

# The RESPONSE

VOLUME - XVIII

ANNUAL ISSUE

OCTOBER-2019



**OSDMA**



**ODISHA STATE DISASTER MANAGEMENT AUTHORITY**  
GOVERNMENT OF ODISHA





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RESPONSE**



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## MANAGING DIRECTOR'S NOTE

It is a matter of great pleasure for me to bring out the special issue of "The Response" marking the occasion of Odisha Disaster Preparedness Day and on 29<sup>th</sup> October, the day on which the Super Cyclone had struck our state and devastated the socio-economic lives of our people. In the current issue of "The Response," many front line districts and departments have documented briefly on their preparedness, response, relief and post-disaster rehabilitation measures and personal accounts on natural disasters. This issue also covers write up on Aapada Mitra, a community resilient programme and Urban Disaster Planning of Cuttack. Our State Government has responded to the Extremely Severe Cyclonic Storm (ESCS) FANI in a very proactive manner before, after and during its occurrence and thereby has saved lives and properties of our people, their livestock and livelihoods. Interestingly, management of FANI has enabled the officials of State Government to acquire knowledge of managing disasters. This has earned OSDMA name and fame across India and the World. OSDMA has leveraged cutting edge technology like SATARK to predict and forecast disasters in collaboration with RIMES, Thailand and early warning in lightning and thunderstorms in partnership with Earth Network USA, which has helped building community resilience and preparedness in the state.

**PRADEEP JENA, I.A.S**  
Managing Director  
OSDMA





## THAT WAS THE YEAR

**O**disha State Disaster Management Authority (OSDMA) had organized the state level programme for observation of Odisha Disaster Preparedness day and National Day for Disaster Risk Reduction at Rabindra Mandap Bhubaneswar on 29.10.2018. S. Naveen Patnaik, Hon'ble Chief Minister, Odisha had graced the occasion as Chief Guest. S. Maheswar Mohanty, Hon'ble Minister, Revenue and Disaster Management, Odisha had presided over the function. S. Aditya Prasad Padhi, Chief Secretary, Odisha and

S. R. Balkrishnan, Development Commissioner-cum- Additional Chief Secretary had joined the occasion as Guest of Honour. Theme of the Odisha Disaster Preparedness Day for the year 2018 was "Social Media and Disaster Response". Exhibition on Disaster Response equipment was inaugurated by the Hon'ble CM on the occasion. Hon'ble CM also commissioned the Early Warning Dissemination System (EWDS) and unveiled the Annual Newsletter of OSDMA "The Response" and the Training Manual on "Aapada Mitra". Hon'ble CM also felicitated 29 persons, agencies and institutions for their commendable works done in the field of Disaster Management for the year 2018. State level competition on Search and Rescue and First Aid techniques for shelter level Task Force teams were organized on 28.10.2018.



OSDMA participated and exhibited response skills and equipment in the 26th National Children's Science Congress (NCSC) organised by the National Council for Science and Technology Communication (NCSTC), Department of Science and Technology (DST), Government of India from



27<sup>th</sup> to 31<sup>st</sup> December 2018 at Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar.

OSDMA in association with Indian Red Cross Society (IRCS)- Odisha State Branch organised 4 batches of Training of Trainers (ToT) Programmes from 4<sup>th</sup> December 2018 for Youth Red Cross and Junior Red Cross Counsellors on Disaster Management and Disaster Survival Skills at Red Cross Bhawan, Bhubaneswar. 118 number of Youth Red Cross and Junior Red Cross Counsellors from various districts have been trained so far.

New Year Resolution Meeting was held on 01.01.2019 in OSDMA conference hall in presence of all Officers of OSDMA.

The three days International Conference on Thunderstorm and Lightning in Tropics (ICTLT) organized by OSDMA in collaboration with SOA deemed to be University was held from 17.01.2019 to 19.01.2019 in SOA Deemed to be University, Bhubaneswar.

Odisha State Disaster Management Authority participated in the 4th World Congress on Disaster Management (WCDM) organized by the Government of Maharashtra in collaboration with IIT Mumbai, TISS and Disaster Management Initiatives and Convergence Society (DMICS) held from 29.01.2019 to 01.02.2019 at IIT, Mumbai.

Sri Laxminarayan SPO, OSDMA participated in the three days training programme on National Disaster Management Services from 29.01.2019 to 30.01.2019 in ARTTC, BSNL Bhawan, Jharkhand, Ranchi.

Sri Gouri Sankar Mishra and Sri Laxminarayan SPO, OSDMA participated in the five days training programme on Space Information and Technology



in Disaster Management from 04.02.2019 to 08.02.2019 in NRSC, ISRO, Hyderabad.

A meeting was organized to develop Disaster management protocol for Child Care Institution on 22.02.2019 in OSDMA conference Hall. A working committee was proposed to finalise the Protocol.

Odisha State Disaster Management Authority has been honored with coveted SKOCH award, the highest independent honour in the country, for the year 2018 for its remarkable achievements in the field of Disaster Management in the mega event of 56th SKOTCH Summit at New Delhi on 25.02.2019.

OSDMA received the prestigious SKOCH award in the Disaster Management category, in addition to "Order-of-Merit" Gold for building community resilience by constructing 879 Multi Purpose Cyclone and Flood Shelters across the coastline and flood prone areas of Odisha which played key role in saving human lives during Cyclone Phailin in the year 2013.

OSDMA received "Order-of-Merit" Silver for constructing disaster resilient houses under ODRP in Ganjam and Khordha districts; "Order-of-Merit" Bronze for establishing a fail proof Early Warning Dissemination mechanism for different hydro-meteorological disasters across the coastline of Odisha benefitting 1205 villages in 22 blocks of 6 coastal districts.

Odisha State Disaster Management Authority has participated in a two days International Radio Fair organized by Outreach, Odisha from





13.02.2019 to 14.02.2019 at Bhanja Kalamandap, Bhubaneswar.

OSDMA in association with Indian Institute of Public Administration organised a five days Training on Climate Smart Governance from 12.03.2019 for key departments of Odisha.

A consultation workshop for development of training curriculum for community volunteers of Gajapati district on disaster response, was held on 27.02.2019 at hotel New Marrion, Bhubaneswar.

92 community volunteers of Gajapati district were trained in different disaster response techniques by OSDMA under the UNDP supported project- in the after math of Cyclone-TITLI', between March and April 2019 in three batches.

Three days(02.04.19 to 04.04.19) Cadre Training of NDRF started today by District Administration for Aapda Mitra Volunteers on SAR skills like hands on training on First Aid, height rescue, water rescue, fire management etc in Jagatsinghapur.

Telecommunications Consultants India Limited (A Govt. of India Enterprise) organised a live demonstration on the Decision Support System to the representatives of various departments and agencies of the State and Central Government having a role in disaster management on 03.04.2019 in Bhubaneswar.

OSDMA in Collaboration with RIMES, Thailand organized 3 days training programme on Flood Modelling and SATARK application for all the key stakeholders including Emergency Officers and DPOs in OSDMA conference hall from 04.04.2019.

On-site emergency mock drill on fire accident held at Bhushan Steel and Power, Rengali, Sambalpur on 10<sup>th</sup> April 2019.

Preparedness for the Extremely Severe Cyclonic Storm 'FANI' that made landfall on 3<sup>rd</sup> May 2019 near Puri initiated and held regularly in OSDMA.

Meeting on the Post Fani -2019 for initiating Damage and Need Assessment was initiated under Principal Secretary, Agriculture and Farmers Empowerment on 23<sup>rd</sup> may 2019 at Krishi Bhawan, Bhubaneswar.



Hon'ble Minister, Revenue and Disaster Management Shri Sudam Marndi reviewed the status of relief and restoration in the cyclone (FANI) affected areas in the OSDMA conference hall on 1<sup>st</sup> June 2019.

OSDMA organised a Meeting of World bank, UN and ADB with the Chief Secretary to appraise







the Post fani -2019 Damage and Need Assessment on 4<sup>th</sup> June 2019 at 2<sup>nd</sup> Floor Conference Hall, Secretariat Bhubaneswar.

OSDMA organised a three days Training programme for the Emergency Officers, District Project Officers and Community Mobilisers on pre monsoon preparedness in the districts from 08<sup>th</sup> to 10<sup>th</sup> June 2019.

Mock Exercises on flood and cyclone management was organized by the OSDMA and Office of SRC on 19<sup>th</sup> June 2019 across the State to test the preparedness at different levels and strengthen the disaster management capabilities of different stakeholders.

An Inter-Ministerial Central Team led by Shri Vivek Bharadwaj, Additional Secretary (PM), Ministry of Home Affairs visited Odisha on 21.06.2019 for on the spot assessment of situation in the district of Puri in the wake of Extremely Sever Cyclonic Storm FANI.

The Flood Hazard Atlas prepared by NRSC, ISRO, Hyderabad in Collaboration with OSDMA released by the Hon'ble Chief Minister, Odisha on 22.06.2019 in Odisha Secretariat.

A State Level Consultation on Role of Media in Humanitarian Crisis to develop awareness and collect feedbacks and recommendations to improve the media coverage during emergency was organized by the Inter Agency Group (IAG), and OSDMA at Hotel Sandy Tower Bhubaneswar on 24.06.2019.

The Rath Yatra Mock Exercise for the year 2019 was organised by OSDMA in coordination with District Administration on 26.06.2019 in Puri to assess the preparedness of the district.

Table Top Exercise on Mass Rescue Operation was held by Indian Coast Guard in Collaboration with OSDMA on 27.06.2019 at Paradip.

A consultation meeting on Preparation/ Updating of Departmental Disaster Management Plan for the year 2019 was held on 29.06.2019 in the Conference Hall of OSDMA,

Brainstorming Session on Chief Minister's new initiative – 5Ts involving the officials of OSDMA and Office of SRC was held on 27.07.2019 in OSDMA conference hall.

The First zonal level Brainstorming session on preparation of disaster risk reductions roadmap in line with SFDRR was held in Balasore on 10<sup>th</sup> July 2019.

The Second zonal Consultation workshop for Preparation of DRR Roadmap for Odisha was held at Sambalpur on 12.07.2019.

The Third zonal Consultation workshop for Preparation of DRR Roadmap for Odisha was held at Koraput on 16.07.2019.

The 1<sup>st</sup> batch of Flood Rescue Boat (FRB) Operation Training-2019 of 30 ICDR trained ODRAF personnel commenced at DMTC, ROTI, Gothapatana, Bhubaneswar w.e.f. 17.07.2019 for a period of 12 days.

The Fourth zonal Consultation workshop for Preparation of DRR Roadmap for Odisha was held at Bhubaneswar on 18.07.2019.







Professor Rajib Shaw of KEIO, Tokyo, Japan along with Mr. Sujit Mohanty Chief of UNDRR, Arab States, Regional Office visited OSDMA on 23.07.2019.

OSDMA organized a meeting to discuss the preparedness state of Odisha towards Chemical Disaster Management and finalise the Action Plan for Management of Chemical Disasters in the state on 25.07.2019

The annual project progress meeting on operational systems for Integrated Disaster Risk Management for Odisha was held on 26.07.2019 in the conference hall of OSDMA.

The 2<sup>nd</sup> batch of Flood Rescue and Boat(FRB) Operation-2019 was conducted for 30 ODRAF personnel from 20 ODRAF units of the State from 29.07.2019 to 09.08.2019 at DMTC and Field Training Exercise (FTE) at Jhumka MIP and Ramachandi, Puri.

The Fifth zonal Consultation workshop for Preparation of DRR Roadmap for Odisha held at Sambalpur on 30.07.2019.



Government of Odisha released Cyclone Fani -Damage, Loss and Needs Assessment Report on 06.08.2019 at the State Secretariat by Honourable Chief Minister Sj. Naveen Patnaik.

OSDMA in Collaboration with NIDM, New Delhi organised a Workshop on Child Centric Disaster Risk Reduction in Bhubaneswar from 07.08.19 to 08.08.19 at HHI, BBSR.

Orientation training of District Administration and the Partner NGOs for preparation of the Village Disaster Management Plan (VDMP) in Baragarh, Balangir, Koraput, Khordha, District organised in August 2019.

A workshop on Mainstreaming of Disaster Risk Reduction and Climate Change Adaptation was organized by District Administration of Gajapati with the support of OSDMA and UNDP at DRDA Conference Hall, Parlakhemundi on 22.08.2019.



World Bank team led by Mr. Christoph Pusch, Practice Manager for SAR-Climate Change and DRM, DRM Specialist and Task Team Leader, ODRP visited OSDMA in August 2019 to discuss the possibilities of new disaster mitigation initiatives in the state.

