tower lights, power saws etc. Police control room was used for emergency operation in the city. ODRAF and Police Force were also alerted with area wise coverage for Rescue operation, if required. Seven tankers kept ready to supply drinking water supply during emergency period. City Disaster Management Plan was referred for standard operating Procedure for different line department.

Immediately after the cyclone, Fire Personnel along with ODRAF personnel cleared all the roads on war foot manner. Electricity was restored within three days in the city in different phases. Post restoration format developed to monitor daily restoration activities. A checklist was prepared to go for systematic restoration of infrastructures. Hon’ble Chief Minister took a special review of the restoration work of the Bhubaneswar City on 16th October, 2013.

Chapter –VI

Effectiveness assessed from district to community level:

During the survey, we have visited 9 most affected districts, which were also covered under DRM and DRR programme, to measure the effectiveness of the programme in responding to the Cyclone-“Phailin and subsequent flood. Responses have been captured, starting from Community to District level. However, due to the immediate crisis situation, it was not possible to call for a structured meeting at all level during our visit to different districts but direct interaction with key informants and different stakeholders helped in collecting insightful information. Information are collected basically at following three level during the field visit, targeting the DRM & DRR programme inputs:

GoI-UNDP DRM programme helped the district in many ways such as:

DRM approach enhanced the level of preparedness at the administrative level as well as Community level. District Natural Calamity Committee (DLNCC) meeting held in the month of March 2008 and May 2008 to take stock of the situation prior to the emergency season. All the concerned line departments were instructed to take necessary preparedness and precautionary measures to tackle the situation.

The EOC is operational and equipped with telephone, internet, VHF facilities, Fax, Rescue Equipments, powerboats, Search lights, Generator and most important is District Disaster Management Plan (DDMP). During Emergency this centre acts as a nodal point for receiving messages and transmits to different quarters. Deputy Collector (Emergency) along with the District Project Officer, DRM monitored the whole situation from the EOC and acted as the information hub of the district during the programme period (2003-2009). So, after the programme the same system continued to perform its task and strengthened further.

All the grass root level officers were alerted and instructed to keep close vigil of the situation and report from time to time to the EOC for better monitoring. It was the stepping stone during the programme implementation and now became a systematic approach to respond in any emergency situation.

The trained volunteers of Disaster Management teams (DMTs) at village/ Cyclone / flood Shelter level were kept in readiness to handle the emergency situations. Best Volunteers competitions organised and awarded at state level by the Hon’ble CM every year on the occasion of Odisha Disaster Preparedness Day i.e. on 29th Oct. This initiative promotes volunteerism and motivates volunteers to perform remarkable task during emergencies. Formation of DMTs and DMCs at all level were formed for the purpose of monitoring and taking decision related to disaster preparedness, management and disaster recovery.

Community Level:

The strength of disaster mitigation and management depends on the level of community involvement. The approach of Community based disaster preparedness was the best form of disaster preparedness as this advocate for a better form of disaster preparedness as this advocate for a bottom up approach for disaster management. It is an acknowledge fact that whatever be the preparedness at top level it takes some time to reach to the community in the normal condition. In case of severe disaster scenario, this time span definitely increases because of various obstacles. Hence, the wise approach was to train the community for self reliance, self help and self protection. It is realised from the past experience that community needs support in specialized training in Search and Rescue, First Aid and Psychological counselling in the post disaster situation. The strong community based approach, supported by institutionalisation of disaster risk management in policy framework is the very foundation for the programme sustainability. With trained human resources made available at Village level, at State and District levels and the entire Disaster Management planning process linked to development plans, UNDP started withdrawing gradually from all programme districts covered under Go-UNDP DRM Programme since 2008-09. The DRR programme started in 2009, however, was limited to only 9 villages of Kendrapara, Gnjam and Balangir. Similarly, the Urban Risk Reduction (URR) programme implemented in three cities namely Bhuaneswar, Talcher and Angul. So, following are the major activities carried out at community level which could be assessed during this assessment:

- Community mobilisation by constituting Village / Ward Disaster Management Committees (VDMC/ WDMC) and their trainings.
- Constitution of Disaster Management Teams/ Taskforces and their skill development trainings like Search & Rescue, First Aid, Shelter Management etc at village and Cyclone / Flood shelter levels as well.
- Mock drills and response drills organised to test check the Community level DM Plans prepared.
- Training of School Children’s on preparation of School Disaster Management plans and basic skill development trainings like Search & Rescue and First Aid.
- Training of Civil Society Organisations / NGO representatives and PRI members on preparation of Community Based Disaster Preparedness (CBDP) by using PRA (Participatory Rural Appraisal) techniques and basic life saving skills, who would play a facilitating role in village disaster management plan preparation.
- Gender mainstreaming by involving women groups, SHGs, ASHA and young girls in disaster preparedness process and basic life saving skill development trainings, on priority basis.

- Awareness activities like public/ school rally on Disaster Preparedness day, organised School / College level competitions like debate, essay and paintings on disaster management / preparedness, Wall paintings at strategic community places on dos & don'ts etc.

District Wise Responses:

Looking in to the above context, assessment was carried out in different districts, which were covered under DRM & DRR programme, to capture the effectiveness in responding to the severe cyclonic storm "PHAILIN". Following are few observations made at different level:

Puri District: Visited on 17th Oct 2013

District level preparedness:

- Shri Rabindra kumar Pradhan, Deputy Collector, Emergency, Puri, shared that the first information received on 8th Oct, 2013 from the Revenue & Disaster Management department that a Deep Depression had intensified into a Very Severe Cyclonic Storm named as "PHAILIN", indicating the threat to Odisha Coast.
- Immediately after receipt of the further warning, the Collector called the emergency meeting of District Disaster Management Authority (DDMA) on 9th Oct, 2013 to chalk out the plan of action.
- Instructions were issued to all the blocks and NACs to start operate their Control Rooms round the clock and keep the officials in readiness.
- District Emergency Operation Centre (DEOC) was activated with full testing of equipments like communication systems, power backup systems, Inflatable tower lights etc available. Roster duty allotted to the officers of the district administration to keep close watch on the situation and assess the movement of the Cyclone through IMD website.
- The updated District Disaster Management Plan (DDMP) was referred for fixing the role and responsibilities of each line departments, checklists for taking precautionary measures and the deployment of higher officials in the vulnerable points.
- District Employment Officer was assigned the duty of NGO coordination at the district level. Immediately after the DDMA meeting, a NGO coordinaton meeting was conducted with local NGOs/ CBOs to extend their support to the administration in early warning dissemination and evacuation.
- Administration used the public address system to alert the public. In warning dissemination Block Development Officers and NGOs played a vital role, to reach at the community level.

- As the per final warning issued from the Revenue & DM Department, District Administration started evacuation from most vulnerable pockets like people leaving within the radius of 2 kms from the sea shore and ensured that all the people should be evacuated by 11th night to nearby safe shelter places. So, total 181915 nos. of people were evacuated and sheltered in 489 safe shelters.
- It was the largest evacuation process ever practiced and this massive evacuation helped the administration in reducing the human casualty.
- Instructions were issued to all the BDOs and Thasildars to actively involve PRI in evacuation and relief operation.

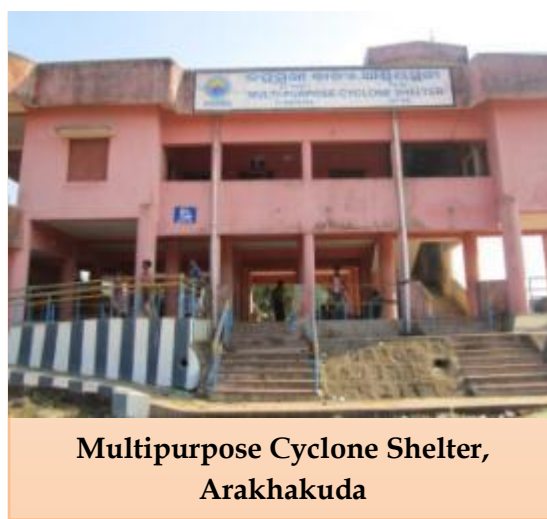
Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific suggestion
Puri	DDMP referred during “Phailin” response, as per the Deputy Collector, Emergency but copy not found.	Emergency Section is functioning in the EOC. Due to emergency situation, Emergency Officer sometimes operating from Collector’s Residence Office	Neither IDRN updated nor used during “Phailin”.	Coordination established with local NGOs.	

Community response observed at Arakhakuda Village of Krushnaprasad block:

Brief about the Arakhakuda

- Arakhakuda village of Krushnaprasad Block is having population more than 7,000 with approximate 1270 Households. The village is very close to the sea shore.
- Out of total house hold in the village, approximately 300 houses are Pucca houses.
- The village is having a Multipurpose Cyclone Shelter (MCS) constructed by OSDMA with a capacity of 2,500 people can take



Multipurpose Cyclone Shelter, Arakhakuda

shelter in standing position. The shelter is provided with equipments like one generator for power backup, two inflatable lights, two power saws, high raised ladder, and one emergency kit containing life jackets, life buoy, megaphone and a set of utensils for cooking food for more than thousands of people.

- Apart from the MCS, the village is having some other shelter places like Upper primary & High school, ANM centre, one community hall, a Panchayat building, a high land identified at near the temple at Harisahadev sahi (Hamlet).
- Mostly, the villagers are depending on fishing, petty business and a few number are engaged as

Training & capacity building activities:

- Last trainings on Search & Rescue and First Aid organised at MCS level during 2008-09 under DRM programme. Total 50 volunteers were trained by Civil defence trainer in this village.
- Response and mock drills have been organised to test the equipments available and test check the capacities of trained volunteers.
- Village Disaster Management Plan prepared during 2004-05 but not existing now.
- Villagers are well aware about dos and don'ts and disaster preparedness measures.



Laxmidhar Behra says “Villagers had experienced a sleepless night on 11th October, 2013. In the same time, around 12 o'clock in the night, when we got the final warning from District Emergency, Puri, I along with few other DMT members like Sanjay Behra, Pradipta Kr. Behra, Bipin Kr. Behra and Basudev Behra of our village, who were giving watch and ward in the MCS, blown the siren through Megaphone. Surprisingly, more than two thousand people at a time rushed towards the Cyclone Shelter, hearing the siren. It was very difficult to accommodate all the people in the first floor. So, we convinced all the people to go down, to the ground floor, keeping their female members, children, disabled persons remain in the first floor only. Everyone was agreed and followed our appeal. We stayed in the Shelter for 2 days up to the evening of 13th Oct. We kept 20ltrs of Kerosene oil, 30 ltrs of Diesel, 20 ltrs of petrol, 5 ltrs of Mobil as a preparedness measure at the MCS level for the use of generators, inflatable tower lights, power saws and Gas cylinders for cooking food. So, any way we could save thousands of life in the shelters because of our preparedness much before the cyclone occurred.

Preparedness Measures taken by villagers:

- Villagers got the information about severe cyclonic storm “Phailin” from Radio, TV news and from their near & dear over telephone.
- The first warning for evacuation was issued by the District and Block Administration through Public Address System (PAS) on 11th October, 2013. Villagers, residing within 2 km from the sea shore and in kutcha houses, were requested to evacuate and take shelter in the nearest cyclone / flood shelters/ school buildings/ pucca houses available in the villages.
- **Shri Laxmidhar Behera, Secretary of Arakhkuda MCS** shared that he called for an emergency meeting with Cyclone Shelter Management Committee and the Disaster Management Team members a trained in S&R and First Aid. All the members decided to perform following task :
 - ✓ First to contact Sarpanch and Block Development Officer to get support for stock piling of minimum essentials like food stuffs, adequate POL for generator and other equipments.
 - ✓ Issue warning in the village by using the megaphone and siren available with the Cyclone Shelter. Priority was given to the areas near by sea shore and people living in kutcha houses.
 - ✓ Test checking all the equipments available in the Cyclone shelters.
 - ✓ Plan for evacuating people from different hamlets and bring them to safe shelter places in the village..
- Some fisherman community people were reluctant to go to the safe shelters but the Police forcibly evacuated all these people to respective shelters.
- Villagers were appealed to carry their belongings, important documents and available dry foods at least for 2-3 days along with them to the shelters places.
- Seven pregnant women and twenty one lactating mothers with their new born babies took shelter in the MCS.
- They found absolutely no problem in the shelter but only the sanitation facilities could not be possible to use because of overcrowded and even some villagers had to stand inside the toilets, as well.
- Volunteers helped the family members of the Physical Challenged person, Seek and old aged persons to shift them to the safe shelter places.
- There was no casualty due to this cyclonic situation in the village.

Few Suggestions of the villagers:

- ✓ The principle, “Who will do? What is to be



**Pradipta Kumar Behera,
a task force member (S&R)**

done? When is to be done?” is really helpful. But the technical skills are not much with us now. Some of our team members have left the village for some reasons- Says one of the task force member Pradipta Kumar Behera, aged about 29. So community level activities like training, capacity building and awareness campaign need to be more focused and frequent.

- ✓ As all the women & children were shifted to first floor, the male members stayed in downstairs with lots of fear. If, it is not possible to construct the cyclone shelter in more numbers, then equipments and emergency kits may also be kept in other



Interaction with women group in Arakhkuda village

shelter places like schools, panchayat building, and community centres with more numbers of trained volunteers for rescue and first aid.

- ✓ While interaction with a women group, *they suggested that more numbers of similar Cyclone shelters are required in our village* because all are preferring to stay in the MCS, rather than other shelters like school/ panchayat buildings, as more facilities are available like power back system,

rescue kit and other equipments. As a result, it becomes more crowded and created problem for women and children to use sanitation facilities.

- ✓ Women group also expressed that there was no separate provision for the pregnant women or lactated mothers. They had also to remain in standing position, due to overcrowded in the MCS. Still we managed to provide space for them after several hours. If there would be emergency pain with any pregnant woman, it became difficult to handle the situation. So, minimum medical facilities and trained quakes also should be made available in the shelters during this type of disaster situation. In this case, village brides along with young girls must be trained on first aid and special care of pregnant / lactated mothers, in case of emergency.

Individual Response in Arakhkuda Village:



Special Care for differently able person in the community:

While interacting with villagers regarding their preparedness measures taken for the Cyclonic warning, it came to notice that special care has also taken for differently able persons during evacuation process. Warning was issued by the volunteers on first priority to the houses of having similar peoples like Chilikarani Behera - physically handicap, Tuni Behera and Reshma Behera, who are deaf & dumb. However, their family members have accompanied them to the cyclone shelters by 12th October, 2013. As shared, by all these girls, they had to stay in the shelter till the morning of 14th October. There was no problem in staying the shelter, as special provisions like ramps and barricades are constructed to go to the upstairs. Special toilets provisions were also made but due to overcrowded, those has been even used by others.