OSDMA in Collaboration with NIDM, New Delhi organised three Workshops on Managing Extremely Severe Cyclonic Storm FANI-Lessons Learnt and Way Forward 2019(26.08.19 to 28.08.19) at HHI, BBSR.

The 1<sup>st</sup> batch of Refresher Course of training on FRB was conducted at DMTC and at Ramchandi, Puri from 26.08.2019 to 30.08.2019 for 30 FRB trained ODRAF personnel.





On 30.08.2019 a Mega Mock Exercise on Anti-Terrorism and Fire Rescue was successfully conducted at Esplanade One Mall, Bhubaneswar.

The Two Days International Conference on "Disaster Risk Reduction and Community Resilience: Developing Policy Options" was organized by Utkal University in collaboration with OSDMA from 20.09.2019 to 21.09.2019 at Krishi Bhawan, Bhubaneswar.

A team of Indian Forest Services, Gujarat cadre visited OSDMA on 10.09.2019 to have an overview on the preparedness of Odisha in managing disasters.

OSDMA conducted a brainstorming session with BMC, CMC and HandUD department on



17.09.2019 in OSDMA conference hall on assessing the emerging urban disasters with special reference to floods of Balangir 2019.

Orientation training of District Administration and the Partner NGOs for preparation of The Village Disaster Management Plan (VDMP) in Balasore, Cuttack, Sundergarh, Angul, Sonapur, Jajpur, Kandhamal, Mayurbhanj, Puri, Ganjam District in September 2019.

Managing Director, OSDMA attended the National Workshop on Post Disaster needs Assessment at India Habitat Centre on 23rd September, 2019 New Delhi

Managing Director, OSDMA attended the workshop on Management of Floods: Reservoir Management and other preventable measures organized by NDMA on 18.10.2019 in New Delhi.



Managing Director, OSDMA represented SDMA Odisha in the meeting on the expert committee for formulating policy guidelines on channelizing domestic support/ assistance for relief and recovery organized by NDMA on 22.10.2019 in New Delhi.

A series of meeting were organized by OSDMA on 19.10.2019 and 21.10.2019 to Review the on site emergency plan and disaster control mechanism of Major Accident Hazards (MAH) installations. ❑



# NEED TO BRACE FOR RECOVERY AFTER SUCCESSFUL EVACUATION AND RESPONSE DURING FANI 2019

One of the strongest summer storm in decades FANI that hit Odisha affecting more than 16 million people including 5 million children. Standing tall Odisha Government was praised globally and by UN office of Disaster Risk Reduction for the approach on minimising the loss of life's, evacuating 1.5 million and pinpoint accuracy of the India Meteorological Department's (IMD) early warning system which helped reduce the deaths from cyclone. This is a major contribution to the implementation of the Sendai Framework and the reduction of loss of life from such events. Geographically the cyclone affected 14 Districts (159 Blocks, 52 Urban Local Bodies, 181,68 villages).

However, we were successful in evacuation and early response to save lives on other hand the cyclone tore apart critical infrastructure, especially power, telecom, and water supply. Including damage to critical infrastructure and services. Similarly impacting social sectors like Health, Nutrition, WASH, Education and Child protection distrusting the infrastructure, critical equipment's and continuation of services increasing risk of deprivation in Women and Children. In fact still service delivery platforms of above 5 sectors/ departments are yet to function to the fullest capacity and are running in transitional mode. The situation has created urgent need to minimize the longer-term impact on development objectives and programme. To reduce impact of cyclone on social sector service delivery systems, particularly in terms of their functionality and fixing their future role in preparedness will require planned and organised action to achieve the goal of build back better.

This is right time for the state to explore and set an example similar to FANI evacuation to place a default recovery strategy in the system and in community which gets activated post disaster scenarios. To add on this idea, sharing here UNICEF's successfully implemented strategy of SSRPP (Social Sector Recovery Planning and Preparedness) in few states in India earlier in post

disaster scenario. SSRPP intervention has special Focus on recovery of Nutrition (ICDS), Health, Education, WASH and Child Protection. However, the state and districts can place similar strategy in place ready to activate after every disaster.

## Salient features of Social Sector Recovery Planning:

**Systematic approach:** Step by step activation of recovery process in line departments under leadership at district and State. More importantly with clear pathway of convergent actions required from other line departments for coordinated and speedy sectoral recovery.

**Prioritise Social sectors:** After every disaster to restore normalcy usually the priority is more on recovery and restoration of the services and infrastructure like roads, electricity, bridges, housing etc, and it has been observed that the restoration of social services especially nutrition, education, WASH and child protection take the back seat. SSRPP provides an opportunity of evidence based advocacy at State and district to achieve recovery of social sectors as one of the priority to reduce further deprivation in Women and Children.

**Inter departmental Convergence actions:** SSRPP process creates clear corridors in between line departments through specific letters with damage data, actions and leveraging existing provisions, thus, resulting in quick inter departmental convergent actions for immediate recovery.

**Strategic engagement of Public and CSO's:** Public and CSO's engagement not only delivers transparent decisions but also populates the recovery plans with extending their support. Adding on, this platform will provided opportunity to build their capacity to become curious learners, conveners and contributors. Public engagement forges a renewed commitment to the community's recovery mission and resilient society.

**Creates a system that engages stakeholders:** It is important to sustain

stakeholders (CSO's) interest and energy in long term recovery. This energy can be continued by providing communicating appropriate comfortable language to each other, with well-articulated vision projects, extending Govt support etc. This is achieved and followed by regular coordination meeting with specific agendas and followed by monitoring mechanism.

### **Capacity building of Line departments:**

One round of this program will build the capacity of respective line departments and officers, that will automatically activate similar process after any such disaster events with minimal delay and robust data for actions.

**Costed Plans with citation of appropriate source of fund:** The plans will have costing against the damage/actions and appropriate source of fund within the department and outside approved by the departments. For example most of the time the damaged critical equipment required to be replaced for functioning of particular services has some standards. Stating clear costings and expected standards in plan will ensure the quality in check on various recovery support especially from CSO's.

### **Responsible officers and Time line:**

Recovery actions at different sectors will require appropriate responsible officer to accomplish the activity. The plan identifies the authority and supportive authority to complete the specific recovery action in stipulated time approved by the departments and state and district administration.

**Recovery plans feed in upcoming PIP/ GPDP :**Partly closing loop of the recovery plans will be to feed the recovery actions with larger budget and long term requirements in upcoming departmental PIP's and Gram Panchayat Development Plans (GPDP). This activity will necessitate the departments for completion of recovery actions as well as insure Risk Informed Programming.

**Preparedness:** SSRPP also leverages the opportunity and learning of recent disaster to craft departmental Preparedness plans approved by line departments. These plans will be rolled out during identified period of the year or gets activated based on early warning.

### **Build Back Better and Managing Residual**

**Risks:** The recurring disasters since last few years keep on adding to the damaged infrastructure and

services with long term impact on development. In most of the situations humanitarian aid and the reconstruction processes are carried out without a risk reduction focus, and thus increased, unintentionally, the physical, social, economic, and environmental vulnerability of the population to new events. SSRPP under recovery actions considers the aspects of risk reduction with collaborative approach for 'Building Back Better' and manages residual risks.

### **Methodology Social Sector Recovery Planning and Preparedness :**

The process followed in social sector recovery consists of in-depth assessment on damage and loss of various elements like Infrastructure, Critical equipment, Services and if possible no of beneficiaries affected ensuring inclusiveness and reaching the unreached. The assessment also records pre-existing development deficit in order to reduce further risk, and leveraging the opportunity as Push for Change to recover and to reach expected standards. Departmental presentation of damage data in SSRPP meetings chaired by DC at Districts in presence of identified departmental nodal officers. With inter departmental consensus the departments approves comprehensive, sectoral recovery and preparedness plans. This includes identifying recovery actions for respective departments with responsible officer to commence the activities within stipulated time line, along with appropriate funding source within the department or supportive department. Followed by rolling out the approved recovery and preparedness plans with monitoring mechanism in place.

### **Conclusion:**

It's high time for the government to push beyond evacuation and early response and set standards on recovery through having inbuilt capacity to switch on recovery planning at different level in respective line departments post disaster. SSRPP could be looked as a one of the strategy, that could help state government to ensure timely and convergent action for restoration of critical social services applying a "building back better" approach and build resilience at system and community level. ■

*UNICEF, Bhubaneswar Office,  
Odisha*



# MANAGING CYCLONE “FANI” IN AGRICULTURE SECTOR

**Preparedness:** After a Press Release of India Meteorological Department on 29.04.2019, on occurrence of Severe Cyclonic Storm “FANI”, Department of Agriculture and Farmers Empowerment has taken pro-active prevention steps to protect the Rabi - summer crops and grains from the forecasted cyclone. Agro-based crop advisory on crop management before the cyclonic storm was issued to the district level officers for wide circulation among the field functionaries and farmers. The Crop specific advisory for protection of standing crops was published in 5 leading Odia dailies and disseminated through All India Radio, 15 Community Radio Stations across the state and Door Darshan Kendras . A detailed crop management programme was telecasted through “Palishree” programme of DD Odia for awareness of farmers. The voice response and SMS on crop protection were delivered to 26.88 lakh farmers. A control room was opened in Krushi Bhawan to receive emergency messages from districts and monitoring.

**Early warning systems :** Since most of the field crops were at maturity to harvesting stage, different awareness programmes, mobile campaigns with mike announcement were done at village level to make the farmers aware about the cyclone and to keep the harvested /threshed products in safer places. Most farmers prepared for the cyclone by storing food and seeds.



*(Awareness campaigns with mike announcement)*

**Effect of FANI on major crops:** Due to the severe cyclonic storm “FANI” the major crops (rabi –summer crops) viz Paddy, Pulses, Groundnut, Maize, Sugarcane, Vegetables, Betel Vine and perennial fruit trees, Coconuts, etc, in the coastal



*(Farmers displacing their harvested produce to a safer place)*

districts were severely affected. The standing crops, pollens, flowers and grains and in many cases, stubbles were left out after the disaster. During the month of May many farmers and farm women who have kept the harvested pulse and oilseed crops either on the threshing floor, in the field or even in their backyard could not protect their food grains. The harvested grains started germinating after 3-4 days of cyclone. Cyclone FANI had caused substantial damage to crops, stored grains and significantly reduced farmer food security.



*(Harvested paddy damage :Gop block of Puri district)*

Fourteen districts viz. Angul, Balasore, Bhadrakh, Cuttack, Dhenkanal, Ganjam, Jagatsinghpur, Jajpur, Kendrapara, Keonjhar, Khurda, Mayurbhanj, Nayagarh and Puri have been affected with different intensity of damage. Officers from state and district level made a number of visits to different districts for crop loss enumeration. The respective Deputy Directors of Agriculture were asked to immediately do joint survey for crop loss assessment and send the report. About 108220 ha (both agriculture and horticulture) were reported having crop loss of more than 33 %.

## **Post FANI management for livelihood support:**

To ameliorate the suffering of the affected farmers, the following programmes have been implemented

for livelihood support of the affected farmers under CMs Special Package during 2019-20.



*Damage to Sunflower standing crop: Beguniablock of Khurda district*

1. Supply of one lakh nos. of Vegetable Minikits
2. 50,000 acres of demonstration programmes of different crops under BGREI
3. 5,000 hectares under sugarcane for demonstration on Sustainable Sugarcane Initiative @ Rs. 20,000/- per Ha. or Ratoon Crop Management @ Rs.12,500/- based on the farmer's requirement.
4. Provision of 5000 pump sets with 50% subsidy limited to a maximum of Rs.15,000/.
5. Provision of 10,000 Sprayers at a subsidy of 50% limited to maximum of Rs.3800/- for battery operated sprayers and Rs.600/- for hand operated sprayers.
6. Training to 2 lakh nos. of farmers in 2000 number of camps to adopt seed treatment with free supply of seed treatment chemicals covering 2 lakh acres for increasing production in Kharif crops.
7. Provision of different types of farm machineries at subsidized rate within subsidy component of Rs 150 crore.
8. An incentive of Rs. 15,000 per farmer for 3000 farmers for repair and renovation of Betel Vine cultivation (Pan Baroj).
9. Rs. 40,000/Unit for repair and renovation of Shade Net / thatched structure for restoration of 1000 Mushroom Units and Rs. 2,000/ box to 500 farmers for livelihood support to honey bee growers.

10. Distribution of fruit seedlings @5 Mango grafts and 5 Coconut seedlings to each farmer are being provided for 50,000 affected farmers for their livelihood sustenance. 4 lakh numbers of Nutri-Gardens will be promoted in the affected households.
11. 10,000 Ha. of Fruit Tree Plantation (Cashew, Mango and Coconut, etc.) with support for inter-cropping package for three years, in order to provide income support in the initial period to the farmers, while the plantations reach the fruit-bearing stage.
12. Incentive of Rs. 25000/ Ha to banana farmers covering 1650 Ha.

**Conclusion:** Agriculture has been facing the wrath of the climate change in terms of unpredictability of different climatic events in Odisha. The agricultural disaster has become a curse to small and marginal farmers because of crop loss. The frequent occurrence of cyclones and floods significantly limit the agricultural productivity which in turn affects the socio-economic prospects of farmers and food security. We have to enhance the accuracy of cyclone preparedness and implement the potential agricultural techniques and structural measures



*(Damage to standing Maize crop) (Bolagarh block of Khurda district)*

as part of integrated management approach in cyclone prone areas. Department is also giving immediate attention to Contingency Crop Planning and strategies for reducing the extent of damage. In addition, prominence is given to system building and strengthening of Climate Resilient Agriculture and Capacity Building of farmers. ❑

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# POST FANI RESTORATION OF GREENERY IN ODISHA

## INTRODUCTION

**O**n a fateful day of 3<sup>rd</sup> May, 2019 forenoon, the extremely severe cyclone named "FANI" with its catastrophic wind velocity of 200 to 260 km/hr created havoc in the three glorious and beautiful cities of Odisha i.e., Bhubaneswar, Puri and Cuttack by uprooting and devastating about 12 Lakhs trees. All these three cities of the state lost its lusture and green glamour. The post "FANI" scenario was a barren and devastated look of the cities and its periphery areas. In the above cyclonic storm, 14 Districts were affected out of which Puri, Cuttack, Kendrapara and Jagatsinghpur were severely affected.



Thousands of trees along roadside, parks, in institutional premises and in private land were either fully or partly uprooted during the cyclone. The roads lost their green canopy of tree cover. The numerous wild lives lost their shelter.

Sl No	Item	No. of Trees apprx.	Value of Damage in aprox. (Rs. In Crore)
1	Damage due to uprooting of trees in the forests/ sanctuary areas	9.00 lakhs	270.00
2	Damage of trees outside forest area	5.00 lakhs	150.00
3	Damage to plantation in forest, urban and avenue areas	7.90 lakhs	39.50
4	Damage to Forest and Environment infrastructure		78.30
	<b>Total</b>	<b>21.90 lakh</b>	<b>537.80</b>

The Hon'ble Chief Minister has announced a package for the people affected by the extreme severe cyclonic storm "FANI" for taking up tree plantation in "Mission Mode". In Puri district the plantations, forests, were damaged severely at the Balukhanda Wildlife Sanctuary, its peripheral areas, and other adjoining areas of the Puri town due to cyclone "Fani". The rapid restoration work of vegetation was the task taken up by the Forest Department.

## TALL SEEDLINGS PLANTATION

Due to uprooting of trees in above said cities huge open spaces have been created. These voids have been filled up by planting Tall Seedlings which will match and compete with the existing left over trees in avenues, institutions and parks. To restore the greenery of Cuttack, Puri and Bhubaneswar town a special plantation drive i.e., Tall Seedlings Plantation Programme has been taken up with financial assistance of OSDMA with a target of planting 60,000 no of tall seedlings. Till date, 60,000 no. of tall seedlings have been successfully planted. Cyclone resilient species which include Ficus Species, Aswastha, Neem, Karanja, Putranjba, Patuli, Sunari, Ashok, Pipal, Jammu, Arjuna, Harida, Bahada etc. have been planted. Regular watering and watch and ward have been provided to make the Tall Seedlings Plantations successful.

The details regarding tall seedlings plantation is given below:

Name of the Agency	Name of the City	Target	Achievement
OFDC Ltd (only Avenue Plantation)	Bhubaneswar	25000	25000
Puri WL Division	Puri	9000	9000
City Forest Division (Institutions only)	Bhubaneswar	17000	17000
City Forest (Avenue and Institutions)	Cuttack	9000	9000
<b>Total</b>		<b>60000</b>	<b>60000</b>

Additional 20,000 no of tall seedlings were also planted by BDA and BMC in their Parks in Bhubaneswar.

## RESTORATION OF PARTIALLY UPROOTED TREES

The Forest Department has taken a very ambitious project to restore partially damaged and uprooted trees. Most of the partially damaged and uprooted trees have been restored in their original



place. Around 11396 no. of plants have been restored outside plantation area and 1,19,665 no. of plants have been restored inside plantation area by City Forest Division. 2,558 no. of plants have been restored outside plantation area by Puri WL Division. Thus, total 1,33,619 no. of trees have been restored.

Restoration on private plots have also been taken by the Forest Department. The removal of uprooted trees and restoration of partially uprooted trees have been completed on all land (Private, Public, Institutions) free of cost by the Forest Department and OFDC Ltd.)

## FREE DISTRIBUTION OF SEEDLINGS

A programme launched on 18.08.2019 at 8.00 AM from Forest Park, Unit -6, Bhubaneswar for free distribution of seedlings free of cost to the public and institutions in Fani affected areas at their door step to encourage public for plantation on mass scale in their land. Several KIOSKS for seedlings distribution were opened for easy access to free seedlings. 25 mobile vans loaded with seedlings were moved in Puri, Bhubaneswar, Cuttack and other Cities for four days. Vehicles were fitted with loud speakers, mike with motivational songs to motivate public to plant saplings and to attract and announce free distribution after flagging off by the Chief Secretary, Odisha. The vehicles loaded with seedlings stayed 15 to 30 minutes in every Chhak,

Colony, Internal Routes, Residential Colonies for smooth distribution to public.

HDFC Bank was a partner in bearing cost of distribution through vans fitted with flex boards (Forest Department, Odisha, HDFC Bank).

## ADDITIONAL ACTIONS TAKEN UP BY THE FOREST DEPARTMENT

In Balukhanda WL Sanctuary of Puri WL Division 400 Ha of plantation in ANR mode @600 Casuarina Plants per ha in 2 strips at a width of 250 meter and over a length of 8 km from Balukhand to Kushabhadra river has been taken up during 2019-20 under OEMF Fund.

During 2019-20, 60,000 nos of seedlings in UTP (Block Model) have been planted in and around Chandaka-Damapara WL Sanctuary in Chandaka WL Division under CSR NALCO funding.

The PCCF, Odisha has submitted an Action Plan for plantation activities with a financial outlay of Rs.187.71 crores which will be implemented from 2019-20 to 2027-28. The cyclone resistant tree species will be planted in the scheme. The activities include 6,000 ha of costal shelter belt plantations 1,100 RKM of avenue plantation 1,100 ha of artificial regeneration, 5 lakh Urban tree plantation and distribution of 35.00 lakh seedlings to the public and institutions. More than 210 lakh



seedlings will be planted as per the action plan of the scheme from 2019-20 to 2024-25

Restoration of Uprooted/ Damaged Trees During Severe Cyclonic Storm Fani. ❑

*Department of Forest and Environment  
Govt. of Odisha*



## ANTICIPATING THE UNEXPECTED: PARTNERS FOR RESILIENT ODISHA

**N**ature has a way of reinforcing its will on Odisha - one of the most multi hazard prone states of India. It unleashes death and destruction in its wake, even though Odisha is one of India's better prepared states when it comes to disasters.

UNDP's association with the Odisha State Government in Disaster Management began with the response to the Super Cyclone that hit 14 coastal districts of the state in October 1999. UNDP supported the government to restore normalcy as well as undertaking rehabilitation and reconstruction activities in the affected areas. Over the years, the focus of support provided to the Odisha State Disaster Management Authority (OSDMA) has changed as per the need of the hour. This shift has been witnessing a gradual shift from a relief centric approach to supporting management and reduction of disaster risk. Over the last two decades, UNDP has played a significant role in facilitating enhancement of Government capacities for preparedness, response and mitigation by working very closely with the state Government and the communities in the hazard prone areas of the state of Odisha.

Urban Risk Resilience has been new area of focus for UNDP. The "Climate Risk Management in Urban areas" project being implemented in the city of Cuttack has supported the preparation of City Disaster Management Plans and Action plans for mitigation, detailed Hazard Risk Vulnerability Assessment and Capacity Building of different stakeholders. Under this is the innovative Public-Private Partnership project on Solid Waste Management that seeks to address one of the contributing factors for urban flooding in the city. Resident Welfare Association of BSNL colony in Cuttack city with 65 households have set up a micro composting plant with support of UNDP and IMFA to recycle green waste and generate manure for their own gardens.

The state has faced two major cyclonic storms in the last year and UNDP, rising to the occasion has supported OSDMA by providing technical manpower, Post Disaster Needs Assessment and supported recovery projects. After the devastating cyclonic storm 'Titili' hit the state in the month of October 2018, UNDP extended technical support to OSDMA and Panchayati Raj and Drinking Water (PR and DW) Department to coordinate their relief, rehabilitation and recovery activities. One State Project Officer was posted to support OSDMA and three housing coordinators were deployed with the PR and DW dept at the local level in Gajapati and Ganjam Districts. Further, UNDP provided financial support to local NGO Gram Vikas

to undertake Early Recovery Interventions in the worst affected Gajapati District. One of the key activities was rebuilding houses of the affected community where Gram Vikas supported the reconstruction of houses by creating a cadre of Masons through Masons Training programme and providing technical support to affected community to rebuild their houses. On the Livelihood front, plantation in the damaged areas and support for SHG revival and restarting the micro enterprise in the most affected blocks of Gajapati districts was undertaken. In all 13 micro-enterprise are being supported.

While the efforts were still ongoing to recover from the impact of Cyclone Titili, another Extremely Severe Cyclone FANI, hit the state in the month of May 2019 affecting 14 districts. As part of the OSDMA team, UNDP State Project Coordinator supported the monitoring, evacuation and response efforts towards the event. UNDP also supported OSDMA to organise GO-NGO meetings before and after the event. On the request of the government, UNDP coordinated the UN, World Bank and ADB led detailed Damage, Loss and Needs Assessment to support the recovery planning process. While the team of multi sectoral experts of different agencies conducted the assessment covering 14 districts and estimated the damage, loss and recovery needs across 15 sectors, UNDP was part of the coordination and assessment teams of Housing; Environment; Employment and Livelihoods; and Disaster Risk Reduction. UNDP also led the analysis to understand the human and macro-economic impact of the disaster on the state's economy and people and provided a broad recovery strategy to make Odisha more resilient in future. Based on the assessment report, UNDP is supporting six sectors namely Agriculture, Fisheries, Livestock, Disaster Risk Reduction, Housing, Handloom and Handicraft and Tourism to come up with a plan for long term recovery and resilience building.

Odisha has successfully reduced the loss of lives but has a long way to go to reduce its recurring economic losses. Despite technology and inventions making us aware of the path and likely damage an event may cause, more efforts are necessary for reducing economic losses. Only by mainstreaming Risk Reduction measures in its development activities and not creating new vulnerabilities can the State achieve its goal of sustainable and resilient development. UNDP stands by the state in its mission for making of a Disaster Resilient Odisha. ■

**Abha Mishra**  
*State Head, UNDP, Odisha*

# REBUILDING ODISHA

## POST FANI CIVIL SOCIETY RESPONSE

**C**yclone Fani which hit Odisha on May 3, 2019 was the most intense cyclonic storm crossing the State coast during pre-monsoon season in the satellite era since 1965." - Indian Meteorological Department (IMD).

It was morning 8.30 on 3<sup>rd</sup> May 2019, the peak of Indian Summer. Fani, the extremely severe cyclonic storm accompanied by the wind speed of 200 km/hr and 50 mm precipitation hit coastal Odisha as a disaster for life and livelihoods of people. The severely affected districts reported are Puri and Khurda including the capital city Bhubaneswar. The cyclone witnessed all the roadways blocked, caved and roadside big trees uprooted. Standing crops of rice on thousands of acres were devastated in a few hours. Coconut trees and betel leaf plantations, the mainstay of the rural economy were critically damaged. Roofs were blown away and the boats that would ferry tourists and villagers were broken. The people in the cyclone Fani affected areas lost their livelihoods from different sources like paddy, pulses, vegetables, nutrition gardens and fruit bearing trees. Apart from these. Marine fishermen lost their boats and nets. Street vendors lost their means of income and employment.