Rupa Behera, d/o Sahdev Behera of Arakhkuda Village, got first aid training in Feb, 2013, for two days as a first aid volunteer, could able to give first aid to her father. During post Cyclone period, when her father was cutting a tree to clear the road and having wound in his right leg due to mishandling of the axe. Initially, she was scared of severe bleeding but observing other volunteers to help her father, she dared to apply bandage and took him to the nearest health centre immediately. She expressed that she would have been more confident to do the first aid, if refreshed her skills more recently. So, Rupa feel the training should be in more detail with a reference material and repeated at least once in a year.

Special Care for pregnant and lactated mother in the community:



Similarly, interacting with Meena Behera, who is pregnant of 8 month and Rasmita Behera, having a new born baby of 21, expressed that they were warned by the village volunteers in time, hence could able to collect their all essentials and moved to the Shelter on 12th October-morning along with their belongings. But in the same evening, the shelter got crowded when all the villagers rushed after getting final warning around 12 o'clock at night and the situation was more alarming. However, we could able to manage to get space for seating, as the entire 1st floor was full of female persons of the village and all were concerned about our condition. We are very much thankful to OSDMA for constructing such a big shelter and villager volunteers for their advance preparedness.



Sanjay Behera (from left), Pradipta Behera and Bipin Kumar Behera of Arakhakuda village, who have got Search and Rescue training, have extended their support to Shri Laxmidhar Behera, Secretary of the Arakhakuda MCS for warning dissemination by using megaphone available in the shelter and subsequently helped people to evacuate from different vulnerable locations of the village. They were also ready for the S&R but it was not required, as all the people came to their nearest shelters.

Further they expect that this type of training should be organized at least twice in a year, so that all the skills would have refreshed.

Jagatsinghpur District: Visited on 18th & 19th Oct, 2013

Jagatsinghpur was one of the worst affected districts of Odisha in last Super Cyclone, occurred in 29th October, 1999. The incident was an eye opener for the people and administration of the district to remain in alertness and make necessary arrangement on top priority to face any such types of calamity further. So, the entire district machinery were geared up and ensured all precautionary measures starting from district to community level after receiving the warning of Severe Cyclonic Storm "Phailin -2013". Following are some of the important observations:

Preparedness at District level as explained by the Collector and District Magistrate, Shri Satya Kumar Malick:

In his word "Odisha Super Cyclone- 1999 taught a great lesson to the administration, civil society and community to better prepare and manage the emergency situation in more systematic manner. Awareness level among general public have been enhanced due to various training capacity building programs in post Super Cyclone period, mass media and



improved communication systems. This time, we got the warning for the **Very Severe Cyclonic Storm- "Phailin"** much before with utmost accuracy from the IMD and SRC office. So, we could able to take all precautionary measures in time and evacuated people from vulnerable pockets to safe shelter places. Evacuation process was completed one day before the cyclone hit Odisha. Durga Puja holiday was cancelled and all the government offices were opened with Readiness. All the officers were instructed not to leave their headquarters without permission of the Collector and must keep their mobile phones open round the clock. First emergency preparedness meeting called on 9th October, 2013 at district level, involving all District level Officials of key line departments, BDOs, Tahasildars, PRI members and elected representatives for taking all preparatory measures like warning dissemination up to the community level, stock piling of all essential items in each identified safe shelter places as well as vulnerable GPs to meet the exigency and evacuation of people from all remote locations to safe places. *Evacuation plan prepared with reference to the vulnerability and route map mentioned in the **District Disaster Management Plan (DDMP)**. Copies of the SOPs of respective department were shared with*

*their Senior Officers to ensure, all preparatory measures have been taken without fail. I was personally monitoring the situation from the **District Emergency Operation Center (DEOC)** from 11th Oct and remained in close contact with BDOs and Tahsildars over telephone. Senior Officials like ADM, Sub-Collector and Project Director, DRDA from district level were deputed to most critical blocks to have close watch of the situation and coordinate with key line departments. Superintendent of Police, Jagatsinghpur was closely monitoring the situation for maintain the law and order and evacuation process. People reluctant to shift from nearby coast line areas, especially the involved in prawn culture (Prawn Gheries), were forced by the police to vacate the place and shifted to safe shelters by evening of 11th October, 13. So, the entire effort caused to reduce the loss of lives and human suffering, even after such severe cyclonic storm. We got all cooperation from Elected Representatives, PRI members, NGOs, CBOs and Community to successfully handle the situation”.*

Explaining the effectiveness of Disaster Risk Management (DRM) Programme, *Shri Malick said that the programme had contributed a lot in creating awareness among the people in a consistent manner but there was a long gap of more than 5 years, no follow up has been done till date. Hence, he suggested following points:*

- There is an immediate need of reviewing the Disaster Management Plans prepared at different levels - especially the Block, Panchayat and Village, Disaster Management Teams constituted at community level, resources developed like District EOC and officials trained on various aspects of Disaster Management.
- Technical & professional support at District Emergency Operation Center (DEOC) is essential to prepare District Disaster Management Plan (DDMP) in more scientific and analytical manner, Information Management and coordinating with Civil Society organization/ NGOs.
- Training and Capacity building activities should be organized, in a periodical manner, to refresh the skills of village volunteers, PRI members, Government Officials as well as Civil Society Organizations on various aspects of Disaster Management.
- More numbers of Multipurpose Cyclone Shelters (MCS) are required with all the equipments, as available in OSDMA and Red Cross constructed Shelters, in the coastal blocks of the district.

Effective use of District Emergency Operation Centre (EOC):

Dr. Sweta Kumar Das, Deputy Collector, Emergency expressed that, the EOC with all its equipment helped the Dist. Administration in reaching out to the field offices and community. Further explaining usefulness of District EOC, Dr. Das highlighted following points:

- Now EOC is treated as an integral part of the District Administration and the focal point to manage any emergency situation.
- Collector operated from the EOC day and night during response period of “Phailin”. The District Disaster Management Plan prepared and updated in 2014 is made available in the EOC.
- DDMP is an important information source available in District EOC. As per Dr. Das, when he joined in the district, as Deputy Collector- Emergency, just three days before the “Phailin” the updated version of DDMP available in the EOC, helped a lot in understanding the vulnerability profile from all possible disasters and their consequences. Planning for the response activities was more ease for him with a single glance of the document, even if he was new to



the district and had no idea of availability of resources.

- The EOC is well connected with all blocks and Tahasils through tele-fax, Internet Connectivity. A Satellite phone received from State level also kept in readiness.

- The Toll free number - 1077 is functional and publicised in electronic and paper media for public information medium in the district. We have received number of calls not only from public of the district jurisdiction but also from other districts, states and even countries to know about the impact of Phailin. Mostly, people from outside were much concerned about Erasama block, which was severely devastated in the Supper Cyclone 1999.
- The EOC became the information hub for the public to know the updates about the “Phailin”.
- We have issued warning from District EOC and also gather information on impact of the Cyclone from various field offices and block control rooms, effectively.
- Lastly, Dr. Das also expressed that there was a full time professional support from UNDP during the DRM programme period, which was felt a enormous support for the district administration at EOC, especially in information Management and Coordination with NGOs/ INGO in disaster response & relief phase. The ECO is lacking that support at this particular situation and we strongly recommend for similar support at District EOC either from State Government or UN agency like UNDP.

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific suggestion
Jagatsinghpur	Updated version of the DDMP (2014) found with the Collector & DM and District EOC. The plan was referred during the response phase of the Phailin. Copy of the SOPs of DDMP,	District EOC found full functional with all equipments and communication systems in operational condition.	Neither updated nor used during “Phailin”. Collector expressed that he will take immediate steps for updating the IDRN district database, after a small briefing	Coordination established with local NGOs.	1. DM plans of District, Block and Villages need to be reviewed periodically and improved. 2. Capacities of the Govt. Officials, PRI members, Civil Society members and Community with respect to Disaster

	shared to the respective authorities for taking precautionary measures.		about the usefulness of the portal.		Management should be reviewed and updated. 3. Professional support at District EOC.
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Preparedness at Block level:

Personal Interview with Shri. Subodh Ku. Acharya, Block Development Officer, Erasama:

Shri Acharya, explained that Ersama block is famous in International level because it was the worst hit block in 1999’s Supper Cyclone and attracted the attention of National and International governments & agencies, who put forward their support in rebuilding massive devastation occurred in the area. Now, the public as well as local administration were so much concerned about disaster like “cyclone” that before getting warning from the state level, we had



**Shri Subodh Kumar Acharya,
BDO, Erasama Block**

started our preparation much earlier by accessing IMD websites and Electronic Media. Describing the preparatory measures taken by the Block Administration, Shri Acharya highlighted following points:

- First warning of Severe Cyclonic Storm –“Phailin” received from the District EOC on 9th Oct, 2013. A block level meeting was called, involving all field staffs and PRI members, to plan for necessary precautionary measures to combat Cyclone.
- Civil Society and local NGOs representatives were also invited to this meeting for extending their support in warning dissemination and community mobilisation for Evacuation process.
- There are total 429 numbers of Multipurpose Cyclone Centres (MCS) available within the block jurisdiction, most of them were constructed in post Supper Cyclone period by various governments and agencies. But only 160

MCSs are functional now a day, which also includes the MCS constructed by OSDMA recently.

- So, all 160 MCSs were get ready by 10th October, 2013 with all essentials stocks piled for 2-3 days. Response drills were carried out in each shelter with the help of Shelter Management Committee members and Community Mobilisers.
- Line departments Officials like Medical Officers, Veterinary Assistant Surgeon (VAS), Agriculture Officer (AO), Supply Inspector, OIC, head quarter police station, Assistant Engineer, RWSS, and Irrigation etc were coordinated to take preparatory measures at their respective level.
- An evacuation plan was prepared, dividing the entire block of 25 Grampanchyats in to six different zones and responsibilities were distributed among the 2 Assistant Engineers and 5 Junior Engineers of Block. Panchayat Executive Officer and Gram Sathi were made responsible for their respective panchayat for evacuation.
- Public Address System was used in 3 vehicles to issue warning on the Severe Cyclonic storm likely to hit Odisha Coast by 12th Evening. So, evacuation of people from all remote and coast line villages was ensuring by 11th Oct, 2013.
- Vehicles were provided to all the GPs of the block for evacuation of people from remote locations. Instruction was given to evacuate people forcibly, if found reluctant to vacate their houses in most interior villages and coast lines.
- Free Kitchens were started on 11th October, 2013 in all shelters, where people took shelter after evacuation process.
- On 12th October morning BDO and Tahsildar monitored the evacuation process by personally visiting all the Panchayat head quarters.
- Drinking water sources were set up by RWSS in all identified shelter places.
- Local Fire Department Officials were requested to remain in readiness with power saws and cutter for clearing the road after cyclone.
- NDRF & ODRAF teams were reached at the Block headquarter on 12th October and remain in the high alert.
- Control room is set up at block level with adequate man power and well connected with District EOC, Police Control Rom and other line departments.
- There was no casualty found in the block due to the impact of "Phailin". This could only be possible because of proper warning and evacuation process followed.

Concluding his discussion, shri Acharya emphasised following four points.

1. **Infrastructure:** Odisha coast is full of Govt. & private RCC buildings, which were not there in 1999. Now Schools, Multi-Purpose Cyclone Shelters constructed by different agencies, private buildings, Panchayat offices, other Govt. Infrastructures helped the local administration to shift the community.

2. **Communication:** Communication in terms of telephone and the road has enhanced the capacity of local administration as well as community in many directions. It is now very easy to disseminate the warning to the public both in phone and by road. Govt. vehicles are used with public address system to disseminate the warning in the vulnerable pockets. Also road communication helped the evacuees to reach the safe shelters in time. Relief operation is an added advantage in proper road communication.

3. **Resources:** Resources can be either human or material available in the field; which were in complete use in this current emergent situation. No doubt disaster risk management is a milestone in this regard. DRM created human resources with skill but this needs more follow ups. After DRM there no such programme which could make such impression in the field. Similarly the equipment provided to the shelters makes the shelter committee and task force members more focused and capable.

4. **Management capabilities:** Govt. officials are now capable enough to handle such type of emergency. Also at the community level the preparedness level increased a lot with capacity. DRM initiatives make the Govt. Officials and community more capable of handling the current Phailin situation. But disaster preparedness should not be a one-time affair; it needs time and technical support to make our community disaster resilient.

Personal Interview with Shri Lagnajit Rout, Block Development Officer, Balikuda:



Shri Lagnajit Rout
Block Development Officer, Balikuda

Shri Rout expressed that the preparedness level at all levels has increased and community also cooperating in the matter. For the first time warning dissemination was well before the event, which helped the local administration and each house hold to prepare themselves. Administration got ample of time to be prepared for the upcoming disaster due to this timely warning. The mock drills and response drills time to time increased the confidence level of the community and task force members. Media and advanced

technology contributed a lot in preparing the community. He added the net connectivity helped him a lot in tracking the path of Phailin which was a new

experience for him because such facilities were not available in 1999. Public Addressing Systems were used to issue warning on 10th October, 2013

Community level preparedness in Nardia Village and Multipurpose Cyclone Shelter:

One Focus group discussion was carried out at Nardia MCS to assess the preparedness measures at shelter and community level. Following observations are found:

Brief about Nardia Village:

- Nardia is one of the revenue village of Nardia Grampanchayat of Ersama block and is having total house hold approximately 600 with a population of 4200.
- 40% of the total households are coming under below poverty line (BPL).
- The villagers had experienced very terrible condition during 1999’s Supper Cyclone by losing more that 30 inhabitants, more than hundreds of



A focused group discussion at Nardia Multipurpose Cyclone Shelter, Ersama

households damaged and people loosed their livelihood for more than a years.

- During the Supper Cyclone villagers had no choice to take shelter other than their own thatched houses but now they are having one Multipurpose Cyclone Shelter (MCS) constructed by OSDMA recently, one MCS constructed by Maharastra Government and one by Paradeep Port Trust (PPT) in post Supper Cyclone period, One primary School Building, One Panchayat Building, Rajiv Gandhi Seva Sadan, building of Grameswar Club and a good numbers of individual Pucca Houses in the villages.