### Understanding Ground Realities

Immediately after the cyclone, a rapid assessment was undertaken in the districts of Puri and Khurda and the urban slums of Bhubaneswar Municipal Corporation in selected villages/ urban slums for assessing the damages caused and chalk out further course of action. A pilot project was also taken up towards use of Drone, Artificial Intelligence in collaboration with India Flying Labs for damage assessment in Arakhakuda village of Bramhagiri block in Puri district

### Critical Deficits observed

- Children and women were the most vulnerable sections during Fani. Single women and widows suffered the most.

- Health and hygiene were the major concerns after cyclone FANI
- Large scale ignorance of people on their entitlements offered through the Government schemes (subsidy and benefits) and the compensation packages.
- Households not having the Record of Rights (RoR) faced difficulties in accessing their entitlements including housing assistance.
- There was huge livestock loss. The compensation doesn't commensurate with the loss.
- Share croppers are not eligible for compensation as enumeration is done on the basis of RoR. So, the benefits are going to the landlords.
- Non-availability of required numbers of skilled personnel locally to meet the requirements like, net-mending, boat repairing, fingerlings production, electricians, etc.
- People are forced to repay the EMIs from the compensation amount received for livelihood restoration.
- National Housing Bank does not recognize MFIs to meet the credit needs of rural housing assistance.

### Collective Humanitarian Action

Civil Society Organizations (CSOs), relief agencies, intellectuals and media houses joined hands and constituted a forum "Civil Society Responds to FANI" for collective humanitarian action immediately after FANI. More than a hundred volunteers were mobilised from different organisations and engaged in relief and restoration activities in the most affected districts of Puri, Khurda and Cuttack. IEC materials in Odia language reflecting the relief packages declared by the Government and on the need for massive plantation were developed and distributed among the affected people to help them to access their



entitlements. The recommendations of the Forum along with evidences from the ground were shared with the Government for appropriate action.

## Launching the Restoration Process

### I. Green Odisha Drive

The devastation in cyclone FANI has been challenging! More than 10 million trees including the ecologically sensitive varieties were uprooted with many more damaged in the extremely severe cyclone. In this context, CYSD in collaboration with Civil Society Responds to FANI (CSRF) organized a consultation on "Restoration of Greenery post FANI" on 4<sup>th</sup> June, 2019. Besides the civil society leaders, Panchayat representatives from affected areas of Brahmagiri, Krushnaprasad, Satyabadi, Delanga and Nimapara participated in the consultation. The meeting was attended by both Civil Society, Corporate Houses along with Senior Officials from the Government. Mass Plantation Drive with focus on short term and long term plans is the answer which emerged from the deliberation.

#### Short term:

- Saplings from nearby range offices of the Forest Dept. can be collected.
- Immediate insurance coverage of coconut plantation and betel vine plantations during re-plantation for individual households.
- Plantation, nursery, cleaning work can be done through MGNREGA immediately in offline mode.
- Cyclone resilient tree manual prepared by Forest Dept. needs to be uploaded on the website of the concerned dept.
- Nodal person to be appointed both from Government and CSO's side for follow ups.
- The Coconut Development Board (CDB) needs to plan for providing technical training on coconut tree climbing, branch cutting by use of appropriate machine. The CDB has already trained 300 local people every year and has already trained 300 people from Bramhagiri block

#### Long term:

- Translocation of trees is possible, which need to be visualised.
- CAMPA Fund can be utilised for regeneration and plantation.
- Coastal shelter belts need to be regularly restalked and monitored.
- Nursery plantations need to be done from MGNREGA.

### Rural Artisans' Livelihood Restoration (Coconut Cluster)



The coir industries have become sick without required raw materials due to loss of coconut trees. This has also affected the livelihood of many women artisans engaged with the coir industry, artisans' clusters, especially the Pattachitra Artisans around Chandanpur and coconut coir artisans around Satyabadi.

#### Workshop for Coconut Artisans

A week long "Workshop for Coconut Coir Artisan", especially for women was organised by CYSD in association with "Kala Aur Katha" and

SWAD at Satyabadi, Puri. A total of 30 women artisans from Dubuduba, Jaypore, Basudevapur and Oathaisa of Sakhigopal block participated in workshop and advanced their skill.

During the workshop, the artisans made products from coconut wastes like sticks and coir and transformed those semi products into sustainable livelihood finished products like lamps, table runners and mats, baskets, home décor, hair bands, clips, pins, flowers, pen holders, etc. After successfully attending the workshop, the artisans feel confident to bring finished coconut stick and coir products for wider marketing to meet the changing need of the market. "Kala Aur Katha", our technical collaborator is working out the modalities to connect the artisan groups with the Craft Council of India for wider marketing support.

## Workshop for Pattachitra Artisans

The first hand visit of CYSD team to the artisans' clusters of Puri district witnessed the major craft that suffered the wrath of cyclone was Pattachitra along with the handloom textiles and craft products. Keeping in mind the above, it was decided to give a space to the rural Pattachitra artisans, especially the young men and women artisans, for restoration of their livelihoods in a sustained manner, in upgrading their existing skills and empowering them to recover from distress.

In this context, a seven-day Workshop for Pattachitra Artisans was organized in August at CYSD-DRTC, Bhubaneswar in association with Kala Aur Katha, having professional expertise in the area. Around 15 artisans from FANI affected



villages of Raghurajpur and Dandasahi of Puri district participated in the programme. After receiving the week long training, the Pattachitra artisan participants could upgrade their skill base and felt confident to bring quality finished products for wider marketing to meet the changing need of customers.

## Agri-Inputs (Seeds) Support to Farmers

In first phase, with the coordinated effort of UDYAMA and Darbar Sahitya Sansad (DSS) around 4000 Agri-Input Kits were distributed to the affected families of Baliana Block in Khurda district.



## Social Housing: An Alternative Housing for Homeless

Shelter is viewed as one of the main concerns in cyclone FANI affected areas where large population have lost their shelters in terms of full damage of their houses. Social housing and construction of temporary shelter (traditional intermediate shelter) for the most affected vulnerable families has been considered as a crucial need of the hour.

Brahmagiri and Krushnaprasad blocks of Puri district, Odisha being the worst affected, CYSD has embarked to provide intermediate shelters to the vulnerable families of the affected areas. To this effect, the households identification was done based on widow, single deserted woman headed, differently abled person, old age and poorest of the poor families without means. In this regard, CYSD



has adopted the community led decision approach and worked together with the communities, block and district administration and local civil society organizations. The Odisha Society of the Americas (OSA) has extended its generous support for the purposed social housing construction during this critical phase.

## Traditional Intermediate Shelter

Plan for construction of 130 traditional intermediate shelters - 34 numbers in Brahmagiri block and 96 in Krushnaprasad block of Puri district in association with AAINA, Antarang of JAGRUTI and UDYAMA has been made with support of our Odia diaspora (Odisha Society of Americas-OSA). In this initiative, material support of Galvanized coloured Aluminum sheet, wooden ballah, bamboo, fitting materials, etc are being provided to affected beneficiaries. Besides, while CYSD ensures the support of skilled carpenter, the household provideslabour contribution for construction of the shelter.

## Child Friendly Space (CFS)

Children are the worst sufferers during and post cyclone FANI. While parents and other adults are busy with salvaging items from the ravage, repairing houses, arranging for food and water - children are neglected and left on their own jeopardizing their security, health and education. Taking into account the effects of extremely devastating cyclone FANI on children, special care and protection are considered critical during post-cyclone scenario. Thus, CYSD has initiated 7 child friendly spaces (CFS) in six worst affected villages of Krushnaprasad block in Puri district.

The purpose of CFS is to support the resilience and well being of children through structured activities conducted in a safe and child friendly



environment. The primary participants of CFSs are children (3-18 years of age). These spaces will prepare children to go to formal education system after a certain temporary period. The main activities conducted at CFS are designed in harmony with the local culture like, Playing, Drawing, Painting and Storytelling for children; Provision of play kits, first-aid kits, safe drinking water, learning materials for children; Health check-up, immunization and Nutritious food supplies; conducting sessions on confidence building and drawing out children from stress; parents counselling and Trauma counselling of children. For this, community institutions and community-based organizations, especially the women groups are closely involved in monitoring the CFSs.

FANI has brought out several facets affecting the coastal areas of Odisha. The problems need to be addressed through a many hands approach through a multistakeholder collaborative framework with active participation of Government, Civil Society, Private Sector, Corporates, Panchayati Raj Institutions and Community based Organization. □

**Jagadananda,**  
**Mentor and Co-Founder**  
**CYSD, Bhubaneswar**

# ଫନିର ଫୁଲାର



କୃଷି କଳାର ଦେଶ ଉତ୍କଳ। ଏହାର ଦିଗନ୍ତ ବିସ୍ତାରୀ ବେଳାଭୂମି, କୁଳୁକୁଳୁ ନାଦିନୀ ତଟିନୀ, ନଭଶୂମ୍ଭି ଗିରିମାଳା, କାରୁକାର୍ଯ୍ୟ ବିମଣ୍ଡିତ କିର୍ତ୍ତୀରାଜି ଆକୃଷ୍ଟ କରିଥାଏ ଅଗଣିତ ପର୍ଯ୍ୟଟକଙ୍କୁ। କବିମାନେ ମଧ୍ୟ କହିଛନ୍ତି ଉତ୍କଳ ଯଶୋ ଦେଶ ନାସ୍ତି ଜଗତ ମଣ୍ଡଳେ। ମାତ୍ର ବିଧିର ବିଧାନ ବିଚିତ୍ର। କିଏବା ପ୍ରତିହତ କରି ପାରିବ ପ୍ରକୃତିର ଅପ୍ରାକୃତିକ ରଚନାକୁ।

ମନେ ଅଛି ମଇ ୩ ତାରିଖ ୨୦୧୯ ଘଟଣା! ତା ପୂର୍ବରୁ ଚିତ୍ତି, ରେଡ଼ିଓ, ଫେସ୍‌ବୁକ୍‌ରେ ଏକ ଭୟାବହ ମହାବାତ୍ୟାର ପୂର୍ବାଭାସ। କିପରି କରାଯିବ ତାର ମୁକାବିଲା! ରାସ୍ତାଘାଟ, ଦୋକାନ ବଜାର ସବୁଠି ‘ଫନି’ର ଚର୍ଚ୍ଚା। ଆସୁଛି ଏକ ମହାବାତ୍ୟା! ୨୦୦ କି.ମି ବେଗରେ ବହିବ ପବନ। ମଇ ୩ ତାରିଖ ସକାଳୁ ହେବ ଲ୍ୟାଣ୍ଡଫଲ୍।

ମଇ ୩ ତାରିଖ ସକାଳ। ଆକାଶ ମେଘୁଆ ଦେଖାଯାଉଥାଏ। କିନ୍ତୁ ଦିଗନ୍ତ ବିସ୍ତାରି ଆକାଶକୁ ଦେଖି ଫନିର ଭୟାବହତା ଜାଣି ହେଉ ନଥାଏ। ଲୋକ କହୁଥାନ୍ତି ଏଇଟା ନିଶ୍ଚୟ ହୁତୁହୁତୁ, ତିତ୍‌ଲି ପରି କୁଆଡ଼େ ଉଡ଼ିଯିବ। ଦି ତିନୋଟି ତାଳ ଭାଙ୍ଗିବ! ଆଉ କଣ! କିଛି ଡରିବାର ନାହିଁ। କଳାବଜାରିଙ୍କର ଚଢ଼ା ବଜାର ଦର ଉପରେ କିଛି ଲୋକ ଚର୍ଚ୍ଚା କରୁଥାନ୍ତି। କିଛି ଲୋକ ଆଳୁ, ପିଆଜ, ଚୁଡ଼ା ଇତ୍ୟାଦି ବୋହି ନେଉ ଥାନ୍ତି। ରାସ୍ତା ଘାଟ ଯୋଉଠି ଦେଖି ଲୋକଙ୍କ ହାତରେ ଝୁଲୁଥାଏ ଖଣ୍ଡିଏ ଖଣ୍ଡିଏ ଲେଖାଏ ବ୍ୟାଗ୍। କିଛି ଲୋକଙ୍କ ମୁହଁରୁ ଶୁଭୁଥାଏ ବ୍ୟସ୍ତ ହେବାର ନାହିଁ, ପ୍ରଭୁ ଜଗନ୍ନାଥ ଅଛନ୍ତି।