Training & Capacity building Awareness and Activities:

- After Supper Cyclone villagers got several orientations on disaster preparedness and participated in awareness and skill building activities organised by Government, INGOs, NGOs.
- Village Disaster Management Plan was prepared during 2002 and then again during 2005-06 but there was no follow up since last 5-6 years. So, people have partially remembered some of the concept of Community Based Disaster Preparedness measures.
- But recently, after completion of MCS constructed by OSDMA, a MCS management committee is constituted by involving BDO, Ersama, Sarpach of Nardia GP, villagers, youths and a Secretary nominated by the committee- Shri Kshetra mohan Das and having a plan
- Similarly, Disaster Management Taskforce (DMTs), comprising of 50 volunteers from villages youths, selected ward members and senior persons, was constituted and trained in 2008-09 under DRM programme. But now only 10 of them are present and hardly remember the techniques and skills imparted to them.
- Mock drills and response drills have been organised but only at the MCS level to check the functional status of the equipments and machineries provided from OSDMA for emergency use.
- The cyclone shelter is well equipped with following equipments and machineries
 1. One generator for power backup.
 2. Two inflatable tower lights.
 3. Two power saws (*both are defunct after use during recent cyclone – “Phailin”*)
 4. One Emergency Kit containing megaphone, siren, life jackets, life buoys, ropes, pulleys, stretchers, extendable ladder etc.
 5. A complete set of utensil for cooking food for more than thousand people, in emergency.
- Other than this the Nardia



Communication Hub at Nardia-MCS, Ersama

MCS is also one of the two cyclone shelter in the state, where OSDMA introduced the concept of Communication Hub on pilot basis and provided with a fully furnished information centre in the MCS having Computer, printer, LCD and book library. But the said concept is not functional till date and the Secretary is still waiting for the confirmation from OSDMA, since last 2-3 years.

- Secretary is still waiting for the confirmation from OSDMA, since last 2-3 years.

Preparedness Measures taken before the Cyclone:

- After getting the warning from block on the evening of 09th October, villagers at their individual level packed up their most essentials and got ready to move to the nearest shelter places.
- A meeting of Cyclone Shelter Management committee level was convened to test check all the equipments and stockpile all essential items like fuel for generator, power saws, inflatable lights, dry food for at least 1000 people in each shelter for 2-3 days.
- Response drill conducted at MCS level on 10th October, 2013.
- Village youths were motivated and mobilised to support in warning dissemination and evacuation process to different shelters available in the village.
- On 11th October, volunteers appealed all the villagers, living in Kutcha houses, to shift to the cyclone shelter. Old aged people, children and women were shifted to the Cyclone shelter by evening of 11th October.
- More than 700 people took shelter in the Nardia MCS for two days i.e. from evening of 11th to evening of 13th October, 2013.
- Power saws available in the MCS helped the villagers to cut the fallen trees and cleared the roads from all obstacles, of their own.

Few Suggestions of the villagers:

- Follow up training for Disaster Management Teams (DMTs) required, at least twice in a year.
- Equipments, as available in MCS, should also be made available in Other shelters like school buildings, Panchayat Building, Community hall/ clubs.

Radharani Swain, aged about 75, belongs to Nardia village of Ersama block, expressed that "we cannot forget the precarious night on 29th October, 1999. No one can stay unprepared, if he/ she had already experienced the devastation of that night. I don't know much about Community Based Disaster Preparedness (CBDP) but



Radharani Swain
with her son Prakash Swain and grand son "Kanha"

*could understand the preparedness level required, at least for my family members, after getting the Cyclone warning. My grandson "Kanha", who is aged about 18 months, repeatedly urged me on 11th October-evening "let's go to that building" indicating the Multipurpose Cyclone Shelter, which is just in front of our thatched house. He repeated "I'm scared". My elder son - **Prakash Swain**- suggested "Not to be panic, if the situation will more threatening on tonight (i.e. 11th October, 13), then only we will shift to the Cyclone Shelter". But I was not convinced and decided to shift along with all other seven family members (including two male person, two female person and three children), leaving "**Prakash**" in our house for watch and ward of our assets. "**Prakash**" can come any time, as it is very nearer to our house but how can I take risk for small children and my daughters in law. We finally shifted to the Cyclone Shelter on 11th October night after taking some foodstuffs. We have not faced any problem in the Cyclone Shelter and stayed there up to 14th October morning, as there was power supply in the night by using Generator. We really felt confident to stay back in that shelter because of all facilities available. We used to switch off the generator in late night to save fuel and allowed all the children sleep well without any disturbances. Thank God, this time we have not loosed any of our neighbours because all of us came to the shelter in right time.*

Balasore District: Visited on 20th & 21st October, 2013

The district was prepared for the Severe Cyclonic Storm –“Phailin” but the unprecedented flood due to heavy rain during and after Phailin, created chaotic situation for the administration and public to handle the emergency. The administration was failed to predict the upcoming flood in river Budhabolanga, Jalaka, Subarnarekha and Sono, as the secondary effects of cyclonic storm.

Preparedness measures taken by the District Administration, as explained by Shri. Parameswar B, Collector & District Magistrate, Balasore



Shri. Parameswar B, shared that “we were prepared from all respect to tackle the alerted Severe Cyclonic Storm but the subsequent heavy rain and unexpected flood has created havoc in the district, all of sudden. We had our District Disaster Management Plan (DDMP) in place and the entire district machinery was geared up, to handle the emergency situation. The flood is occurred in

Subarnarekha, Budhabalang & Jalaka river system, as a result of which 11 blocks are affected. District Emergency Operation Centre (EOC) is functioning round the clock and Deputy Collector, Emergency along with other Deputy Collectors are engaged to coordinate with field offices and line departments. We have successfully evacuated more than one lakh people from most vulnerable areas before the Cyclone as well as due to flood. Dr. Aurobindo Padhi, Revenue Divisional Commissioner (RDC), Central Division is also stationed in the district and closely monitoring the relief & response activities. Air dropping of dry food was also carried out in some of the inaccessible pockets. We have organized the NGO coordination meeting on 15th October and requested all participated NGOs/ CBOs to extend their support by proving volunteers for relief distribution”.

The Collector is very new to the district, as he has joined the district just two & half months before i.e. on 23.07.13, so, no idea about DRM programme. But he appreciated two major initiatives of DRM programme i.e. District EOC and District

Disaster Management Plan (DDMP), while briefed about some of the programme components.

District Emergency Operation Centre (EOC), Balasore



Interaction at District Emergency Operation Centre (EOC), Balasore:

Mr. T. Padmanav Dora, Deputy Collector, Emergency and Mr. Saroj Das, Head Clerk, Emergency highlighted about the preparedness measures taken at District EOC.

- Copy of the DDMP updated for the year 2013-14 kept in the EOC for reference.
- DDMP was referred during the planning of evacuation from various vulnerable pockets and place the evacuees in nearest Multipurpose Cyclone Shelters.

- Communication systems like Tele-fax, Toll free number-1077 and Internet connectivity are available in the EOC for Information management.
- Control Room is functioning round the clock with staffs in roster duty.
- Mr. Saroj Das, Head Clerk of Emergency Section Balasore shared that he witnessed the way District Project Officers under the DRM programme used to support the district administration during such kind of massive disasters. But as the clerical staffs are not skilled and technically sound to help administration as DPOs deed at that point of time. He also expressed that, they have a direct access to the villages and used to monitor from ground zero which helped the administration in many times and ways. So DRM type of community preparedness programmes must be implemented and community needs to be involved in such types of programmes time and again.

Interaction with Mrs. Kalyani Pattnaik, Block Development Officer, Soro:

Mrs. Pattnaik, expressed that following the instruction from District Collector, She has called for an emergency meeting in the block on 9th October, 2013 by involving all field staffs like Extension Officers, JEs, VLWs and PRI members, to plan for warning dissemination, evacuation and Relief and response work. She has highlighted following precautionary measures taken by the Block Administration:

- Control room was activated round the clock with staffs on duty
- A detail plan for dissemination of warning to the community level and evacuating people from remote pockets was prepared.
- Teams are constituted for each Gram Panchayats (GP) involving respective PRI members for taking preparatory and relief measures, as well.
- Food stuffs were kept ready in all GP godowns / offices.
- Apart from Cyclone and Flood shelters, Schools, Colleges and Community halls were made ready to provide shelter for the evacuees.
- 3 Vehicles with Public Address Systems sent to disseminate warning to the most vulnerable communities.
- Durga Puja Holidays were cancelled and all the field staffs were informed not to leave head quarter without taking permission.
- Coordination was established with line department officials, elected representatives and civil society members and requested to extend their cooperation, as and when required in their respective expertise areas.

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific suggestion
Baleswar	<p>Updated version of the DDMP (2014) found with the Collector & DM and District EOC.</p> <p>The plan was referred during the planning of evacuation process.</p>	<p>District EOC found full functional with all equipments and communication systems in operational condition.</p>	<p>Neither updated nor used during “Phailin”.</p>	<p>A NGO coordination meeting was called on 15th October but no specific approach was adopted for involving NGO in response and relief work.</p>	<p>Deputy Collector, Emergency expressed that a full time professional is required to help us in proper planning during Disasters and in normal period may be engaged in creating awareness camping and training & capacity building programme.</p>

Community Response in Inchudi village of Remuna Block:

Brief about the Village:

- Inchudi village of Remuna block is one of the coast line village of Baleswar districts. So, there was high alert for the Severe Cyclonic Storm-“Phailin”.
- The village is having population not more than 6000 with approximately 1000 households.
- There is a Multipurpose Cyclone Shelter (MCS) constructed by OSDMA and apart from the MCS, villagers have the option to take shelter in other three school buildings situated in the village i.e. Labana Satyagraha Smruti Vidyapitha, Trilochapur Nodal Primary School and Inchudi Primary School.

- The village is also having good numbers of Pucca individual houses, constructed in recent past.

Training & Capacity Building and Awareness initiatives:

- During the year 2008, Disaster Management Committee and Disaster Management Teams (DMTs) were constituted and the last training for DMT members was organised for 5 days on S&R and First Aid under GoI-UNDP Disaster Risk Management Programme starting from 20th Feb, 2008.
- Around 50 village youths (both male & female) from different 6 wards have participated in the training programme and the training was imparted by civil defence volunteers, as expressed by Shri. Sarbeswar Das, Secretary of the Inchudi Multi-Purpose Cyclone Shelter.
- Shri. Das also narrated that during that period several time training and awareness activities on Community Based Disaster Preparedness (CBDP) were organised involving villagers and school children but after that very rarely people have seat together for this reason. So, most of volunteers trained during that period, are either forgot those skills or have gone away from the village for some reason.
- But Shri Dash, being a social activist and writer of more than 31 books which were published in different language and awarded in 4 states, has maintained the spirit of spreading the disaster preparedness message in the village on a consistent manner till date. Looking to contribution, villagers and local administration have selected him as the Secretary of the Include MCS.
- In Inchudi MCS, he has maintained all the information materials on Disaster



Preparedness since DRM programme period and actively organising mock drill and response drills as per the guidance and support from OSDMA time



to time.

- Equipments provided in the MCS are well maintained and he has got all support from the villagers in making the MCS useful before, during and after any disaster strikes in the village.
- He himself is a differently able person, so more focused about the special needs of the disabled persons during disaster period and help the villagers in meeting those requirements.
- During the programme period orientation and trainings on Disaster Management were also organised at school level.

Preparedness measures taken by the villagers for the Severe Cyclonic Storm- “Phailin”

- As per him, warning was issued by the administration on 9th October 2013 on account of Phailin and by using local youths they have disseminated the warning with the megaphone provided in the MCS.
- More than thousand 1500 villagers took shelter in MCS and 400 villagers in Inchudi Primary School from 11th October to 13th October 2013.
- Initially, a registered was maintained in both the shelter places but it was not possible to record their details, when more numbers of villagers rushed to the shelter places on 11th October.
- Generators, inflatable tower lights and power saws kept ready with adequate fuel received from local administration and dry foods were made available in both the shelter places.

- Old aged, disabled, pregnant women and small children were accompanied with their family members and those who needed help, the volunteers supported their family members to bring them to the shelter places.
- One first aid kit was available in the MCS though it was not adequate but there was no such problem aroused to use this limited resources.
- In the post cyclone period i.e. on 14th October 2013, power saws kept in the MCS, were very much useful to clear the fallen trees on the roads by the village volunteers and Fire people from Local Fire department. Villagers could make best use of the resources available in the MCS.
- It was found that, the students are well acquainted with disaster management safety tips. They nicely explained what to do in different phases of disaster i.e. pre, during and post cyclone & flood situation.

Suggestions from the community:

- Fresh training of village volunteers on Search & Rescue, First Aid and Shelter Management.
- More equipments for other shelters like Schools and Community Hall, as provided in MCS.
- Training & awareness campaigning should be organised every year to refresh the volunteers.
- Training & Capacity building at School level will sustain for a long period, as the school students will remain in the village for long period.
- Training on use of equipments is also required to be organised for villagers for their effective use during the time of emergency.

Interaction with the School Students:

- During the interaction with the school students it was found that, both the boys and girls are having a good knowledge about the disaster preparedness and do's & don'ts during the disasters. They explained very nicely about the do's and don'ts for the disasters like flood and cyclone Phailin. Some of the students also influenced their parents to come to the Multi Purpose Cyclone Shelters with all their important documents and dry food for at least three days.
- The students also expressed that they used to participate in the essay and debate competitions held at the MCS on 29th Oct every year. Also they used to read the books available in the MCS on disasters and its preparedness measures.





Biswajit Sena



Saumit Ku. Dash



Yaian Prakash Pradian

While interacting with Biswajit Sena, Saumit Ku. Dash and Yajan Prakash Pradhan of Class-VIII of Inchudi Primary School, all of them have expressed that they got training on School Disaster Management Plan, Search & Rescue and First Aid during 2008-09. The training builds their confidence to handle any disaster situation more systematically during school time and community as well. But such training should be imparted on regular basis to update their knowledge. During this cyclonic situation, all of them have expressed that they could able to take precautionary steps with their little knowledge they did get through the training programme of Disaster Management. They have also expressed about their skills on S&R and First Aid. Lastly, they felt more confident about the Multi Purpose Cyclone Shelter, where all the equipments are available and in fact their school is running nearby.

Mayurbhanj District: Visited on 22nd Oct 2013

Mayurbhanj district although had a partial impact of the Severe Cyclonic Storm-“Phailin” but the subsequent flood and water logging due to continuous heavy rain, paralyzed the life of 11 blocks out of total 26 and 2 Urban Local Bodies including Baripada. The District head quarter Hospital was also submerged for two days. District Administration was fully prepared for the impending cyclone but not predicted about the heavy rain in the district, as a result of which an alarming condition was aroused all of sudden. However, the District Administration along with Civil Society Organization and the communities geared up with a coordinated effort to management emergency situation.

Preparedness Measures taken at District level:

- The first preparatory meeting was called on 9th October, 2013 at 10.00 am in the Collectorate Conference Hall under the chairmanship of Additional District Magistrate, Mayurbhanj in connection with Severe Cyclonic Storm, as alerted by State Relief Commissioner (SRC). Following preparatory measures were decided in the meeting
 - All Sub-collectors, BDOs, Tahasildars, District Level Officers and Line Department Officers have participated in the meeting and planed for the precautionary measures to be taken at respective level.
 - Medical Teams were constituted under the directions of CDMO, Mayurbhanj, to remain in readiness along with vehicle and ambulance.
 - Executive Engineer, NESCO also constituted four technical teams ready for restoration of power / electric installations, if damage due to cyclone. He was requested to shutdown the electricity before one day of the Cyclone, predicted to landfall in Odisha Coast.
 - Executive Engineer, RWSS, Baripada and Rairangpur instructed to keep water tankers and pouches ready for drinking water distribution.
 - ODRAF team reached at the district, deployed in all strategic locations and remained in readiness for Evacuation & Rescue operation.
 - SP, Mayurbhanj deployed police forces in all targeted locations for maintaining law & order and support in Evacuation operation.
 - BDOs & Tahasildars were instructed to conduct preparatory meeting at their level, involving PRI members and open control room round the clock.
 - Executive Engineer, R&B was requested to mobilize heavy equipments like JCB, Cranes, and Power Saws etc from contractors or Govt. source, if available and keep them ready for restoration of roads.
- A subsequent review meeting was once again conducted by Shri Rajesh Patil, Collector & District Magistrate, Mayurbhanj on 12th October, 2013 at 10.00 am

to review the preparedness, as decided in the preparatory meeting held on 9th October.

- District Emergency Operation Centre (EOC) was functioning round the clock with additional staff support.
- All the officials were ensured to have alternation SIM connection other than BSNL.

Effective use of District Emergency Operation Centre (EOC):

Smt. Pallavi Nayak, Deputy Collector, Emergency expressed that the Emergency



Operation Center (EOC) is fully functional and became the Information hub for the Disaster Management.

- All the communication equipments like tele-fax, Toll Free no-1077 and Internet Connection are of a great use in information and warning dissemination.
- There is an Emergency Kit provided to EOC, which is very useful for the centre, as and when required the Officers / staffs can use the life jackets/ life buoys during rescue and relief operation for their own safety.
- A generator is also available in the EOC and functional for power backup.
- We have our computers and printers, which ease our information/ database management during disasters.
- District Disaster Management Plan is also available, which guides the Officers and Staffs in handling the emergency situation more efficiently.

GO-NGO Coordination established:

A GO-NGO coordination in the name of “Mayurbhanj Disaster Response Forum (MDRF) was established in the participation of 13 NGOs.

- The first NGO coordination meeting was organized on 17th October, 2013 and planned for extending support to the District Administration in Relief & Rescue operation in all affected 11 blocks.
- The District Administration has provided a meeting hall for the forum within the Collectorate campus and shares their plan of action for the relief and rescue work.
- A letter was issued by the Collector & District Magistrate, Mayurbhanj to all the BDOs of affected blocks for coordinating with assigned NGOs for relief and rescue work.
- The NGO forum basically supported the District Administration in providing Volunteers support and Information dissemination in the first phase. But latter on extended relief measures in selected flood affected villages in close coordination with District and Local Administrations.
- Shri Bibekanand Pattnaik of SPARDA NGO was nominated as the Coordinator of the Forum and Shri Aditya Pattnaik of ACM -NGO as the resource person, directly coordinating with the District Administration for all kind of support and planning.

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific Suggestion
Mayurbhanj	DDMP prepared in 2012-13, not	Emergency Section is functioning in the EOC.	Neither updated nor followed	A GO-NGO forum established in the name of	Technical Manpower required at District

	<p>updated. Partially used at District EOC.</p>	<p>Toll free number - 1077 working for public information Equipments provided are in functional condition.</p>	<p>during “Phailin”.</p>	<p>“MayurBHANJ Disaster Response Forum (MDRF) with all support from District Administration.</p>	<p>EOC.</p>
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Community level preparedness at Salagaon of Badasahi block and Nakhara of Betanati block:

- As shared by the villagers the impact of Cyclone was very low but the subsequent flood in river Budhabalanga & Gangahar followed by continuous heavy rain, caused the entire villagers stranded in nearest School Buildings, Panchayat Office, and Community Halls and on the roof of individual pucca houses for more than two days.
- Flood water even drowned the schools and other Pucca Buildings, up to the half of the ground floor level and all these buildings were overcrowded. So, people took shelter in those building, had no choice of doing anything, other than taking shelter and waiting for the flood water to recede.
- Villagers were neither prepared nor warned for the unprecedented flood situation. But the little preparedness for cyclone helped them to take shelter in safe places and save lives.
- As shared by the villagers, they have never been oriented or trained for any skill development activities for



disaster preparedness, although both the villages were covered under DRM programme during 2006-08.

- Whatever preparedness measures taken by the villagers, it was only of their own knowledge and capacities.

Critical Observation at Community level:

- While interacted with Shri. Santosh Kumar Khanda, Secretary, FORD- A local level NGO, who took the responsibilities to prepare the Village and Gram Panchayat Disaster Management Plans, during DRM programme from 2006-08 with support from the Block Administration, Badasahi & Betanati, got very poor response from the community. He further narrated following issues:



- Both the blocks are having mixed population of SC, ST and General cast people. So, there is a big gap of understanding, realizing and thinking for preparedness with respect to any disasters.

- Village DM plans were prepared in 2006-07 and training on Search & Rescue were organized in 2007-08. Funds were very limited to cover entire geographical areas of each revenue village, which are very big in size.
- After 2008, neither there was any follow up awareness campaign organized nor the Village and GP DM plans prepared, were recognized by the local administration. So, it lost its' importance and acceptability.

Bhadrak District: 23rd Oct 2013

This district is surrounded by Balasore district and Bay of Bengal in the North, Kendrapada district in the East, Jajpur district and River Baitarani in the South and Keonjhar district in the West. The area of this district is 2505 Sq. Km. This district is divided into seven numbers of Blocks i.e. Bhadrak, Chandbali, Basudevpur, Bhandaripokhari, Bonth, Tihidi & Dhamnagar.



District Emergency Operation Centre (EOC), Bhadrak

Bhadrak district administration was in full readiness, after getting the warning for the Very Severe Cyclonic Storm- “Phailin” on 8th October, 2013 from the SRC office. Shri. Laxminarayan Mishra, Collector & District Magistrate, Bhadrak was seating in the District Emergency Operation Centre (EOC) to supervise the situation and coordinating with field offices and BDOs. As discussed, following steps were taken by the Administration as precautionary measures:

- An emergency meeting was called on 9th October 2013 at the district level, involving all line department officials, BDOs and Tahasildars to plan necessary preparatory measures for the Cyclone.
- All Block Development Officers were alerted for the cyclonic storm and instructed to evacuate all the people from vulnerable locations and living in Kutch house by 12th October, 2013 positively.

- Public Address Systems were used in all block to inform the people about the “Phailin”.
- As a result of which, total 48030 people were evacuated and provided shelter in 31 Cyclone shelter and 23 school buildings.
- Free kitchen provided in all 53 shelters for two days i.e. up to 14th October 2013, till the normalcy of the situation.
- 6 medical teams were constituted in four most likely to be affected blocks namely Dhamnagar, Bhandaripokhari, Tihidi and Chandbali.
- Toll free number -1077 is functional and public are informed about the updated information.
- District Emergency Operation Centre (EOC) is functioning round the clock and actively coordinating with the field as well as district level officials and line departments.

District Contingency Plan made available in the EOC, which was of great use as shared by Shri. Padman Kumar Rai, Deputy Collector, Emergency (I/C), Bhadrak. In addition to Shri Ray's comment, Shri Niranjana Parida, the senior clerk replied that, “after withdrawal of the District Project Officer engaged under DRM programme, it was very difficult on our part to prepare the District Disaster Management Plan (DDMP), which was multi hazard focused. We do not have either the expertise or adequate time to prepare the DDMP. It is also very difficult to prepare DDMP, without referring Block DM plan from respective blocks. So, the entire system of information flow for the preparation of Disaster Management Plan, at all level is paralyzed after the DPO's withdrawal.

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific Suggestion
Bhadrak	DDMP District Contingency Plan available in the District EOC, which is only flood focused.	The EOC is functional with Emergency Section. Collector & DM and ADM are seating in the EOC Emergency equipments provided are in use.	Neither updated nor followed during “Phailin”.	Not activated.	Professional support at District EOC for Disaster Management Planning and coordination.

Preparedness measures taken at Community level:

Brajanandapur village of Gobindpur GP, Basudevpur block is having population approximately 2,000 with 123 households, also got prepared on the Cyclonic warning. The villagers were prepared with all the resources available with them and took all sorts of precautionary measures, as explained below:



Interaction with Villagers of Brajanandapur, Bhadrak district during the survey on 23rd October, 2013

- Shri Aanant Charan Jena, a villager nominated as the Secretary of Cyclone Shelter Management Committee of the Brajanandapur village started preparation at shelter level with active support from the village youths, earlier trained as Disaster Management Team.
- A response drill was organized on 10th October to test check all the equipments available in the shelter. The Generator provided in the shelter could not be started, as the key was not available. So, it was decided that to hire a Generator from the market on emergency basis.
- Adequate fuel for Generator, Power Saws and Inflatable lights was kept ready in the shelter.
- Dry foods like Chuda (flat rice), biscuits etc and drinking water pouches were also kept ready in sufficient quantity with own arrangement of the villagers.
- Final warning was issued to all the villagers on 12th October, by using the megaphone available in the shelter, appealing all the people living in Ktcha houses and low lying areas to come to the Cyclone shelter by evening with all their belongings and essential documents.
- After watching the cyclonic situation and getting final warning, more than 700 people have reached at the shelter on 12th October- evening. They stayed in the shelter up to 13th October- evening.
- Cooked food was arranged by the villagers in the shelter places by using the utensils and gas stove available in the Cyclone shelter.

- Among of the total evacuees, 15 were physically handicapped and 6 women were pregnant. Special arrangement like place for taking comfortable rest in the shelter and drinking water and food was made available for all the pregnant women.
- There was no casualty in the village due to the cyclone –“Phailin”.
- The villagers, now realizing that, the early preparedness using available resources can reduce their risk of life loss, which was got tested in the recent “Phailin” situation.



Shri Ramakanta Dangua, Secretary of a local NGO- Lifeline of Basudevpur is an active & dedicated volunteer and social worker, who always extended his support to the block and district administration. Ramakant has been awarded by the Minister of State, Revenue & Disaster Management, Government of Odisha, during the Disaster Preparedness Day 2010, as the best volunteer in Disaster Preparedness. Ramakant expressed that he has been actively involved in all the initiatives taken by UNDP in Basudevpur block, with respect to disaster management, since 2001. When Disaster Risk Management (DRM) Programme started in 2003, Ramakant took the responsibility of preparation of Disaster Management Plans in 12 GPs and 45 villages of Basudevpur block, in the banner of his registered NGO- Lifeline. He mobilized 10 volunteers at local level for this task. Financial support was provided out of the DRM programme fund through Block Administration. He expressed that “Fund for preparation of each Village DM plan was Rs. 500/-- only, which was very nominal but the response and respect that he used to get from the villagers, tempted him and his small team of volunteers to continue their effort without any expectation of financial gain”. In the Latter stage, they were also involved in organizing Task Force training in several villages of the block. He trained his volunteers in Search & Rescue and First Aid as Master Trainers and utilized their services for imparting training to the villager volunteers.

The honorarium they used to get from the block administration under DRM programme, could only bear their daily pocket expenses but the motivation level was so high, that they even went to other blocks, as demanded by the District Project Officer, DRM programme, Bhadrak. He could able to establish a good social network through the programme and decided to continue his organization’s activity in the field of Disaster Preparedness at various levels. They have got several chances to participate in trainings, workshops and competitions organized by OSDMA during DRM programme and even till now, he is extending his support to the OSDMA for organizing and coordinating several activities in the Basudevpur block but the frequency of activities have been very limited now.

Concluding his remarks, Ramakant shared that after DRM programme, there was no such programmes, which could cover the entire district including all Blocks, Panchayats and villages to propagate the message of disaster preparedness, instigate the villagers to become Disaster Management team members, impart training to develop their skills and prepare meticulous plan for Disaster Management with risk and vulnerability assessment through PRA process. Now, hardly any people recognize the VDMC and VDMT in the villages because there is absolutely no efforts either from local administration and state authority level to revive those village DM plans and DM team members. The effort is now limited to only all those villages, where OSDMA has constructed Multipurpose Cyclone / Flood shelters with all equipments and constituted management committees and Task forces. This is just the replication of DRM experiences to a limited scale. *But if we critically analyze the current “Phailin” response, where the villagers got sensitized and evacuated from all vulnerable locations after getting warning from various sources, then it is obvious that they have been consistently gone through various disaster preparedness activities since 2003 but now, faced the real time disaster like Cyclone, where they replicated their practice and leanings in to action.*

Kendrapara District: Visited on 24th and 25th Oct 2013:

Kendrapara district, comprising of 9 blocks, 230 Grampanchayats and 1407 inhabited villages, is covering around geographical area of 2494.69 Sq Km. Is mostly affected by flood in two major river system i.e. Brahmani & Baitarani. Two bordering blocks of the district i.e. Mahakalpada and Rajnagar are opened to Bay of Bengal and mostly the entire district is highly vulnerable to Cyclone. The entire district was also badly affected by the Supper Cyclone in 1999 and massive destructions to public and private infrastructures, especially in the Mahakalpada and Rajnagar block. Hence, the preparedness measures taken by the Administration and general public to respond the Very Severe Cyclonic storm - “Phailin”, was much more that of they learnt from the 1999’s Supper Cyclone experience. Following are few observations reported from different level:

Preparedness at district level as explained by Shri Niranjan Nayak, Collector and District Magistrate, Kendrapara:

Shri Nayak expressed that Super Cyclone 1999 has taught us lessons of preparedness measures needed to be taken to minimize losses but in Phailin we actually got the scope to test and incorporated the lessons learnt in our management abilities. We got enough time to respond due to timely feasting of the Cyclone from various sources. Immediately evacuation process was started and people were



Shri Niranjan Nayak
Collector & District Magistrate, Kendrapara

informed about the gravity of the Cyclone, which helped the administration to get maximum cooperation from the community for successful evacuation. The entire effort reduced the risk of life loss and it’s a great lesson for the Administration for future plan of action in the Disaster Management. Infrastructure and Communication system are two major drawbacks during 1999’s Super Cyclone, which emerged as two major strengths in managing the Very Severe Cyclonic Storm-“Phailin” in 2013. Shri Nayak, further shared the details of the preparedness measures by the administration, as mentioned below:

- An emergency meeting was convened on 10.10.13 to streamline the preparedness and response activities at all levels starting from District to village and up to the shelters.
- The meeting was held involving all the BODs, Tahasildars, Line Department officials, selected Secretaries of shelters to prepare a detailed plan for preparedness measures. On the first hand all the BDOs and Tahasildars were instructed to disseminate the warning up to the GPs and Village level.
- District Emergency Operation Centre (EOC), which is always have been treated as the nerve centre for Disaster Management, started coordinating with all other control rooms like Block, Tahasil, Police etc.
- The evacuation process started from the morning of 11th October and continued up to the evening of 12th October, ensuring the evacuation of 68,000 people from all vulnerable pockets and placed in different Schools, Cyclone and Flood Shelters.
- Evacuees were provided with dry and cooked food in the shelters with the help of block administration, PRI members and Civil Society Organisations.