ଈତିମଧ୍ୟରେ ସଂସ୍କୃତି ବିଭାଗ ମଧ୍ୟ ଫନି ପାଇଁ ପ୍ରତିକାରମୂଳକ ପଦକ୍ଷେପ ନେବା ନିମନ୍ତେ ତତ୍ପର ହୋଇ ଉଠିଲା। ରାଜ୍ୟ ସଂଗ୍ରହାଳୟ, ନେତାଜୀ ଓ ଆନନ୍ଦଭବନ ସଂଗ୍ରହାଳୟ, ରାଜ୍ୟ ଅଭିଲେଖାଗାର ସବୁକୁ ତିନି ଦିନ ପାଇଁ ବନ୍ଦ ରଖାଗଲା। ସମସ୍ତ କାର୍ଯ୍ୟାଳୟର କବାଟ, ଝରକା ଇତ୍ୟାଦି ଦୃଢ଼ ଭାବରେ ଦୁଇ ତାରିଖରେ ବନ୍ଦ କରିବା ପାଇଁ ନିର୍ଦ୍ଦେଶ ଦିଆଗଲା। କାର୍ଯ୍ୟାଳୟ ପ୍ରାଙ୍ଗଣରେ ଥିବା ବୁଲା ଜୀବଜନ୍ତୁଙ୍କୁ କାର୍ଯ୍ୟାଳୟର ଅଗଣାରେ ଖାଦ୍ୟ ଦେଇ ତାଙ୍କୁ ସୁରକ୍ଷା ଦିଆଗଲା।

ସଂସ୍କୃତି ବିଭାଗ ଅଧୀନରେ ଥିବା ସମସ୍ତ ଶିକ୍ଷାନୁଷ୍ଠାନରେ ଥିବା ଛାତ୍ରଛାତ୍ରୀମାନଙ୍କୁ ଘରକୁ ଚାଲିଯିବାକୁ ଅନୁମତି ଦିଆଗଲା। ସମସ୍ତ କର୍ମଚାରୀଙ୍କୁ କିଛିଟା ଜରୁରୀକାଳୀନ ଜିନିଷପତ୍ର ମହଜୁଦ ରଖିବାକୁ କୁହାଗଲା, ଯଥା- ଟର୍ଚ୍ଚ ଲାଇଟ୍, ମହମବତୀ, ଚୁଡ଼ା, ଗୁଡ଼, ଆଳୁ, ପିଆଜ, ତେଲ, ଲୁଣ, ଆବଶ୍ୟକୀୟ ହାଲୋଜେନ୍ ବଟିକା, ମଶା ଧୂପ ଓ ଔଷଧପତ୍ର (ତରଳ ଝାଡ଼ା, ଜ୍ୱର, ବାନ୍ତି ଇତ୍ୟାଦି ପାଇଁ)। ପୁରାତନ

ମନ୍ଦିର ମାନଙ୍କରେ ଗାଁ ଲୋକଙ୍କୁ ସୁରକ୍ଷିତ ରଖିବାକୁ କୁହାଗଲା। ଲୋକଙ୍କ ସହାୟତା ପାଇଁ May I help cell ଗଠନ କରାଗଲା।

ଏମିତି ସବୁ ଆୟୋଜନ ଚାଲୁଚାଲୁ ସକାଳ ଆସିଗଲା। ମଇ ୩ ତାରିଖ। ମୋର ଠିକ୍ ମନେ ଅଛି, ସରକାର ସମସ୍ତଙ୍କର ସୁରକ୍ଷା ପାଇଁ ଛୁଟି ଘୋଷଣା କରିଦେଲେ। ଆମେ ସମସ୍ତେ ଘରେ ଥାଉ। ଆମେ ସବୁ ସକାଳୁ ସକାଳୁ ଘରକାମ ସାରିଦେଲୁ। କାଳେ କିଛି ଜରୁରୀକାଳୀନ ସେବା ଦରକାର ପଡ଼ିବ, ସେଇଥି ନିମନ୍ତେ ଜରୁରୀକାଳୀନ ଖାଦ୍ୟ ପଦାର୍ଥ ମଧ୍ୟ ପ୍ରସ୍ତୁତ କରିଦେଲୁ। ବାରମ୍ବାର ପାଣିପାଗ ସୂଚନାକୁ ଚିତ୍ତିରେ ଶୁଣୁଥାଉ। ବାହାରକୁ ଝରକାରେ ଦେଖୁଥାଉ। ପ୍ରଥମ ପର୍ଯ୍ୟାୟରେ ପବନଟା ଉତ୍ତର ପୂର୍ବ ଦିଗରୁ ବହୁଥିଲା, ମାତ୍ର ଦିନ ୧୦-୧୧ଟା ବେଳକୁ ଦକ୍ଷିଣ-ପୂର୍ବ ଦିଗରୁ ବହିବାକୁ ଲାଗିଲା। ଅବିଶ୍ରାନ୍ତ ବର୍ଷା ସାଙ୍ଗକୁ ଫନିର ମହାତାଣ୍ଡବ ସମସ୍ତଙ୍କୁ ଭୟଭୀତ କରିଦେଲା। ପ୍ରଥମେ ଗୋଟେ ଦିନ ତାଳ ଭାଙ୍ଗୁଥିଲା। ଦେଖୁଦେଖୁ ସମସ୍ତ ଗଛ ଧରାଶାୟୀ ହେବାକୁ ଲାଗିଲା।

ଏଇ ସମୟରେ ମୁଁ ମୋର ବାଲକୂନକୁ ଗଲି। ସେଇଠି ଗୋଟେ ପାରା ତାର ଦୁଇଟା ଛୁଆକୁ ଧରି ଆଠ ଦଶଦିନ ହେଲା ଗୋଟେ ଫୁଲକୁଣ୍ଡରେ ବସିଥାଏ। ମୁଁ ତାକୁ ପ୍ରତ୍ୟେକ ଦିନ ବିରି ଗହମ ଆଦି ଖାଇବାକୁ ଦେଉଥିଲି। ପିଲାମାନଙ୍କର ଆଖି ଫିଟି ନଥାଏ। ଦେଖିଲି ପାରାଟି ବ୍ୟସ୍ତ ବିବ୍ରତ ହୋଇ ଝରକାରେ ବସିଛି। ଭାବିଲି ନିଶ୍ଚୟ ତାର ପିଲାଙ୍କ ସୁରକ୍ଷା ପାଇଁ ଚିନ୍ତିତ ଥିବ। ମୁଁ ଖୁବ୍ ବ୍ୟସ୍ତ ହୋଇ ପାରା ଏବଂ ତାର ପିଲାଙ୍କୁ ବଞ୍ଚାଇବା ପାଇଁ ଝରକାଟି ଖୋଲିଦେଲି। ମାତ୍ର ହାୟରେ ଦଇବ! ପାରାଟି କିଛି ନ ବୁଝିସୁଝି ବାହାରକୁ ଉଡ଼ିଗଲା। ମୁଁ ଦେଖିଲି ଗୋଟିଏ ଗଛତଳେ କଟାଡ଼ି ହୋଇ ପଡ଼ିଗଲା। ତା ଚାରି ପାଖରେ ଅନେକ ତାଳ। ଆଉ ଦେଖାଯାଉ ନଥାଏ ପାରାଟି। ପବନର ବେଗ ଏତେ ଭୟଙ୍କର ଥିଲା ଯେ ମୋ ଘରର ଝରକାଟିଏ ମଧ୍ୟ ଭାଙ୍ଗିଗଲା। ତାର ଫେରିବା ଆଶା ବୃଥା। ମୁଁ ତେଣୁ ଫୁଲ କୁଣ୍ଡ ସହିତ କୁନି ପାରାଙ୍କୁ ଘର ଭିତରକୁ ନେଇ ଆସିଲି। ମୁଁ ଦେଖିଲି ପାରାଟି ଚେଷ୍ଟା କରୁଥାଏ ଉଠିବାକୁ। ମାତ୍ର ଅଲଗା ପାରାଟି ପବନରେ କୁଆଡ଼େ ଗଲା ଆଉ ଦେଖାଗଲାନି। ଭାବିଲି ଫନି ପରେ ପାରାଟି ଯେଉଁଠି ଥିଲେ ବି ନିଶ୍ଚୟ ଫେରିବ। ଏଇ ଆଶାରେ ମୁଁ ମୋର ପାରୁ ପର୍ଯ୍ୟନ୍ତ ତାର ପିଲା ଦୁଇଟିଙ୍କୁ ବଞ୍ଚାଇବା ପାଇଁ ଭ୍ରମରେ କ୍ଷୀର, ବିସ୍କୁଟ ଗୁଣ୍ଡ ଆଣି ତାଙ୍କ ପାଟିରେ ଦେଉଥାଏ। ତାଙ୍କୁ ଶୁଖିଲା କରିବା ପାଇଁ ଗୋଟେ ଟାଉକିସ୍ ଓ ଟୁଆଲରେ ରଖିଲି। ଏମିତି ଭାବରେ ଫନିର ତାଣ୍ଡବ ଦିନ ତିନିଟା ପର୍ଯ୍ୟନ୍ତ ଲାଗି ରହିଲା। ଘରର ଗୋଟେ ଝରକା ମଧ୍ୟ ଭାଙ୍ଗି ଘର



ଜଳମୟ ହୋଇଗଲା। ସେ ପାଣି ସଫା କରୁଥିବା ଦିନ ସରିଗଲା। ସନ୍ଧ୍ୟାବେଳକୁ ଫନିର ପ୍ରକୋପ ଥମିଗଲା।

ମୁଁ ତେଣୁ ପାରା ଦୁଇଟାର ମାଆକୁ ଖୋଜିବା ମୋର ପ୍ରଥମ କାର୍ଯ୍ୟ ବୋଲି ଭାବିଲି। ତେଣୁ ମୋର ଦୁଇଟି କୁନି ଡଗ୍‌ସ୍‌ମାନଙ୍କୁ ଧରି ବାହାରକୁ ବାହାରିଲି। ଦେଖିଲି ଚାରି ପଟେ ବିରାଟ ବିରାଟ ଗଛ ସବୁ ଚଳିପଡ଼ିଛନ୍ତି ମାଟି ଉପରେ। ମୁଁ ମୋର ଦୁଇଟା ଡଗ୍‌ସ୍‌ମାନଙ୍କୁ ସହିତ କୁନିପାରାଙ୍କ ମାଆକୁ ଖୋଜୁ ଖୋଜୁ ଦେଖିଲି ଗୋଟେ ପାରା ଠିକ୍ ଭାବରେ ଉଡ଼ି ପାରୁନି, ଏଣେତେଣେ ବୁଲୁଛି। ଭାବିଲି ଏଭଳି ବୋଧେ ସେ ପିଲା ଦୁଇଟାର ମାଆ। ତେଣୁ ତାକୁ ଧରି ଆଣିଲି ଏବଂ ସେ କୁନି ପିଲା ଦୁଇଟି ପାଖରେ ରଖିଦେଲି। କୁନି ପାରା ଦୁଇଟା ତାଙ୍କର ମାଆ ଭାବି ଚେଁ ଚେଁ ରଡ଼ି ଗଲେ ଓ ପାରାଟିର ଅଣ୍ଟାକୁ ଖୁଞ୍ଚିବାକୁ ଲାଗିଲେ। ମାତ୍ର ଦେଖିଲି ପାରାଟି ତାକୁ ରାତି ଝୁଞ୍ଚିବାକୁ ଲାଗିଲା, ଖାଇବାକୁ ଦେଲାନି ମଧ୍ୟ। ସେ ବୋଧେ ତା ମାଆ ନଥିଲା। ମୋତେ ଭାରି ବ୍ୟସ୍ତ ଏବଂ ଦୁଃଖ ଲାଗୁଥିଲା। ଇତିମଧ୍ୟରେ ମୁଁ ଘଣ୍ଟାକୁ ଅନେଇ ଚାହିଁଥାଏ। ଦେଖିଲି ଧରି ଆଣିଥିବା ପାରାଟି କିଛି ଖାଉ ନାହିଁ। ତାକୁ ତେଣୁ ହୁପ୍‌ରେ ପାଣି ଏବଂ କ୍ଷୀର ଦେଉଥାଏ। ମାତ୍ର କିଛି ସମୟ ପରେ ଦେଖିଲି ପାରାଟିର ଅଧା ଆଖି ବନ୍ଦ ହେବାକୁ ଲାଗିଲା। ମୁଁ କାଳେ ସେ ମରିଯିବ ଭାବି ତାକୁ ଛାତ ଉପରକୁ ନେଇ ଗଲି। ଭାବିଲି ତାର ସାଙ୍ଗସାଥୀମାନେ ଆସି ତାକୁ ବଞ୍ଚାଇବେ। ମାତ୍ର ପାରାଟି ମରିଗଲା। ଏହା ଦେଖି ଭାରି ବ୍ୟସ୍ତ ଲାଗିଲା। କୁନି ପାରା କଣ ଖାଇବେ କିଏ ଖୁଆଇବ। ତେଣୁ ପୁଣି ନେଇ ସେଇ ପିଲା ପାରାଦୁଇଟିଙ୍କୁ ବାଲକୋନିର କୁଣ୍ଡରେ ରଖିଦେଲି। ଭାବିଲି ତା ମାଆ ବଞ୍ଚିଥିଲେ ନିଶ୍ଚୟ ଆସିବ। ମାତ୍ର କେହି ବି ଆସିଲେନି। ଭୋକ ଉପାସରେ ପାରା ଦୁଇଟି ମରିଗଲେ।