He expressed that the situation in Kendrapada is different. In some places like Auli, Patamundai, Rajnagar, Mahakalpada etc, roads get cut off even in a normal rainy season. So it becomes a difficult task for the villagers to come out of the village and take shelter in nearby village/ safe shelter places. So, We have tried, our level best and rest was assured because of the cooperation of the villagers. It shows, how the community is sensitized and can realise the gravity of the natural disasters and gets prepared for it. All this could be possible because of rigorous training and awareness activities, since after Supper Cyclone by various organisations and Government.

- There is one casualty reported in the district and that is due to his own negligence, as the man gone out of his house during the Cyclone on 12th October night and dead due to a heavy tree fallen on him.
- The restoration of electricity in Kendrapara town could be possible soon after 24 hours of the cyclone.

Suggestion from the Collector & DM, Kendrapara:

- The support of District Project Officer during DRM and DRR programme, should be continued either by the Government or UNDP because the DPO was the focal person for Disaster Management Planning and Coordination in the district, having a technical and sound knowledge about the subject matter.

He cited one example that there was a workshop on "Emergency Health Care Management Plan" at district level, in the month of October 2013, but the same workshop would have been organised in more systematic approach, if a

technical person like the DPO could be present. He also narrated that “To educate people on a particular concept, always there is a need of at least one subject matter specialist. However, the workshop was successful with participation of all CDMO and Medical Officers of all the blocks and other district level officers.

- There is also a need of more numbers of Multipurpose Cyclone Shelters in coastal blocks and flood shelters in others because large portion of the total population of the district are below poverty line, who are still having no Pucca houses and the Cyclone / Flood Shelters available in the district are not adequate to accommodate all the vulnerable people.
- Training and Capacity building is the main key areas of disaster management, which is required in a continuous and periodical manner, especially for the Communities, PRI members and Civil Society Organisation in preparing the disaster management plans and skill development like effective Search and Rescue Operation, shelter management, First aid and evacuation operation.

Hence, all the agencies, working in this field should put their resources for this purpose and most important support will be by providing technical support in terms of trained manpower, hi-tech equipments and consistent training programmes for their uses and applications.

- He also highlighted that even the Government Officers, trained on Disaster Management during last five years, are now transferred or promoted to some other places. So, fresh training is required at all levels especially district and block level. OSDMA should make plan for such training programmes.

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific Suggestion
Kendrapada	DDMP updated and referred during “Phailin” response, as per Collector and a copy was available	The EOC constructed within the Collector’s Residential campus and fully functional during the emergency under the direct	Neither updated nor followed during “Phailin”.	NGO coordination activated but as per the Collector, situation was not so devastated where the administration could request for the NGOs	One Technical & Professional support required for Kendrapada district EOC. Community level preparedness activities

	with him.	supervision of the Collector .		support.	needs to be further strengthened.
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Mr. Rajani Kanta Mohanty, Deputy Collector (in charge), Emergency, Kendrapada shared that after the Disaster Risk Reduction Project, there is no Project Officer available in the district emergency operation centre to carry forward the community level preparedness activities. Though dist. Administration has organised two capacity building training programmes on “Healthcare Management Plan and Vulnerability assessment of relief lines, identification of alternative relief lines and supply chain management” but failed to coordinate it properly.

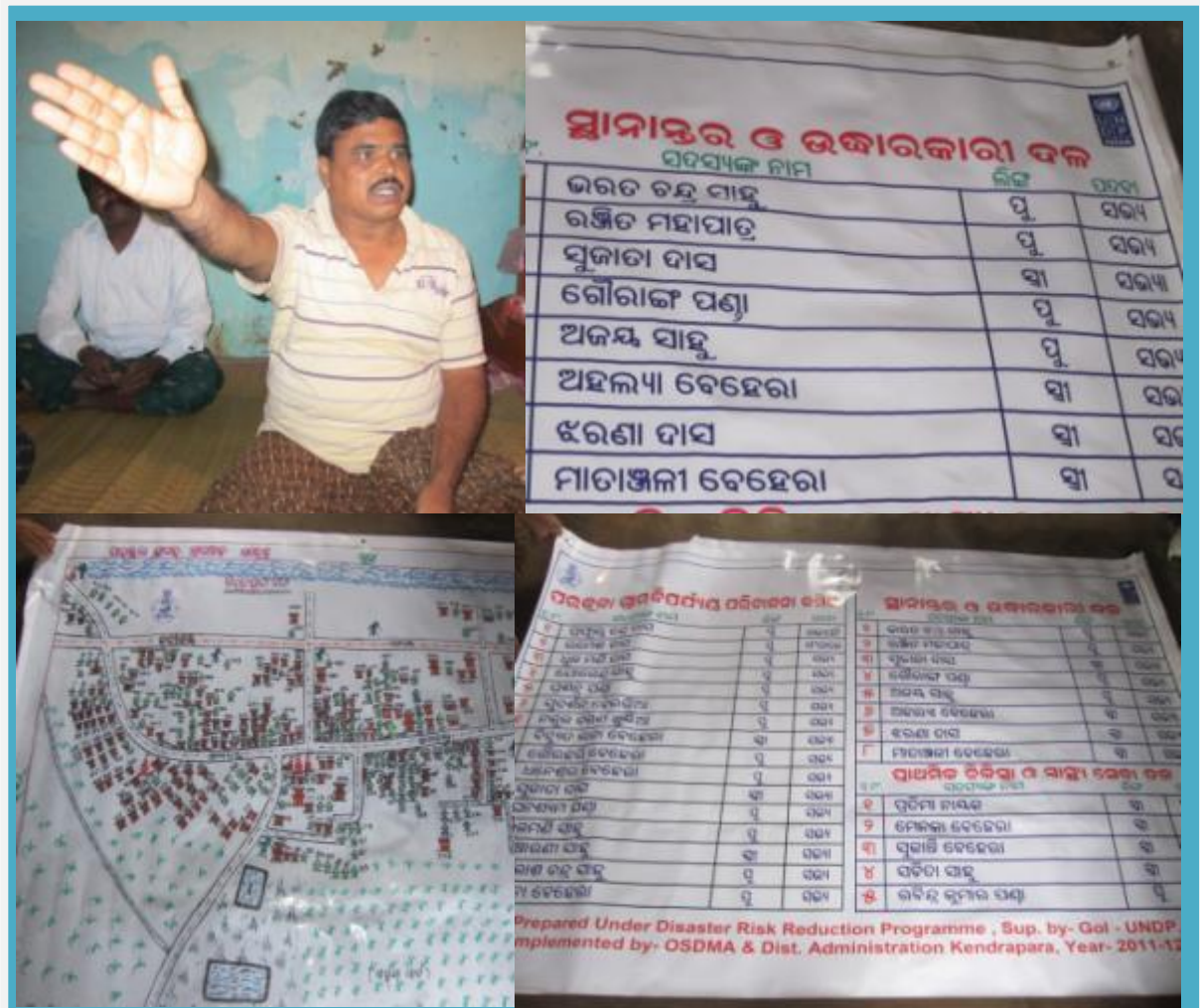
District Emergency Operation Centre (District EOC), Kendrapara:



Village level preparedness at Parakula and Pikarali village of Marshaghai Block:

Parakula and Pikarali villages of Parakula GP of Kendrapara district were covered under the Disaster Risk Management (DRM) and Disaster Risk Reduction (DRR) Project. So, both the villages have Village Disaster Management Plans and First Aid.

Shri. Prafulla Das, Secretary of the flood shelter constructed by OSDMA and focal



Shri Prafulla Das, Secretary of Flood Shelter, Parakula and focal person of the village for Disaster Preparedness initiatives

person in the village for disaster preparedness explained that there is absolutely no impact of “Phalin ” in our village but we took all precautionary measures after getting the information from BDO, Marshaghai. He told that, Dinabandhu Behra, Sarpanch of Parakula Panchayat, who is also an active member of Village Disaster Management Committee, extended all support in preparing for the cyclone along with a couple number of Village youths, trained in S&R and First Aid. Describing the detail steps taken by them, Shri Das highlighted following points:

Preparedness measures taken at village level:

- After receiving the warning from the block office, he along with task force members both boys and girls disseminated the warning in the periphery

villages with mega phone on 10th Oct 2013, followed by a meeting conducted at village level.

- He shown us the village map prepared during the implementation of DRR project and that helped the task force members in identifying the details of the village.
- Pucca houses marked for possible shelter places, made ready for the nearest villagers and informed accordingly with an appeal to carry their belongings and important documents/ papers.
- A response drill was organised on 10th October to test check the equipments like generator, power saws and inflatable lights available in Flood shelter.
- Finally, 300 people, those have Kucha houses evacuated and took shelter in the flood shelter by evening of 12th Oct 13. Free kitchen was provided to the evacuees on 12th & 13th Oct 13 with the active support of the Sarpanch.
- The female task force members helped Shri. Sahu to carry out the free kitchen in the flood shelters.

Training & Capacity building activities at Village level:

- 50 volunteers were trained on SAR and FA under the DRR project in the year 2011-12.
- Recently, a mega mock drill was organised in the village by the District Administration with the help of OSDMA and NDRF on 15th August. 2013. In this mock drill, 15 NDRF personnel along with all their equipments facilitated the villagers in carrying out the mock drill exercise on Flood and Cyclone. Participation of school students was also ensured and Shri Umakanta Swain, ADM, Kendrapara along with BDO, Marshaghai was also present during the mock drill exercise.
- So, all these effort now gives us the result of self sustaining and preparing for reduce the risk of disasters, easily, at our own level.

Similarly, we met few trained lady volunteers named, Sujata Das, Bidyutlata Behera and Ahalya Behera. They admitted that, the skill based training programmes helped us in widening our vision and motivated us to do something for our fellow villagers in this type of emergency situation. Also demanded more training programmes so that each and every point they could remember and utilize at the same at the time of need.

Mr. Dinabandhu Behera, Sarpanch, Parakula expressed that due to training programmes and frequent mock drills by OSDMA & NDRF in the village the people are more sensitive towards disaster preparedness and they responded well, when the task force members propagated the warning for the recent cyclone – “Phailin”. Shri. Behera, has also participated in the Search & Rescue and First Aid training programmes several time, organised at Panchayat and District level. He is now well versed with all the Search & Rescue skills and can help people, when ever required. He found it very interesting and with his own interest, knows much about Community Based Disaster Preparedness (CBDP) from various sources.



Mr. Dinabandhu Behera,
Sarpanch, Parakula



Smt. Pratima Nayak,
Angan Wadi Workers,
Centre-B, Parakula

Smt. Pratima, Nayak, Angan Wadi Worker of Centre-B of Parakula Village is one among the Village First Aid Team and trained on First Aid techniques during DRM & DRR programme. She always actively participated in all mock drills organised in the Village. She believes, she is now more skilled, unlike other AW worker, because she is trained in First Aid. She committed to provide first aid, when ever needed by any of her villagers. Taking this advantage, she was ready during the recent “Phailin”, to provide first aid with her first aid box. She expressed that more trainings are required for the villagers, especially women on First Aid, so that they can help their villagers at the time of emergency.

Smt. Bidulata Behra (from left & in green saree), Smt. Ahalya Behra (middle & in red saree) and Sujata Das (right and red & white drees) of Parkula village of Kendrapara district, are three village DMT members trained in Search & Rescue at Block and Village level in 2012 under Gol-UNDP DRR programme. Earlier, they have also got training under DRM programme and participated in state level competitions organized during Disaster Preparedness Day. Expressing their interest in disaster preparedness activities, they have also been involved in village level mock drill exercises and committed to extend their support at the time of need by their village. They feel confident during any flood and cyclonic situation because they can use their skills for their own family members and villagers. During the recent cyclonic warning they have actively involved in warning dissemination through their Women group and later on supported in cooking to provide free kitchen at the flood shelter for the evacuees. During this cyclone there was no casualty and neither any of their villagers stranded due to any emergency situation. So, they have actively contributed in shelter management.



Smt. Bidulata Behra (from left), Smt. Ahalya Behra (Center) & Sujata Das (right)

Saroj Kanta Behera along with her wife Malati Behera and four daughters went to the flood shelter, immediately after getting the cyclone warning on –“Phailin” from the village volunteers, on 12th Oct 2013 morning. Lady volunteers of his village helped her wife to go to the shelter because Malati was pregnant of eighth month. They have a small thatched house and situated in a very low laying area of the village, hence chances of getting flooded/ water logged. Saroj did not take any risk and went to the shelter with all his essentials. In the flood shelter, they were safe with other village mates and trained lady volunteers. They stayed there up to 14th October 2013, morning and got cooked food during their stay in the shelter. Her wife gave birth a baby boy on 23rd October evening. Saroj was very happy and expressed that I was very much scared after getting the Cyclonic warning because of her wife’s condition but felt confident when his villagers took them to the shelter and concerned about her wife. However, Ajay could able to safe his wife and family because of such preparedness of the villagers and very helping nature.



Saroj Kanta Behera & his family of Parkula Village took shelter in the flood shelter.

Ganjam District: Visited on 26th& 27th Oct 2013

Ganjam is the worst affected district by the Severe Super Cyclonic Storm "Phailin", as the landfall was near Gopalpur of Ganjam with wind speed of 200-220 km. per hour on 12th October, 2013. Subsequently, in the secondary effect of the cyclone, heavy rain occurred which caused to severe flood in rivers like Badanadi and Rushikulya, affecting 22 blocks and 18 ULBs in the districts.

GO-NGO Coordination in Ganjam district:

- Interagency Coordination Group cell was established on 19th October, 2013 by the District Administration, Ganjam in the Collectorate Conference Hall, followed by a meeting under the Chairmanship of Shri. Upendra Nath Behera, Additional Chief Secretary, Finance Department, Government of Odisha. Dr. Krishan Kumar, IAS, Collector & DM, Ganjam, Shri. Bikash Chandra Mohapatra, Revenue Divisional Commissioner (Southern Division), ADM and PD, DRDA were among of other senior officers present in the meeting.
- A total number of 48 INGOs/ NGOs have participated and registered in the cell and extended their support in relief and response activities.
- District Administration welcoming all the participating INGOs/ NGOs requested not to overlap any intervention in a single area rather to distribute their work in close coordination with Shri Prem Chandra Chaudhary, IAS, PD-DRDA, who is designated as the Senior Supervisor Officer for IAG cell.
- In Addition to the PD, DRDA, three other officials of District Administration i.e., APD, DRDA, District Coordinator, MGNREGA and PMRDF, Collectorate, Chatrapur, were also assisting the cell.
- A matrix table is developed indicating the expertise area/ intervention areas of different Agencies/ INGOs/NGOs with respect to the area of operation and key contact person for coordination.
- Daily coordination meeting was conducted at the Conference hall in the Chairmanship of the PD, DRDA to finalize the area and sector of intervention and review the progress of relief operation organized by different agencies.
- A specific format was developed and used to collect the information from the participating organization based on which permission was granted with the approval of the Collector & District Magistrate, Ganjam. Subsequently, intimation letter was issued to the organization immediately for starting their intervention in the needy areas, as assessed by the Government and NGO cell.
- Sharing of updating database of NGOs/ Volunteers/ Area of operation and sector of intervention was shared with all the participating organization and the Authorities concerned.
- The NGO cell found very active and supportive with the District Administration in managing the relief and response activities.

Functioning of District Emergency Operation Centre, Ganjam:



EOC constructed under DRM programme (2006), used for other official purpose



EOC constructed by District Administration (2003), now used for Emergency Operation Centre

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific Suggestion
Ganjam	DDMP prepared in 2012-13	Functional with all its equipments. ADM along with the Deputy Collector, Emergency were operating the relief and response activities	Neither updated nor followed during “Phailin”.	Inter Agency Coordination Group cell was activated on 19 th Oct, 2013 by the District Administration. Shri Prem Chandra Chaudhary, IAS, PD, DRDA was designated as the Senior Supervising Officer of the Cell.	

Preparedness at community level:

- Visited Purunabandha village of Ganjam Block, which is covered under the GoI-UNDP DRR programme and met the community, task force members and discussed about their preparedness for Phailin.

- The village is very close to sea and in air distance it is about 2Km. from the sea shore. The community members shared that Multi-Purpose Cyclone shelter helped them to survive.
- All the women members of the family along with their child took shelter in the MCS where as some male members took shelter in the nearest School.
- Around 1000 people took shelter in MCS. Shri. Surendranath Behera, Secretary of MCS shared that 50 volunteers have undergone training on SAR and FA during the DRR programme, which enhanced their confidence and they have helped the villagers in shifting to the nearest MCS. The village Disaster Management Plan is available with Shri Beher, it was recently prepare during DRR programme in 2011-12.
- Similar training programmes need to be done more frequently to grow our efficiencies, as opined by following task force members.



- The last training of village Task Force Members was organized under GoI-UNDP DRR programme, during 2011-12.
- The village is full of fisherman communities covering three wards. They took all precautionary steps before coming to the shelter on 11th October and stayed there up to the morning of 14th October 2003.
- Still the villagers were scared in the Cyclone Shelter, hearing the roaring sound of the high speed wind. The entire building was vibrating because of Severe Cyclonic Storm, as the shelter and village is just 2.5 km from the sea shore.
- Still the villagers reported no casualty in their village. People have saved their lives because of early preparedness.

Khorda District: Visited on 29th October, 2013

Disasters happen and pass away but the memories left with the people for longtime. 29th October, the day people of Odisha never forget, on which the Super Cyclone occurred in the year 1999 and its massive devastation are still in the memory of people. In this remembrance, Govt. of Odisha used to observe the day as the Odisha Disaster Preparedness Day & the International Day for Disaster Reduction.

District Administration, Khorda also observed the Odisha Disaster Preparedness Day in the august presence of Shri, Niranjana Sahu, Collector & District Magistrate. Though Khorda district was fully affected in “Phailin” and partly affected by Flood, but the effort of awareness and preparedness was on full swing. Subsequently, Disaster Preparedness Day observation meeting along with Shri Umakanta Mohanty, Additional District Magistrate, Khorda, District Emergency Officer and other Dist. Level officials. In his deliberation Collector, Khorda emphasized on



ଶପଥ ପାଠ

ମୁଁ ଆଜିର ପୁଣ୍ୟ ଦିବସରେ ପ୍ରତିଜ୍ଞା କରୁଛି ଯେ, କୌଣସି ପ୍ରକାର ପ୍ରାକୃତିକ ବିପର୍ଯ୍ୟୟ କିମ୍ବା କୃତ୍ରିମ ଦୁର୍ଘଟଣାରେ ନିଜକୁ ସଫୁର୍ଷ ଭାବେ ମାନବ ସଭ୍ୟତାର ଧନ ଜୀବନ ଓ ଜୀବିକାକୁ ପ୍ରତିହତ କରିବା ପାଇଁ ନିୟୋଜିତ କରିବା ସଙ୍ଗେ ସଙ୍ଗେ ମୋର ଚତୁର୍ପାର୍ଶ୍ୱରେ ବସବାସ କରୁଥିବା ପଡ଼ୋଶୀମାନଙ୍କର ନିରାପତ୍ତା ପାଇଁ ଶତ ଚେଷ୍ଟିତ ରହିବି । ପ୍ରାକୃତିକ ବିପର୍ଯ୍ୟୟ ପ୍ରଣମନର ଦୃଢ଼ ମୁକାବିଲା କରିବା ପାଇଁ ମୁଁ ନିତ୍ୟାନ୍ତ ଭାବେ ଅନ୍ୟ ପାଠକ ଜଣଙ୍କୁ ଆଜିର ଦିବସର ମୁଖ୍ୟ ଉଦ୍ଦେଶ୍ୟ ବିଷୟରେ ଅବଗତ କରାଇବି । ଶେଷରେ ଆଜି ଦିବସର ମୂଳମନ୍ତ୍ର ଯଥା ବିପର୍ଯ୍ୟୟ ପ୍ରସୂତି ଓ ଅଭିଧାନର ଅଭିମୁଖ୍ୟକୁ ପୂରଣ କରିବା ପାଇଁ ଆପ୍ରାଣ ଚେଷ୍ଟା କରିବି ।

- ABC of life i.e. Always Be Careful.
- Importance of Preparedness at all levels including the household level.
- Importance of the Odisha Disaster Preparedness day.

At the end of the meeting, the Collector requested all the participants to stand for a silent prayer, on the remembrance of deceased people in 1999’s Super Cyclone. The meeting was ended with “a Oath Taking as Disaster Volunteers” by all the participants and vote of thanks by the Additional District Magistrate.

Similarly, Fire personnel also demonstrated many latest techniques available with them. Experts and volunteers from Civil Defence demonstrated various rescue operations to the gathering. In the said event a lot of school students and teachers were participated from different schools.



Preparedness at district level as explained by Shri Niranjana Sahu, Collector and District Magistrate, Khorda:

He expressed that, the level of advance preparedness for Phailin was quite satisfactory. We have taken all the necessary precautionary measures after unloading the warning message from the Revenue & DM Department. An emergency meeting was called on 9th Oct, 2013 to chalk out the plan and all the line department officials were instructed accordingly. The preparedness measures taken, as expressed by Shri Sahu are as follows :

- District Emergency Operation Centre (EOC) operated round the clock to coordinate with field offices and dissemination of warning message. Duties allotted to the officials along with the supporting staff for control room.
- District Disaster Management Plan (DDMP) updated and shared with all the line department officials for ready reference. A copy was available with the Collector.
- Warning disseminated to the public through public address system and BDOs and Tahasildars took the responsibility.



- Total 1,87,000 people were evacuated and sheltered in nearest schools by evening of 12th October, 2013. He also shared that due to this massive evacuation, they could able to save many lives. In evacuation operation the community response was tremendous.
- Food stuffs like dry foods, rice, dal and other relief materials were stock piled in every Gram Panchayats by evening of 11th October, 2013.
- ODRAF / Civil Defense / Fire personnel deployed in all strategic locations and played a crucial role in rescue & evacuation operation.
- Baliana and Balipatana blocks are the identified flood zones in khorda but this time Banapur was affected, which was an exceptional this time. Now, this exception can be taken into account during flood preparation.

Suggestions by the Collector & DM, Khorda:

- Expressing the effectiveness of GoI-UNDP DRM programme, Shri. Sahu, expressed that when he was Sub-Collector in Kendrapara district, the programme was being implemented through District Administration and he took participation in several district level workshops and training programmes. In his word, awareness and skill among the people must have been enhanced due to the DRM programme but after its completion in 2009, there is no follow up programme to carry forward the initiatives. Ultimately, the programme loosed its identity in the current period. However, the outcomes can be realised during such type of emergency situation, indicating the response of community due to Phailin.
- Further, he added that now we should constitute similar Village level committees and Disaster Management Teams (DMTs), who could not only play the major role during natural disasters but also manmade disasters like road accident, road blocking etc.
In Khorda district, road accident is prevalent because of National Highway-5 and busiest State High Ways across the district. People never understand the law & order situations and block the roads followed by an accident demanding the unexpected compensation for the next to the keen. This creates another disaster for the District Administration.
So, the Disaster Management Teams to be constituted, should also be trained and sensitise to manage such situation, as well. Hence, their role should be multi tasking. He advised that UNDP should also think about such initiatives, when planning for Disaster Management Programmes.
- Adding to the points raised by the Collector, Shri Umakant Mohanty, Additional District Magistrate, Khurda shared that he has also good knowledge about the DRM programme and it was also beneficial for the community. After that there was no such programme implemented, either by OSDMA or UNDP, covering such largest areas of the state. But fact is that

now-a-days, the disasters are more frequent in nature and also there is no specific identified place for disasters. Every other day we are facing some kind of disaster may be natural or man-made. Necessary steps must be taken to formulate such type of programme for the benefit of community, once more.

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific Suggestion
Khorda	DDMP referred during “Phailin” response, as per Collector and a copy was available with him.	The EOC is functioning in the newly constructed building of the collectorate.	Neither updated nor followed during “Phailin”.	NGO coordination activated.	Programmes like DRM should be formulated for mass community mobilisation with emphasis on manmade disasters like Road Accident, as well. Many flood shelters needs to be constructed throughout after analysing the previous and current trend of flood.

Preparedness at Block level:

Personal Interview with Mr. Padmanav Behera, ABDO, Baliana, Khorda District

ABDO Baliana shared his experience at the Block level of managing the severe cyclonic storm “Phailin” and emphasised on pre warning and how it was helpful to them for better and smooth management of community at the time of emergency. He shared that Block has prepared the Contingency Plan for the year 2013-14 in which all the relevant data captured & which was also helpful. He has also shared that that in his previous assigned Block i.e. Nischintakoili of Cuttack District he was involved in DRM Programme and he used his Disaster Management expertise in Baliana block. He pleased to share that, he is more confident than before in handling the disasters now and there is a definite and positive impact of the DRM programme on the community. Community aware of the preparedness aspects and the house hold level preparedness was quite good. He said that there is vast improvement in cyclone prediction and warning dissemination at all levels than 199 Super Cyclone.

Media played major role in disseminating the cyclone warning at the community level. Due to this early warning, administration got ample of time for warning dissemination and evacuation which helped us in reducing the human casualty. He narrated that the following steps taken at Block level to face Phailin:

- Control room activated with required manpower.
- Warning disseminated in all GPs and villages through Public address system and PRIs involved in the process. PRIs are always in touch with the administration through cell phones.
- A team of three members constituted and stationed in GP HQs for monitoring evacuation, relief and rescue operation. They were instructed not to leave the HQ until further order of Block Development Officer. These teams were always in touch with the Block Administration and report time to time.
- Public Distribution System (PDS) quota rice placed in all GPs after receipt the warning from DEOC.
- 3470 nos of community members evacuated and placed in safe school buildings.
- There are two flood shelters constructed and people took shelter there.
- Dry foods and cooked foods provide to the evacuees at the shelters.

Explaining the DRM effectiveness Mr. Behera, shared that Disaster Management Should not be a onetime affair, because the types and frequency of disasters are increasing now-a-days. We need to have that basic preparedness knowledge. DRM is one of the best initiatives taken at that point of time for the community but now time has come to re-think of similar programme. He also appreciated the concept of Village Disaster Management planning and Disaster Management Teams, which were constituted during the programme period, was quite useful. But now we hardly find those plans and DMTs. Because there is no further follow up after the DRM Programme is over. Govt. should have taken initiative to move it forward. Somehow now time has come to mobilise the youth of the villages and train them and create a Disaster Management Force in each village.

Cuttack District: Visited on 28th Oct 2013

Cuttack district is a narrow strip of land spreading from east to west. Topographically, Cuttack has two prominent divisions i.e. hilly terrain on the west and Mahanadi delta plain on the east. The highly fertile and densely populated land is criss-crossed by hundreds of rivers and rivulets. These water bodies function both as tributaries and as distributaries of the Mahanadi river system. Large portion of the land mass is low lying and gets submerged during flood. People of Cuttack largely depend upon agriculture as the primary means of livelihood. The vast network of irrigation canals established by the Britishers after the great famine of 1866 is the backbone of agriculture. Cuttack city is still the commercial capital of Odisha with the *Malgodown* controlling the trade throughout the state. The alertness for the recent cyclone - “Phailin” was as high as the coastal district because all the rivers flowing through the district are influenced by the heavy rain and create flood like situation. Water logging in the Cuttack city creates another chaotic condition for its habitants. Hence, the District Administration was on high alertness to manage the emergency situation proactively.



Sri. Laxmidhar Mohanty,
Additional District Magistrate, Cuttack

District Level Preparedness as explained by the ADM, Cuttack:

Sri. Laxmidhar Mohanty, Additional District Magistrate, Cuttack shared the District level preparedness and steps taken by the administration to combat the effect of Phailin. He said that, Collector along with all the line department officials worked days together after the receipt of warning message from the Revenue and DM Department and planned in such a way that there are zero casualties due to Phailin. In all the preparedness drill, DEOC played a vital role. The detailed preparedness drill undertaken by the district administration is given below.