ଫନିର ଫଣାରେ ସମସ୍ତେ ସ୍ତବ୍ଧ, କ୍ଷତବିକ୍ଷତ। କାର ଘର ଭାଙ୍ଗି ଯାଇଛି ତ କାହାର ଘରର ଛାତ ନାହିଁ। କାହାର ଦୋକାନ ଉଡ଼ିଯାଇଛି ତ କାହାର ଝରକା ଭାଙ୍ଗି ଆସୁଏ ପାଣି। ପୁଣି ତା ପର ଦିନ ଧୁ ଧୁ ଖରା। ଘରେ ନାଁ ବିଜୁଳି ଅଛି ନାଁ ପାଣି ଆସୁଛି। ଧୀରେଧୀରେ ଘରେ ସଞ୍ଚିଥିବା ପାଣି ସରିବାକୁ ଲାଗିଲା। ପାଣି, କରେଣ୍ଡ, ଟେଲିଫୋନ୍ ସେବା ସଂପୂର୍ଣ୍ଣ ବିପର୍ଯ୍ୟୟ ହୋଇପଡ଼ିଥିଲା।

ତା ପରେ ଆରମ୍ଭ ହେଲା ଗ୍ରୀଷ୍ମର ତାପ୍ତତା। ପବନ ପ୍ରବାହ ସଂପୂର୍ଣ୍ଣ ବନ୍ଦ। ଲୋକଙ୍କ ଘରେ ଖାଲି ହାଣ୍ଡି ଏବଂ ମାଠିଆ ଗଡ଼ିବାକୁ ଲାଗିଲା। ଦୋକାନ ବଜାର ଏବଂ ଭିଟାମାଟି ସଜାଡ଼ୁ ସଜାଡ଼ୁ ଲୋକଙ୍କୁ ଫୁରସତ୍ ନାହିଁ। କଣ ବା ଦୋକାନ ଖୋଲିବେ।

ପ୍ରବଳ ଗୁଳୁଗୁଳିକୁ ଗରମ, ସତେ ଯେମିତି ଦେହରୁ ବହି ଯାଉଛି ଧାରା ଶ୍ରାବଣର ବର୍ଷା। ଫନି ଦେଖିବାର ଉତ୍ସୁକତା ସଂପୂର୍ଣ୍ଣ ମଲିନ ପଡ଼ିଯାଇଥାଏ। ଗରମ ମରଣ ଯନ୍ତ୍ରଣା ଦେଉଥାଏ। କୋଉଠୁ

ଟିକେ ପାଣି ମିଳିଗଲେ ଟିକିଏ ଢାଳି ହୋଇଯିବା ପାଇଁ ମନ ଛଟପଟ ହେଉଥାଏ। ଚାରିପଟେ ପାଣି ପାଇଁ ହାହାକାର। କୋଉଠି କୋଉଠି ଲୋକ ରାସ୍ତାରୋକ ଆରମ୍ଭ କରି ଦେଇଥାନ୍ତି। କିଛି କଳାବଜାରୀ ଏହାର ମୌଳିକ ନେଇ, ଜେନେରେଟର ଚଳେଇବା ପାଇଁ ଘଣ୍ଟା ପ୍ରତି ଦୁଇ ହଜାର ଟଙ୍କା ଭଡ଼ା ଆରମ୍ଭ କରି ଦେଇଥାନ୍ତି। ପାଣି ଟୋପେ ପାଇଁ ଲୋକେ ଏତେ ବ୍ୟକୁଳ ଥାଆନ୍ତିଯେ ଟଙ୍କା ପାଇଁ ତାଙ୍କର କୌଣସି ଖାତିର ମଧ୍ୟ ନଥାଏ। ସରକାର କିପରି ଲୋକଙ୍କୁ ପାଣି ଯୋଗାଇବେ ସେଥିପାଇଁ ତର୍କ ବିତର୍କ ଆମମ୍ଭ କରିଦେଇ ଥାଆନ୍ତି।

ଲୋକଙ୍କ ମୁଣ୍ଡରେ ଗୋଟିଏ ଚିନ୍ତା କେବେ ଆସିବ ବିଜୁଳି। କିଛି ପ୍ରମୁଖ ଜାଗାରେ ୬-୭ଦିନ ପରେ ବିଜୁଳି ଆସିଲା। କେତେ ଜାଗାରେ ଆସି ନଥାଏ। ଲୋକଙ୍କ ଅସହ୍ୟ ବହୁଥାଏ। ଇତିମଧ୍ୟରେ ଏହି ଦହଗଞ୍ଜରେ ୧୮ ଦିନ ବିତିଯାଇଛି। କେତେ ଯେ ବିନିଦ୍ର ରଜନୀ, କେତେ ଅଗାଧୁଆ ଦିନ; ପତ୍ରରେ ଖାଇବା; ଡିବିରି ଜାଳିବା; ସକାଳ ରନ୍ଧାକୁ ଗରମ କରି ରାତିରେ ଖାଇବା, ପରିବାକୁ ଓଦା କନାରେ ଗୁଡ଼ାଇ ରଖିବା ଇତ୍ୟାଦି। ଲାଗୁଥାଏ ସତେଯେମିତି ଗୋଟେ ଗାଉଁଲି ଜୀବନ। ଫନିର ପରବର୍ତ୍ତୀ ସମୟରେ ଗାଁ ଓ ସହରର କିଛି ପାଥକ୍ୟ ନଥାଏ। ସତେ ଯେମିତି ଆମେ ଆଦିମ ସଭ୍ୟତାରେ ଅଛୁ। ପ୍ରକୃତି, ସହରୀ ଜୀବନ ଓ ଗାଉଁଲି ଜୀବନ ଭିତରେ ଆଉ ତାରତମ୍ୟ ରଖିଲା ନାହିଁ। ସମସ୍ତଙ୍କର କଷ୍ଟ ସମାନ। ‘ସର୍ବେ ହୋଇବେ ଏକାକାର, ନଥିବ ବର୍ଣ୍ଣର ବିଚାର’ ସନ୍ଧ୍ୟା ହେଲେ ଚାରିପଟ ଶୁନ୍‌ଶାନ୍। ଚାରିଆଡ଼େ ଶୁଭିଥିଲା ଟିଁ ଚଉଁ ଝିଙ୍କାରୀର ସ୍ଵର।

କିନ୍ତୁ ପ୍ରକୃତିର ରୋଷ ଆଗରେ ମଣିଷ ସାମୟିକ ଭାବରେ ଅସହାୟ ମନେକରେ, କିନ୍ତୁ ମଣିଷ ଭିତରେ ଥିବା ଜୀବବୀର ଇଚ୍ଛା ଏବଂ ପ୍ରକୃତିକୁ ଜୟକରି ପୁଣି ବଞ୍ଚିବାର ପ୍ରତ୍ୟାଶା ପାଇଁ ଆତ୍ମପ୍ରତ୍ୟୟ ତାକୁ ପୁଣି ସଭ୍ୟତାର ପୁନଃ ସଂସ୍ଥାପନ ପାଇଁ ଆଗକୁ ନେଇଯାଏ। ପ୍ରକୃତିକୁ ପ୍ରତିହତ କରି ସଭ୍ୟତାକୁ ଆଗକୁ ନେବାର ଅଭୀପ୍ସା କେବଳ ମଣିଷ ପାଖରେ ଅଛି।

ଶେଷରେ ୧୮ ଦିନ ପରେ ସବୁ ହଇରାଣ ହରକତର ଯବନିକା ପଡ଼ିଲା। ଓଃ କି ଶାନ୍ତି! ଯଦିଓ ଫନିର ଫ୍ ଫ୍ ଫୁଙ୍କାର କାନରେ ଗୁଞ୍ଜରିତ ହେଉଥାଏ, ଫନି ଶିଖେଇ ଦେଲା ଅନେକ କଥା; ଅଳ୍ପରେ ବଞ୍ଚିବା; ପାଣି ସଞ୍ଚୟ କରି ରଖିବା; ବିଜୁଳିର ବ୍ୟବହାରରେ ସଞ୍ଜମତା ଅବଲମ୍ବନ କରିବା; ଏପରି ଅନେକ ଅନେକ କିଛି। □

**ଶ୍ରୀମତୀ ସଂଘମିତ୍ରା ଶତପଥୀ, ଓ.ପ୍ର.ସେ.**

*ଯୁଗ୍ମ ନିର୍ଦ୍ଦେଶିକା ଏବଂ ପଦପ୍ରଯୁକ୍ତ ଯୁଗ୍ମ ସଚିବ, ଓଡ଼ିଆ ଭାଷା, ସାହିତ୍ୟ ଓ ସଂସ୍କୃତି ବିଭାଗ ଏବଂ ଅଧୀକ୍ଷିକା, ରାଜ୍ୟ ପ୍ରତ୍ନତତ୍ତ୍ଵ ବିଭାଗ*

# RESPONSE TO CYCLONE FANI-2019

**I**nformation on severe cyclonic storm "FANI" was circulated by Govt. of Odisha to the District Administrations of Coastal and other vulnerable districts and detailed instructions on precautionary measures were promptly issued by tourism department.

Hoteliers were asked to exercise precautionary measures and educate tourists/pilgrims about the risks of venturing out, particularly to the sea. Further, they were also requested to extend possible help to the tourists as and when required. A 24x7 Control Room was operationalised at Odisha Tourism's Paryatan Bhawan Office to centrally coordinate tourist evacuation and assistance operations.

All the Boat Associations of Chilika Lake were advised to suspend tourist boat services until the normal weather returns. On receiving further authentic updates regarding the intensity of Cyclonic storm "FANI", District Tourist Officers (DTOs) instructed the Hotel Owners of Puri to vacate rooms, request tourists to leave Puri and cancel all the bookings made for the time period of 2<sup>nd</sup> to 5<sup>th</sup> May 2019.

## Pre-cyclone Precautionary Measures



The local administrations had issued public announcements to raise real-time awareness



about the severity of the Cyclonic storm "FANI", including advising tourists and pilgrims to leave Puri. The managing authorities of all major places of tourist attractions were officially asked to halt entry to the respective premises until further notification.

The Department of Tourism had issued a Tourism Advisory for safety and security of tourists. About 24,889 tourists were successfully evacuated from Puri, Ganjam, Cuttack and Balasore districts by special trains and buses.

With the help of Fire Officials, ODRAF cadre and life guards, Department of Tourism installed Red flags on the beach fronts.

Tourist / pilgrim movements near the vulnerable areas continuously monitored.

The Department were geared up to use its Social Media presence to share continuous updates and to respond to stranded tourists, apart from meeting their queries.



**The impact of the cyclone on facilities, livelihoods and activity of the tourism and hospitality sector was considerable, in that:**

- Damages of over INR 25 crore to infrastructure were reported to infrastructure and hospitality units maintained by the Department / Odisha Tourism Development Corporation (OTDC).
- Just under 3,000 individuals directly dependent on tourism, such as tourist guides, photographers, boatmen and lifeguards incurred heavy losses, both in terms of damages to equipment as sets as well as stoppage of revenues.

**Inview of the above, the Department undertook the following measures based on several damage assessment surveys and meetings:**

- DoT facilitated the provision of electric poles, till restoration of normalcy. It caused the electric charges to hospitality units to be levied on LTCT meter basis until operational normalcy was achieved.



**Commissioner-cum-Secretary**

Post-cyclone Relief Operations over saw expeditious repair works and operational restoration at all DoT and OTDC properties.