- The first information received on 8th Oct, 2013 from the Revenue & Disaster Management department that a Deep Depression had intensified into a Very Severe Cyclonic Storm named as “PHAILIN”, indicating the threat to Coastal and internal Odisha.

- Immediately after receipt of the further warning, the Collector & DM decided to call for an emergency meeting of District level line department official and on 9th Oct, 2013 to chalk out the plan of action.
- Instructions were issued to all the Blocks, Tahasils and NACs to start their Control Rooms round the clock and keep the officials in readiness. They were also instructed to hire gen sets at their office so that the communication will not be disrupted and no officer allowed going on leave in that period.
- District Emergency Operation Centre (DEOC) was activated and roster duty allotted to the officers of the district administration and kept close watch on the movement of the Cyclone through IMD website with frequent communication to the Block and Tahasils. In Cuttack, administration hired 125 Kva Dgset to provide uninterrupted power supply to DEOC during & after Phailin.
- More importantly, all the telecom service providers like BSNL, Airtel, Vodafone, etc instructed by the Collector to keep generator along with the fuel so that the tele communication would not be disrupted even during and after Phailin.
- Administration instructed all the hospitals to hire generators and store diesels for power backup at least for seven days. Medical Mobile Teams were constituted with Doctor from MKCG Medical College and Hospital. Emergency units were opened in MKCG medical college and Shishu Bhawan, A government hospital for Childrens, in Cuttack.
- Similarly the administration instructed PHED to keep power backup systems ready at the water distributing points, so that drinking water supply would not be disrupted.
- The updated District Disaster Management Plan (DDMP) was referred for fixing the role and responsibilities of each line departments, checklists for taking precautionary measures and the deployment of higher officials in the vulnerable points.
- All the line department heads instructed to sit along with Mr. Satya Sundar Rout, Assistant Collector, Emergency, Cuttack in the District Control Room conference hall to operate and coordinate with their field offices.
- A NGO cell opened at the emergency section and Addl. District Social Welfare Officer was kept in charge of NGO cell. 32 nos of NGOs enlisted and contacted by district administration to keep their volunteers in readiness and 5 nos NGOs came to DEOC to help the administration in current Phailin situation.
- Administration used the public address system to alert the public. Print and Electronic media has also played a very vital role, sharing the updates of the movements of Phailin, as stated by ADM, Cuttack. In warning dissemination

Block Development Officers and NGOs played a vital role, to reach at the community level.

- All total 1,14,000 nos of people were evacuated from the vulnerable areas all blocks and provided with shelter in safe school and College buildings.
- As the district received 4 times more rainfall (i.e. 582 mm) than the normal rainfall (i.e. 125 mm), the situation was worst in Cuttack city. Water logging in Cuttack cityIt has created a water logging situation in the city. Administration used 200 pump sets to drain the water from the water logging areas.
- In Cuttack City, administration evacuated people from the low lying areas and sheltered them in safe schools. Free kitchen provided to them.
- It was the largest evacuation process ever practiced and this massive evacuation helped the administration in reducing the human casualty.
- Instructions were issued to all the BDOs and Thasildars to actively involve PRI in evacuation and relief operation.

Shri. Gyana Ranjan Das, PD, DRDA, Cuttack, who was earlier served as State Project Officer, GoI-UNDP Disaster Risk Management Programme, shared that, the impact of Disaster Risk Management (DRM) programme at the grass root level cannot be denied because it was a huge task for the State and District Administration to evacuate the people in such large number. Unless there was a continuous sensitisation and



awareness among the general public, Government Officials and Elected Members under the DRM and other programmes, it would not have been possible to mobilise the community. In Odisha, DRM programme, was a largest interactive programme targeted to sensitise and build capacities on Disaster Preparedness starting State to Village level. But in later stage, the new Programme , Disaster Risk Reduction (DRR), started from 2009, had very limited coverage area although it has major focus on Institutional Strengthening w.r.t. National DM Act-2005 and mainstreaming DRR with development initiatives. Narrating the effectiveness of DRM programme, Shri Das has highlighted following critical issues which should be taken care of in future by the Government:

- Dist. Disaster Management Authority formed as per the DM Act but not functional. State Authority still has to strengthen these institutions and regularly follow up with new initiatives.
- District Disaster Management Plan (DDMP) prepared but neither discussed nor approved by the DDMA.
- Though DM plans prepared, but the Hazard Risk Vulnerability Assessment (HRVA) and lessons learnt from the previous disasters are not incorporated in the plan. DM plan prepared is incomplete without HRVA. So, HRVA is must for DM plan at any level.
- IDRN was neither updated nor used in the current Phailin situation.
- District Administration played proactive role and prepared a list of equipment available with Emergency and line department offices for removing the trees uprooted and blocked the road from 12th itself, but again DDMP was not use full, as the list of resources were not updated .
- Though NGO cell opened, but it has limited approach and scope. Rather District Administration took the services of Puja Committees for Relief distribution. Even Puja committees responded to administration and also provided cooked food to some of the schools where people took shelter.
- ***An orientation meeting on preparation of Block Disaster Management Plans (BDMPs) of all the Block Development Officers was organised by DRDA, Cuttack in the month of August 2013 at district level. That orientation was of a great help for all the BDOs to systematically plan for the preparedness and response work during the Severe Cyclonic Storm -Phailin, as shared by Shr. Das.***
- At the DRDA level, a separate control room was also set up in close coordination with District EOC and all Blocks for relief and response activities.

Concluding his remarks, Shri Das, expressed that overall the initiative taken during DRM programme and by OSDMA, have got tested during responding to this Phailin cyclone.

Observation with respect to DRM initiatives at district level:

District	DDMP	Functional status of EOC	IDRN	GO-NGO Coordination	Specific Suggestion
Cuttack	DDMP referred during “Phailin” response, as per the Deputy	Emergency Section is functioning in the EOC. Collector, ADM with other Heads	Neither updated nor followed during “Phailin”.	NGO Cell was opened in Dist. Office and ADSWO was kept in charge of NGO cell.	Preparedness at the City level needs to be enhanced. Disaster Management

	Collector, Emergency. Soft copy as well as Hard Copy was available in DEOC.	of Line Departments Operated from the DEOC during the Emergency situation.			Mechanism needs to be strengthened at all levels.
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Preparedness at Block level:

Personal Interview with Smt. Renuprava Nayak, Block Development Officer, Niali:

BDO Niali explained about the preparedness steps taken to combat the effect of Severe Cyclonic Storm “Phailin”, as follows:

- After receiving the warning from the DEOC on 8th Oct, she invited an emergency meeting on 9th Oct, involving all the block officials, line department officials, PRIs, Zilla Parishad members, Media personnel under the chairmanship of Chairman, Panchayat Samiti. All the members present in the meeting were informed about the severe cyclonic storm Phailin and instructed to be in alertness.
- Block Control Room started functioning round the clock from 8th Oct and 30 nos. of teachers were deputed as the nodal officer for coordinating the evacuation, relief and response activities. This arrangement was made because they have a good knowledge about the schools and villages. So, that evacuation and placing the evacuees in School, as the shelter places.
- Vehicle mounted with Public address system were moved around all the 23 GPs and 127 villages to disseminate the warning. In some villages warning disseminated through traditional drum (Dengura) also followed.



Smt. Renuprava Nayak
Block Development Officer, Niali

- Total 9108 People evacuated on 12th Oct morning from vulnerable packets and sheltered in 63 identified school cum cyclone shelters.
- 23 nos of Generator sets were hired and placed in all 23 schools of each GPs where evacuees provided with shelter.
- 3000 ltrs Diesel and 1000 ltrs of petrol were kept reserved at the local petrol pump of Niali by the Block Administration for emergency operation on 10th Oct, 2013.
- Local NGOs contacted to find out the no of volunteers they can provide if the situation demands. Around 130 volunteers identified, to be used for warning dissemination, evacuation and relief work.
- PDS retailers were requested to keep one month advance stock in all GPs for relief operation, if required.
- Each GPs were provided with 10 Qntls of Chuda (Flat Rice) and 2 Qntls of Gur by morning of 12th Oct , 2013.
- Relief teams constituted headed by Junior Engineers / Extension Officers and stationed in all the 23 GPs from 10th Oct, 2013. They were instructed not to leave the GP HQ until further order.
- PRIs instructed to have a close eye on the situation and to be in touch with the relief team all the time.
- To supervise the relief teams, one special supervisor was nominated by the BDO and instructed to liaison between the block office and the relief teams and report the BDO, time to time.
- BDO assessed the amount of MDM rice available in the schools and it was found that 151 Qntls of MDM rice available in different schools. She instructed the concerned Head Masters to use that rice for free kitchen purposes.
- Free kitchen centres were opened for 2 days for in all 23 shelters.
- Prior to the event, road cleaning equipments were hired and kept ready in the block office premises.
- Baby foods for 2 months in advance were kept ready in all the Anganwadi centers in coordination with CDPO.
- 11 Medical Relief Centres were opened by the Medical Officer, Niali PHC.
- 6300 nos of cattle population were evacuated and placed in schools. 7 nos of cattle camps were opened for the cattle.
- After Phailin, 827 House Holds were provided with 25 Kg Rice and Rs.300/- form the Govt.
- Community involvement and response in the whole process was tremendous as stated by the BDO. PRIs also motivated and worked hard in phailin response.

- The most vulnerable packets of the block identified and the Block Assistant Engineer was stationed there to monitor the entire activity including the relief teams placed in each GP.

One of the interesting things found in the block office that, all those instructions, letters, orders issued at different times are well documented and kept ready with the BDO for ready reference, for updating the Block Disaster Management Plan (BDMP).

- BDO Niali further shared that, she got all sort of support and response from PRIs and the community. Community themselves cleared the roads and cleared the uprooted trees. She shared that the motivational level is very high in case of community and PRIs.

Chapter-VII

Summary of conclusion & recommendations

1. DRM programme effectiveness, during preparedness & response phase of recent Severe Cyclonic Storm "Phailin"-2013 and subsequent flood, has been realised at State level with respect to use of State Disaster Management plan, State Emergency Operation Centre and the management capacities of the Government Official, who have been trained and sensitised under the programme activities. State Emergency Operation Centre (S-EOC) has been used to a great extent for Warning dissemination; information management and coordination with inter departmental control rooms and District Emergency Operation Centres (D-EOC).
2. GO-NGO coordination, which has been promoted since the period of 1999's Supper Cyclone by OSDMA and subsequently under DRM programme, was also successfully established not only at state level but also at some of the severe affected districts. However, one observation found at state level i.e. whereas State Inter Agency Group (IAG), comprising of all National and International Organisations, started coordinating with Government, a parallel system has also been set up by few State and Local level Organisation, in the name of "Odisha Phailin Response Forum" and later on participation by National and International Organisation, to coordinate with the state government. Hence, there should have some synchronisation between both the forum and promoted the unified response system in coordinated effort.
3. Indian Disaster Response Network (IDRN), which was developed during the DRM programme at Ministry of Home Affair, Government of India level and now managed by National Institute of Disaster Management (NIDM) was remain un used at state and district level, the database was not updated by any of the districts. However, letters and reminders have been issued from SRC's office to all District Collectors, in the month of March & June 2013, to update the district resource database but the response was nil. Hence, there is an urgent need of regular monitoring from state level for updation of district database by the District Administration with technical support from NIC.
4. DRR programme, which gave more thrust on Institutional Strengthening and mainstreaming at state and district level but there was no mechanism developed for institutionalisation of Village Disaster Management Committees and Teams, constituted under DRM programme, except the committees and teams constituted at those villages where Cyclone / Flood Shelters have been constructed by OSDMA. Hence, in other villages neither the committees are existing nor the Village Disaster Management Plans. Only the villagers have recalled their skills as Disaster Management Teams because of participation in the Search & Rescue training programmes organised during the DRM programme period i.e 2003-09.
5. One observation made during the survey that all the Cyclone/ Flood Shelter committees and Task Forces constituted in the selected villages by OSDMA, have played a very significant role in the preparedness phase of the cyclone like warning

dissemination, evacuation, shelter management and road clearance by using the equipment provided with the Multipurpose Cyclone / Flood Shelters. But all these DMT members were trained under GoI-UNDP Disaster Risk Management (DRM) programme during 2009.

Hence, a general conclusion may be considered that if in future, Government or any partner agency is planning for any Community Based Disaster Management Plan at community level, then it should be linked with any of the Institution available in the village like School/ College/ Community Centre/ Cyclone/ Flood shelter constructed (looking into the life of the building⁶)/ Panchayat Buildings etc, as the shelter point. And these shelter points should be supported with all the equipments and training programmes, as it is provided by OSDMA in the Multipurpose Cyclone / Flood Shelter with consistent monitoring through their Secretaries and Community Mobilisers. Sustainability of village disaster management committees and teams can be ensured, if they will be provided with equipments, infrastructure and continuous training programmes followed by mock drills.

6. District Emergency Operation Centres (EOC), constructed under DRM programme, was of great use for the District Administration for Warning dissemination and Information Management during the preparedness and response phase of the "Phailin". Still the demand was for a Technical / Disaster Management professional at District EOC for coordination and preparation of District Disaster Management Plan in more systematic manner, as the District Administration felt the absence of District Project Officers engaged by UNDP, withdrawn after DRM programme in 2009.
7. Lastly, it is also observed that the continuous and periodical training & capacity building activities have been felt very essential, starting from district level to village, government officers to villagers, on Disaster Management Plan preparation, basic skill up gradation like Search & Rescue, First Aid, Shelter Management, Relief Management etc. Mock drill should be organised after each training programmes, to test check the efficiency enhanced and instigate for further training.
8. Training & Capacity building activities at all level may be organised out of the 13th Finance Commission fund available with the State by involving Training Institutions, Academic Institutions, NDRF and ODRAF during normal time, NGOs/ CBOs etc. As per the recent amendment HR support for technical supervision of the training programmes, also can be possible out of 13th FC.
9. Media played a very significant role for dissemination of the cyclonic warning, updating the current updates about the situation and aware about the do's and don'ts among the public. In most of the communities, it is found that people have got updated information about the Cyclone and took necessary precautionary measures and not waited for the warning issued by the local administration. One conclusion may be drawn from this experience that the media may be encouraged to

⁶ Life of the building means the strength of the building infrastructure, as it is found in some districts which were affected in 1999's Supper Cyclone, are subsequently supported with Cyclone Shelters constructed at villages by various agencies / other state governments, are now damaged or treated to be damaged.

disseminate the warning to the community, after receiving from authenticated sources like IMD.

- 10.** Similarly, it is also experienced that now most of the people in communities are using smart phones or phones having internet accessibility through 2G/ 3G connection. So, the community may be further oriented to access the IMD website or any other such authenticated sources to get update information instantly about the cyclone and can disseminate the warning among other households of the community, without waiting for the local administration. This will ensure timely dissemination of warning to the last mile connectivity.

Annexure-I:

A journey from isolation: DRM and DRR initiatives:

The Super Cyclone of 1999 reinforced the faith in community based disaster management and led to implementation of pilot project of Community Based Disaster Preparedness Programme (2001-02) and Disaster Risk Management (DRM) Programme (2002-09) with support from UNDP and Government of India. Similarly, after successful completion of DRM programme, Disaster Risk Reduction (DRR) programme was started from 2009, with an objective to provide technical support for institutional strengthening as envisaged in the Disaster Management Act 2005.

In August 2002, UNDP signed a MOU with Government of India to implement Disaster Risk Management (DRM) Programme to assist the 18 states, which are most prone to natural disasters. The thematic focus was on awareness generation and education, training and capacity development for mitigation and better preparedness in-terms of disaster risk management and recovery at community, district and state levels, and strengthening of state and district disaster management information centres for accurate and timely dissemination of warning. **The overall goal of the programme is “Sustainable Reduction in Disaster Risk in some of the most hazard-prone districts in the selected States of India”.**

The **Programme Components** included the following:

- Human Resource support to the State & District authorities for implementation and monitoring of programme activities.
- Development of disaster management plans at district, block, panchayat and village levels
- Constitution of Disaster Management Teams and Committees at all levels with adequate representation of women in all committees and team. (Village / Ward, Gram Panchayat, Block / Urban Local Body, District and State.)
- Capacity building of Disaster Management Teams at all levels. Special training for women in first aid, psychological first aid, shelter management, water and sanitation, rescue and evacuation, etc.
- Capacity building in cyclone and earthquake resistant features for houses in disaster-prone districts, training in retrofitting, and construction of technology demonstration units.
- Integration of disaster management plans with development plans of local self-governments.

The **project envisaged** the following:

- Development of state database on vulnerability, disaster risk management and sustainable recovery.
- Strengthening the Government through support for hardware and software for disaster risk management and capacity building of institutions.
- Awareness campaigns on disaster mitigation and preparedness for each programme state.
- Support to include disaster management in school curriculum and schedule to drills in disaster prevention and response for schools.
- Promoting partnerships with academic institutions and private sector in development of disaster risk management plans.
- Development of training manuals in Disaster Management for District, Block, Gram Panchayat, Villages/Wards for each State in vernacular languages.
- Capacity building activities for all stakeholders including civil society organizations in the rescue, relief and restoration in disaster situations and the use of equipment involved.
- District multi-hazard preparedness and mitigation plans integrating Block/ULB, Gram Panchayat, Village/Ward plans which would involve vulnerability mapping, risk assessment and analysis, hazard zoning, resource inventory, response structure, etc.
- Developing Vulnerability and Risk Indices, and annual Vulnerability and Risk Reduction Reports for creating benchmarks to measure disaster risk management.

In Odisha, the GoI-UNDP Disaster Risk Management (DRM) Programme was implemented in 23,208 villages under 3,202 GPs of 155 blocks and 58 Urban Local Bodies under 16 districts. The Project was implemented through Odisha State Disaster Management Authority (OSDMA) from 2002 to 2009. Following are the major outputs of the project:

Following are the **direct outcomes** of the programme:

- Comprehensive disaster risk management framework and recovery strategies in all 16 programme districts.
- Aware and informed community in hazard-prone districts on disaster risk management and mitigation.

- Multi-hazard prone districts have multi-hazard disaster risk management, response and mitigation plans based on vulnerability and risk assessment of women and children towards natural disasters.
- Greater participation of elected women representatives of local self-governments in districts in the process of disaster preparedness and risk management.
- Enhanced capacity of the government functionaries of the nodal agency at the state level and in all selected districts in developing and updating the risk management and response plans for different hazards from time to time.
- Enhanced capacity of women in First aid, Shelter management, Water and Sanitation and Rescue Evacuation at selected States and Districts.
- Emergency kit at all selected districts.
- Manual, training module and awareness strategies are available for replication in other areas.
- Enhances capacity of the training institutions for training in disaster risk management.
- Trained skilled masons and engineers for hazard0-resistant housing.
- Models for dissemination of best practices in retrofitting in roof top rainwater harvesting.
- Knowledge network for better involvement of stakeholders.
- State database on natural disaster risk management developed.
- Vulnerability and Risk Reduction Reports prepared for integration of vulnerable reduction into development programmes to allocate resources more effectively to the needy states.

The following are **indirect outcomes** of the programme:

- Reduction of expenditure on disaster relief & increased investment in preparedness measures.
- Sharing of disaster relief cost by the community.
- Self-reliant village, Gram Panchayat, Blocks and Districts for preparedness.
- Convergence of services & links to area development plans.
- People’s awareness and participation increased.
- Access to information by the people.
- Cost reduction in housing construction.

Similarly, **GoI-UNDP Disaster Risk Reduction (DRR) Programme** drawn up by Government of India and UNDP is being implemented in Odisha through OSDMA from 2009 to 2012 with the objective of strengthening the institutional arrangements to undertake disaster risk reduction activities at various levels to develop preparedness for recovery. DRR programme had two components: 1. Disaster Risk Reduction (DRR); implemented in three districts (Balangir, Kendrapara and Ganjam) and 2. Urban Risk Reduction (URR) Project; implemented in three cities (Bhubaneswar, Talcher and Anugul).

Following are the outcomes of DRR & URR Programme:

DRR Project:

- Human Resource Support provided at the SDMA and DDMA level.
- District Disaster Management Plans prepared and updated.
- 6 nos. of BDMPs, 9 nos. of VDMPs have been prepared and updated in the 3 DRR programme districts.
- In 9 non- DRR districts initiatives were taken up for preparation of the DDMPs.
- 237 nos of DMTs were trained in 9 DRR villages of 3 programme districts.
- 40 batches of capacity building programmes for PRIs and Govt. Officials in 5 districts covering about 1500 participants, was conducted in collaboration with IGNOU & NDMA.
- Convergence programmes with Animal Resources, Agriculture Women and Child Development Department (Mission Shakti) and Bamboo Development Agency has been undertaken.
- Workshop on Supply Chain Management and identification of alternative relief lines was conducted at the State level by involving participants from various Govt. & Non-Govt. Agencies.
- School safety programme in 96 most vulnerable coastal schools located in close proximity of Multi-purpose Cyclone Shelters was initiated out of OSDMA funds.
- A consultation workshop development of innovative DRR concepts among school students on local Hazard Risk & adaption issues and model exhibition was conducted at the State level in which 35 Participants participated and shared their valuable suggestions on the theme / models / activities to be exhibited at the school level exhibition.

URR Project:

- Human Resource Support provided at the city level.
- City level Emergency Control Rooms have been set up in all the three cities with emergency equipment.
- City Disaster Management Plans prepared. Preparation of Ward/community level disaster management plans prepared for 68 Wards.

- 750 number of City level volunteers and Ward Disaster Management team members on various aspects of Disaster Management especially planning and basic survival skills
- Websites providing information on Disaster Management initiatives for all the three cities being developed
- School Safety Initiatives undertaken in 17 schools with participation of teachers and students. A training manual was developed
- Training and capacity building programme organized for 80 elected representatives of three cities.
- 200 number of Municipal Health workers/ICDS workers trained on CBDRM
- Training of city level engineers (65nos.) and masons (81nos.) on hazard resistant technology have been undertaken.
- A state level Workshop on inter-departmental Coordination was conducted.

Annexure-II

Terms of reference of the Survey:

The assessment was carried out by two consultants engaged by UNDP-India. Mr. Simanchal Pattnaik engaged as the Lead Consultant with supporting hand of Mr. Sachidananda Pati, as Consultant. Both the Consultants worked under the guidance of the State Programme Officer (Orissa), UNDP. He is expected to undertake the following. The support consultant will be responsible for providing the inputs to the lead consultant for preparing the report.

Questions for survey:

- When was the emergency meeting called? Who participated?
- How useful was the State Disaster Management Plan (SDMP)/ District Disaster Management Plan (DDMP)/ Village Disaster Management Plan (VDMP) for responding to the disaster?
- Did the state/ district officials use the India Disaster Resource Network for resource mobilisation?
- Did the Emergency Operation Centres (EOC) function well?
- Were people able to get relevant information from the EOCs?
- Did the Early Warning System function up to the mark and information from the state and district reach the community at right time?
- Did the volunteers trained under the project able to perform their duties especially the evacuation, search and rescue teams?
- Did the Cyclone Shelter accommodate the likely affected people (focus on pregnant women, old persons, persons, with disability) and was properly managed.
- Did the community member follow the basic do's and don'ts prescribed for the cyclone while evacuating.
- Did the disaster management teams perform the role as envisaged under the VDMP?
- Has the Government and Non-Government Organisation (GO-NGO) coordination meeting been initiated both at the state and district? What is being discussed?
- What role did the elected members (PRI) play to facilitate the evacuation from the villages to safe shelter?
- Did the elected representatives (PRI) ensuring stock piling of essential items.
- Did the Municipal Corporation of Bhubaneswar organise an emergency meeting of its ESF members?

- What preparedness steps did the Municipal Corporation of Bhubaneswar take to ensure availability of essential items?
- What additional plans were put in place to ensure safety of women and children?
- What was the preparedness level of the medical facilities?
- Has the State Government institutionalized the system for involvement of the DMCs and DMTs during actual disasters?
- Whether the preparedness of SC/ST groups were any better or worse than last time
- Damage to livestock

Annexure-III:

List of persons / Organisations met:

Sl. No.	Persons Met	Contact Number
1	Shri Pravat Ranjan Mohapatra, Deputy Relief Commissioner, SRC's Office, Rajiv Bhawan	9437306659
2	Shri Kamal Locahn Mishra, GM, OSDMA	8763354637
3	Shri Abhaya Nayak, GM, OSDMA	
4	Shri Meghnad Behera, City Project Coordinator, UNDP, Bhubaneswar	9438281225
5	DR. Ambika Prasad Nanda, State Programme Officer, UNDP, Odisha	9437020580
6	Shri Binay Kumar Das, Assistant Commissioner (Slum), Bhubaneswar Municipal Corporation	9437286649
7	Shri Mangala Prasad Mohanty, Chairperson, IAG, Odisha	9439193110
8	Shri Manoj Dash, IAG Coordinator, Odisha	9040094330
9	Mr. Satya Kumar Mallik, Collector & District Magistrate, Jagatsingpur,	9437239444
10	Shri. Parameswaran B, Collector & District Magistrate, Balasore	
11	Mr. Laxminarayan Mishra, Collector & District Magistrate, Bhadrak	9437061000
12	Mr. Niranjan Nayak, Collector & District Magistrate, Kendrapada	
13	Dr. Kishan Kumar, Collector & District Magistrate, Ganjam	
14	Shri. Prem Chandra Choudhary, Project Director, DRDA, Ganjam	9438835404
15	Mr. Niranjan Sahu, Collector & District Magistrate, Khorda	9437272751
17	Mr. Rabindra kumar Pradhan, Deputy Collector, Emergency, Puri	943722882
18	Mr. Manoranjan Choudhery, Deputy Collector, Revenue, Puri	
19	Met Laxmidhar Behera, the Secretary of the MCS, Arakhakuda GP, Krushnadapur block, Puri	9776993117
20	Dr. Sweta Kumar Das, Deputy Collector, Emergency, Jagatsingpur	
21	Mr. Sudarshan Sathy, Head Clerk, Emergency Section, Jagatsingpur	8763546605
22	Mr. Laganjit Rout, BDO, Balikuda, Jagatsingpur	9437107397
23	Mr. Suresh Chandra Mohanty, OIC, Revenue, Jagatsingpur	
24	Mr. Subodh Ku. Acharya, BDO, Erasama, Jagatsingpur	8018467083
25	Mr. Kshetra mohan Das, Secretary of Nardia MCS, Ersama	9853631237 / 8908102988
26	Shri. T. Padmanav Dora, Deputy Collector, Balasore	
27	Shri. Saroj Das, Head Clerk, Dist. Emergency, Balasore	9861030756

28	Smt. Kalyani Pattnaik, BDO, Soro, Balasore	9438148480
29	Shri. Sarbeswar Das, Secretary, MCS, Inchudi, Balasore	8763311994
30	Smt. Pallavi Nayak, Deputy Collector, Emergency, Mayurbhanj	
31	Shri. Vivekanand Pattnaik, Coordinator, NGO cell	
32	Mr. Padman Kumar Rai, I/C Dist. Emergency Officer, Bhadrak	9437215822
33	Shri. Niranjana Parida, Head Clerk, Emergency Section, Bhadrak	9937717474
34	Mr. Ananta Charan Jena, Secretary, CSMMC, Brajanandapur MCS	
35	Mr. Ranakanta Dangua, Secretary, NGO, Life Line, Basudevpur	9438320960
36	Mr. Rajani Kanta Mohanty, Deputy Collector, Emergency, Kendrapara	
37	Mr. Prafulla Das, secretary, Flood Shelter, Parakula, Kendrapara	8895205141 / 8455866743
38	Shri Aswini Mishra, Addl. District Magistrate, Ganjam	9437135270
39	Mr. Mahendra Panda, Deputy Collector, Emergency, Ganjam	
40	Mr. Prafulla Kumar Swain, Deputy Collector, Establishment Officer, Collectorate, Ganjam	9937975446
41	Mr. Umakanta Mohanty, Addl. District Magistrate, Khorda	
42	Shri. Satya Sundar Rout, District Emergency Officer, Khorda	9437672601
43	Mr. Padmanav Behera, ABDO, Baliana, Khorda	
44	Mr. Laxmidhar Mohanty, Addl. District Magistrate, Cuttack	9437194270
45	Mr. Gyana Ranjan Das, Project Director, DRDA, Cuttack	9437348573
46	Mr. Satya Sundar Rout, Deputy Collector, Emergency, Cuttack	94376726011
47	Mrs. Renuprava Nayak, BDO, Niali, Cuttack	9437441309
48	Mr. Tuna Moharana, Secretary, Kamadhenu Seva Samiti, Ganjam	9040497607 / 9437402023
49	Mr. Muralidhara Das, Asst. Engineer, Erasama, Jagatsinghpur	
50	Mr. Surendranath Behera, Secretary, CSMMC, Purunabandha, Ganjam	

Annexure-IV

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