- DoT requisitioned and received a sum of INR 5.79 crore from the Chief Minister's Relief Fund(CMRF)for Relief Assistance for tourism dependent groups, especially in Puri District. While 79 guides, 897 photographers and 304 life guards are to receive per capita assistance of INR 10,000 under a Special Package, over 1,100 tourist boatmen are to receive a subsidy component of INR 40000 per boatman per boat.
- Besides the above measures,the Department facilitated several initiatives under Corporate Social Responsibility(CSR). □

*Department of Tourism,  
Government of Odisha*

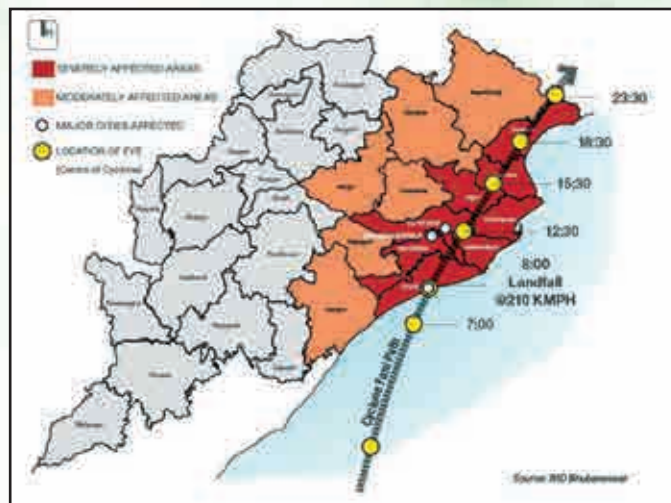
# REBUILDING PURI AFTER “FANI” AND THE LESSONS LEARNT

**E**xtremely Severe Cyclone Storm “FANI” was made land fall on 3<sup>rd</sup> May 2019 near Puri from 8.00 AM to 12.00 PM. Due to the severity of the cyclone most of the trees uprooted, road communication blocked, houses got damaged, electrical poles and infrastructure were badly affected, telecommunication network was also cut off. All 11 Blocks and 4 ULBs were affected by the Cyclone FANI, more than 19 lakh people affected. The major concern was to clear the road blockage. supply of adequate nos. of polythene sheets to the affected people, sufficient relief materials both dry food and free kitchen, supply of drinking water, electricity supply, tele-communication network restoration and health facilities to both human and animals, house damage assessment was also a big challenge the revenue field staffs deputed from other districts used for the assessment of house damage. For assessment of horticulture loss and loss to artisans, the staffs from districts were deputed. Similarly, assessment of animal's loss, agricultural crop loss assessment and assessment of damage to boats, nets, fish farms etc. were also completed.



## Preparedness

- Immediate steps for shifting of old, infirm, disabled people and other people those are living in thatched houses along with nourishing mothers to Multipurpose Cyclone Shelters/ Multipurpose Flood Shelters/School Buildings/BNRGSK in case of exigencies.
- As a preparedness measure 1,29,800 people evacuated and gave shelter at 357 safe shelters i.e. Cyclone/Flood Shelters, School Buildings, GP Offices, BNRGSKs, etc. which minimizes the the casualty.
- A Multi Agency Control Room at Collectorate under the supervision of a Senior Officer from State was functioning from 8 AM to 10 PM for better coordination among all agencies related to Relief and Restoration.
- An NGO coordination cell was made functional for coordination with NGOs and Corporate Houses.
- Control Room activated in District Emergency Operation Centre (DEOC), Blocks, Tahasils and all other line department offices 24x7 hour
- Fire department had been directed to be in readiness with their teams and equipment to clear the road blockage immediately if occurs due to the Severe Cyclonic Storm.
- Readiness for immediate restoration of electricity, if disrupted. Uninterrupted electricity should be supplied to places like CHCs, PHCs, Collectorate, S.P Office etc with power back up.
- All the overhead tanks of Puri Town to be filled and all the generators are to be





functional with adequate stock of POL and provide drinking water in tankers in case of any emergencies.

- Megaphones announcement to aware general public not to stay in kutcha houses within 1.5 kms from the Sea shore and set the domestic animals free. Announcement to inform the Fishermen not to venture into deep sea areas and whosoever in the deep sea was advised to return to coast.
- The R.T.O, Puri had kept the vehicles ready to meet any emergency as and when required. Instructions to locally arrange the vehicles as well as the POL in case of emergencies.
- Requisition for supply of sufficient polythene sheets given to the SRC, Odisha on 29.04.19.
- The Chief District Medical Officer, Puri was in readiness with his team of Doctors/staff/Ambulances/Medicines. etc. to meet the emergent situation.
- 2 ODRAF Teams, 3 NDRF Teams, 12 Fire Service Teams, 32 Medical Teams and 45 Veterinary Teams were deployed in vulnerable locations to counter any eventualities.
- 200 Trained NDMA Scheme "Aapada Mitra" volunteers had helped the Block and District Administration in evacuation, free kitchen to the affected people at Cyclone / Flood shelter level.

## Relief and Restoration

- National Highway from Puri to Bhubaneswar cleared by 4<sup>th</sup> May 2019.
- All roads including village roads cleared by 15<sup>th</sup> May 2019.
- By 12<sup>th</sup> May 2019 Shree Jagannath Temple got electricity.
- 4000 workers, 200 technicians, 50 supervisors and senior officials including 6 IAS Officers were engaged for restoration of electricity.
- 50 Cell on Wheels (COWs) of different operating agencies for tele communication restoration.

- Mobile charging points provided in different locations of Puri Town.
- 21 mobile ATMs were operated for people.
- 14023 tube wells disinfected.
- 90% in Urban piped water supply restored by 10<sup>th</sup> May 2019.
- 100+ Generator sets were used for charging pipe water supply.
- 185 Tankers were used for providing drinking water in rural areas.
- 45 Police Platoons, 9 ODRAF Teams, 23 NDRF Teams, 52 Fire Service Teams, 45 Medical Teams, 45 Veterinary Teams, 50 Works Deptt. Teams (300 vehicles and 50 JCBs) deployed in vulnerable locations for clearance of road blockage, relief distribution, clearance of debris, restoration of drinking water supply, power supply, etc.
- 457 Inflatable Tower Lights used in 4 ULBs and 11 Block head quarters for lighting the Govt. offices and important roads and squares.



- Immediate relief free kitchen provided to 2.8 lakh affected population in 862 free kitchen centres for 15 days.
- Over 3 lakhs affected people provided polythene sheets to cover their damaged houses.
- Dry foods like Chuda, Gur and other necessary items like candles and free kerosene to the affected people.
- 5 Maitree shops were opened in Puri Town to provide necessary items to the affected people at fare price.



- 4,000 animals and 24 lakhs poultry birds carcassing was done by Veterinary Deptt. with the help of Blue Cross of India a NGO from Tamil Nadu.
- Mobile veterinary units were opened for vaccination of animals.
- More than 700 MT fodder distributed for animals.

### Damage Assessment

- Massive damage to house, public infrastructure, veterinary, fishermen, agricultural crops and horticulture sector.
- 270 Revenue Teams, 200 Panchayati Raj Teams, 70 Veterinary Teams, 70 Fisheries Teams, 90 Agriculture Teams, 150 Horticulture Teams and 50 MSME Teams were engaged for damage assessment.
- 33000 Ha. land area affected by the cyclone.
- 33 nos. of precious human lives and 26,71,929 nos. of animals lost due to the severity of ESCS- FANI.
- Estimated cost of damage to houses, crops and Public properties is around 3,157.71 lakhs.
- 2,78,762 houses got damaged in which 9,059 nos. of fully damaged, 1,04,715 nos. of severely damaged, 1,62,810 nos. partially damaged, 2,178 nos. of hut damaged and 44,378 nos. of cow shed damaged.

- 173 nos. of school fully damaged.
- Estimated loss to crops 5003.14 lakhs.
- 8,87,500 nos. of coconut palms damaged.
- Assistance have been given to the affected people for house damage, crop damage, replacement of animals, damaged boats and nets, assistance to artisans, etc. through bank transfer.

### Lesson learnt during Extremely Severe Cyclonic Storm "FANI"

The following measures will be taken up as a part of lessons learnt during the Extremely Severe Cyclonic Storm "FANI".

- Availability of polythene sheets is a must, in District headquarters and Tahasils well in advance before any disaster to meet the needs of the affected people immediately after the disaster. The Store house/ Godown needs to be Strong, Accessible with sufficient space to accommodate sufficient numbers of polythene rolls and to keep them safe from any hazards.
- Arrangements for stocking of sufficient food stuff, vegetables to run free kitchen during any disaster like situation for providing cooked food to the affected people in cyclone/flood or any safe shelters will be made, preferably for a period of 15 days.
- Assessment for requirements, availability, identification of locations and prepositioning of gensets will be made in hospitals and major Government Offices for supply of uninterrupted drinking water and power supply. Further, intervention at shelters be made to keep all the gensets ready.
- Prepositioning of HAM Radio or VHF in all Dist Offices and Block Offices for communication purpose.
- Identification of places for prepositioning of Cell on Wheels in dist. hqrs as well as in each Blocks for early restoration of Tele communication networks.





- Identification of places for prepositioning of Mobile ATMs in Dist. Hqrs. as well as in each Blocks for fulfilment of the cash need of the public.
- Safety audit of Govt. buildings, electronic gadgets, etc. removal of LED display screens and High mast street lights, etc. will be made before any disaster like situation.
- Identification of locations for prepositioning of plasma cutters and hydra for immediate restoration of power supply and clearance of road blockage.
- Functioning of Integrated Control Room both in District HQ as well as in Block HQs, in order to have better coordination among the officials for timely completion of the relief and restoration activities.
- Provision of Walkie Talkies to all District level officials along with one police personnel for its operation.
- Safety measures should be taken for the labours engaged in electrical restoration works.
- Availability of sufficient foods and drinking water for the persons engaged in restoration works like electricity, drinking water supply, sanitation, etc.
- Separate cells should be opened for coordination of restoration works.
- More numbers of farmers should be included under the Pradhan Mantri Fasal Bima Yojana

(PMFBY) for getting benefit during any disaster.

- Building of an extra disaster resilient ward in District Head Quarter Hospital for 200 patients which may be used at the time of Rath Yatra or any disaster situation.
- 12 Mobile Medical Van (1 for DHH and 11 CHCs) with all equipment should be procured for immediate service to the affected people at the time of disaster.
- All road clearance teams (NDRF, ODRAF, Fire Service, RD and RandB) should worked under the command of Block Development Officer at Block level for quick clearance of road blockages.
- Identification and prepositioning of high performance saw machines for cutting of big uprooted trees.
- Assessment and identification of manpower, machinery and locations for carcass disposal of animals by the Veterinary department for



quick disposal in order to prevent the public from any air/water borne diseases.

- A joint inquiry report of Health, Home and Revenue Dept. will be submitted daily to the Collector and DM, Puri on casualty and injury for early disbursement of Ex-gratia to the NOKs of the affected person during disaster. □

**Sukanta Dash**

**District Project Office, Puri**

# PREPAREDNESS AND PUBLIC HEALTH PREVENTIVE ACTIVITIES FOR CYCLONE FANI IN ODISHA

## A. Background:

**A**s per alert of US Navy information on 29<sup>th</sup> May 2019 and India Meteorological Department, Extremely Severe Cyclonic Storm "Fani" hit coast of Odisha on 3<sup>rd</sup> May 2019 morning, disrupting general public life and took a heavy toll on animal husbandry, environment, and infrastructure,

In response to the above information the Director of Public Health issued an letter addressed to all the CDM and PHOs of the state vide letter No. 154 Dt. 29.04. 2019 instructing all the districts to remain vigilant with all activities like stock of drugs and other logistics disinfectants, ASV, Ambulances etc up to block level. A detailed guideline was enclosed with the letter mentioning 1. Functioning of Control Room, 2. Identification Cyclone prone areas of the district, 3. Casualty Services and contingency plan for MRCs, 4. Supply of Drugs , Logistics and Disinfectants, 5. Ambulance Services, 6. Disinfection of Drinking Water Sources, 7. Diseases Surveillance etc. Prior the 3<sup>rd</sup> May, Govt. of Odisha had issued high alert to 14 coastal districts of Odisha and directive was issued for evacuation of people from low lying areas, cancellation of leaves of govt. officials, functionalization of cyclone shelters, free kitchen at the cyclone shelters etc.

## B. Pre-cyclone preparedness

- On 1<sup>st</sup> May 2019, the Commissioner-cum-Secretary to Govt., Health and FW Department convened a meeting with senior officials of the Department, Directorates and Development Partners to chalk out the strategies to address impact of FANI on health related issues.
- Health and Family Welfare Department, Odisha issued Guideline all 14 districts likely to be affected by FANI as per forecast of India Meteorological Department (IMD) well in advance to mitigate the health issues due cyclone
- A 24X7 state and district control room was established to oversee the preparedness to face the wrath of FANI.
- All pregnant women whose expected date of delivery is around 15 days as on 3<sup>rd</sup> May and critical ill patients are shifted to nearby hospitals to avoid any emergency. Prior to cyclone 1,945 pregnant women in advance stage of pregnancy were shifted to nearby hospitals.
- Odisha State Medical Corporation Limited (OSMCL) supplied all emergency logistics (Antipyretic, antibiotics, Anti diarrheals, ORS, Halazone/chlorine tablets, Anti snake venom. Anti-rabies vaccines, IV fluids etc) in sufficient quantity to all 14 districts. Government of India also supplied emergency medicines in the view of FANI.
- Alternative water and power supply to the hospitals, storage of adequate dry rations for in-patients in hospitals, storage of DOL for generators etc were ensured before the actual landfall of cyclone.
- In order to support and guide the vulnerable districts, senior officials from the Health Directorate were deployed to 14 high priority districts on 2<sup>nd</sup> May.
- Vaccines and other heat sensitive medicines shifted to district/block head quarter for cold chain maintenance



- Standard operating procedure for surveillance of outbreak prone diseases, vector borne diseases and other accidental animal bite diseases were issues to all to be affected districts. Officials were assigned for surveillance data analysis to raise early warning signal (EWS) for prompt response. State and district rapid response team (RRT) were kept in readiness for emergency.
- A WhatsApp group named "FANI Health Action Group" was created for fast and easy communication involving state, district officials and partner agencies. In case of telecommunication failure, special messenger was kept standby for communication between state, district, block and village level workers.

## C. Effect of Cyclone on Health Infrastructure and Service Delivery

The land fall of cyclone Fani was at Balighai, Puri on 3<sup>rd</sup> May 2019 at 8.00 AM. and passed through Puri, Khurda including Bhubaneswar, Cuttack, Kendrapada and Jagatsinghpur districts causing massive damage to power supply, water distribution, uprooting of trees, blocking road connectivity and house damage etc which hampered the service delivery in 783 number of health institutions. Power supply, telecommunication and internet connectivity was totally paralyzed for 4-5 days post-cyclone which had badly impacted the post-cyclone rescue and restoration activities. Condition improved gradually after 8th May. Puri was the most affected district in Odisha.

## D. Post-cyclone activities

- After Cyclone "FANI", rapid assessment was done to enumerate the infrastructure damage to health institutions. The Civil Engineering section of NHM with the support of district and block officials made assessment of damage.
- Among the affected districts, all districts except Puri ensured 24X7 running water supply, alternative power back up and start of critical services within 48 hours. Puri district took 7 days to restore these facilities.
- A sum of 1.88 million rupees was released to 14 affected districts and 3 medical colleges for restoration and work from state public health response fund (state budget).
- The Commissioner-cum-Secretary to Govt. Health and FW Department reviewed the post FANI activities daily in presence of all senior officials, district Nodal Officers and other developmental partners and necessary instructions were passed to districts accordingly

## Deployment of Human Resources and teams:

- Around 20 state level officials deployed to 5 worst affected districts and they were stationed there for 15 days to oversee the restoration and disease surveillance activities with real time feedback to state.
- For Puri, one nodal officer from state were deployed to 6 worst affected blocks to oversee the restoration and disease surveillance activities with real time feedback to state
- 281 no of Mobile Health Team (MHT) were engaged.
- 87 doctors and 366 paramedics mobilized from other parts of state and were deployed to affected blocks of Puri and Khurda districts in 2 phases.
- 12 Senior Officials including Health secretary, Mission Director NHM, MD OSMCL visited 6 worst affected blocks of Puri for assessment and monitoring of public health activities.
- 2 state level entomologist, 3 assistant entomologist, 3 insect collector were deployed for entomological surveillance.
- Government of India, Indian Institute of Public Health and World Health Organization also deployed public health specialists, entomologists and microbiologists to support Government of Odisha in most affected areas.

## Distribution of Drugs, consumable and logistics:

- MD, OSMCL ensured adequate supply of emergency drugs, consumables and other logistics to the affected areas.

- 24 lakh sanitary napkins were distributed free of cost to all adolescent girls and women in Puri district for 2 months.

## **Prevention of Outbreak: Daily Disease surveillance, Vector control. Water testing, monitoring:**

- Daily disease surveillance reports as per SOP were generated from each sub-centre. The compiled and analysed report from each affected district received at state surveillance unit. Three EWS were raised, investigated by RRT. None of these were marked as outbreak after detailed investigation.
- Daily media scanning done State surveillance unit and 3 reported outbreaks were investigated by RRT. Only one was marked as outbreak of "acute diarrheal disease".
- Rumor register also maintained at district and state.
- Disease trend analysis was done for last 3 years and diseases reported during FANI. No diseases outbreak predicted from this.
- Entomological survey done in 54 areas.
- Routine immunization started in all district after 10 days of cyclone with vaccine preventable disease surveillance
- Quality of drinking water sources cross checked at block, district and state level. 282 no of drinking water sources were checked for fecal contamination by H2S methods and 1,227 water samples checked for residual chlorine by Orthotolidine method.

## **Participation of ASHAs**

- Accredited Social Health Activist (ASHA) played crucial role in mobilizing pregnant women to nearest hospital, disinfection of open wells, distribution of halazone/chlorine tablets, ORS and sanitary napkins.
- They also worked tirelessly to raise awareness among the community regarding personal hygiene, safe drinking water, use of mosquito net and village cleaning.
- ASHA spearheaded in disinfection of 1,28,850 open wells, distributed 40,54,148 halazone/chlorine tablets and 26,89,795 ORS.


## **Activities by GKS in Cleanliness drives**

- A joint letter from Health, Women and Child Development and Panchayati Raj was issued to President of Gram Kalyan Samiti (GKS) to support sanitation drives.
- Additional funds @Rs 10,000/- allocated to all GKS to take up special cleanliness drives and sanitation work in each village.
- GKS conducted 22,340 cleanliness drives in villages of the affected districts which helped in preventing outbreaks.
- 83 unsafe water bodies (ponds with animal carcasses and decomposed organic matters) were barred from public use by putting appropriate signage and public awareness.

## **Information, Education and Communication Awareness drive, Social media**

- State Institute of Health and Family Welfare Directorate has given responsibility to generate awareness regarding effect of FANI on public health through print, electronic and social media (twitter, facebook and WhatsApp)
- 265 TV spots, 244 radio spots and 82 newspaper advertisement was given on health awareness
- 6,16,000 health awareness leaflets were distributed at household level by ASHAs in 5 highly affected districts including Bhubaneswar and Cuttack Urban.

## **Summary**

To summarize Health and Family welfare Department, Government of Odisha has managed the post cyclone aftermath on public health effectively and efficiently without loss of life. The timely pre cyclone shifting of pregnant women proved to be a game changer strategy, resulted in no maternal and infant death during cyclone and post cyclone period. Well-coordinated management of manpower deployment, cleanliness activity, distribution of halazone/chlorine tablets, vector control activity has prevented public health emergency situation. 

*Department of Health and Family Welfare,  
Govt. of Odisha*



# CYCLONE 'FANI' HUMANITARIAN RESPONSE BY INDIAN RED CROSS SOCIETY

**D**ue to the recent past fierce disaster "FANI-2019" which occurred on 3<sup>rd</sup> May 2019 in Odisha, the entire populations of coastal districts, towns and big cities like Bhubaneswar, the capital city of the state had been severely affected. Millions of trees, electric polls, thatched and asbestos houses had been completely damaged. Because of large trees uprooted, a major portion of populations of all affected areas remained unreachable and under served due to communication, electricity and internet problems.

Small children, pregnant and lactated mothers, persons with disabilities, elderly and ailing persons faced a lot of problems. The post disaster scenes were very heart-rending and pitiable. Situation had compelled some households to migrate from Bhubaneswar and other municipal areas due to lack of water, electricity and other essentials. People in entire affected coastal pockets of Odisha were struggling to get recovery to normalcy.

Role and Relief operation by Indian Red Cross Society, Odisha State Branch:

To create a ray of hope and smile on the lips of affected millions, Indian Red Cross Society, Odisha State Branch took up outstanding initiatives for cyclone affected populations in line



with its humanitarian activities and 7 fundamental principles. Since the day when early warning was notified by US Navy, IMD, GOI as well as OSDMA, GoO, our Block Coordinators, VDMC and Task Force Members were engaged for emergency preparedness. Since 25<sup>th</sup> April 2019, the following disaster preparedness and response activities were performed by IRCS, Odisha under the leadership and guidance of Dr. (Major) Kalpana Das, the Honorary Secretary of IRCS-OSB, Bhubaneswar:

## **Pre-FANI stage:**

- 1) Orientation, Mock-drill and exercises on Evacuation, Search and Rescue and First Aid by Task Force and VDMC members in association with OSDMA, Govt. of Odisha and DRCBs covering all the 69 multi-purpose cyclone shelters of Red Cross
- 2) Early warning dissemination and Evacuation of people to safe shelters by Task Force and VDMC members under the direct supervision of 10 Block Coordinators of IRCS-OSB.
- 3) Shelter level preparation such as keeping ready of dry food materials, drinking water, Dari/Tents, first aid kits, genset, rescue equipments, megaphones, rope ladders, medicines etc.

## During-FANI stage:

- 1) Helping the people those evacuated to cyclone shelters in various ways such as providing drinking water, dry foods, first aid, medicines, psychological first aid, updated information etc.
- 2) Special care, support and services to small children, vulnerable pregnant and lactated mothers, sick and ailing patients, persons with disabilities including elderly persons.

## Post-FANI stage:

- 1) Coordination with VDMC leaders of all shelter communities, DRCBs, district and state administrations, SRC, OSDMA and NHQ, IRCS, New Delhi
  - 2) Mobilization of essential relief materials and medicines from various sources
  - 3) Deployment of 2 nos Mobile Health team with ambulance, 250 Volunteers, Red Cross life members and Staffs for emergency relief, First Aid and cleaning of uprooted trees.
  - 4) Information dissemination and evacuation of people to multi-purpose cyclone shelters. Since 4<sup>th</sup> May 2019, they served the people under the guidance of Dr. (Major) Kalpana Das, the Honorary Secretary of IRCS-OSB, Bhubaneswar. 250 volunteers and life members (Red Cross) were working relentlessly to reach and serve the most affected populations both at rural and urban communities. In order to assess the loss, damages, needs and to monitor the concurrent relief operation activities of IRCS-OSB, a team from National Head Quarter of Indian Red Cross Society, New Delhi also remained present and visited to the affected areas. We were in regular coordination with district as well as state administrations.
- ❖ Relief materials such as Tarpaulin sheets, Dry Foods {Flattened rice, Jaggery, Biscuits, Satua}, clothes, mosquito nets, candles, matches, utensils and kerosene stoves were provided to the needy.



- ❖ First Aid was given by trained volunteers to Injured persons.
- ❖ Many people were evacuated to Multi-purpose Red Cross cyclone shelters in 6 cyclone affected coastal districts.
- ❖ Cooked foods, drinking water, first aid kits, dry food, medicines were kept ready in the shelters
- ❖ The VDMC and Task Force members were also providing psycho-social counseling to the traumatized survivors

## Our partners/contributors

- Mr. R.K Jain, Secretary General, NHQ,
- Tamilnadu State Branch
- Gujarat State Branch
- Keonjhar District Red Cross Branch
- Ganjam District Red Cross Branch
- Mayurbhanj District Red Cross Branch
- Nestle
- NISSAN
- TATA Motors
- Col. Retd. A. Krishna Swami
- D. Prakash
- Sangeswar Sarma
- Honorable Governors Secretariat
- Office of the Special Relief Commissioner, GoO
- OSDMA, GoO
- DRCBs

**Sumitra Tripathy**  
**DM-Coordinator**  
*Odisha State Branch, Bhubaneswar*



## “FANI - THE RESPONSE”

**O**disha faced Extremely Severe Cyclone ‘FANI’ on 3<sup>rd</sup> May this year which affected 14 Districts of Odisha, namely Balasore, Bhadrak, Cuttack, Dhenkanal, Ganjam, Jagatsinghpur, Jajpur, Kendrapara, Keonjhar, Khurda, Mayurbhanj, Nayagarh, and Puri. The cyclone caused widespread devastation, and left marks of extensive damage, especially in the districts of Puri and Khurda.

Upon receiving the early warnings from IMD and State Government on 30.04.2019, the Department geared up for an effective and well-planned response. Since there was a possibility of complete disruption of communication, the immediate focus of the Department was to plan, the post-cyclonic restoration works of all Roads and Govt. buildings under the Works Department, by arranging sufficient materials, men and machinery and deploying them to vulnerable locations. Since the General Election 2019 was in process, a team comprised of E.I.C. (Civil), Chief Engineers & concerned Superintending Engineers checked the water-tightness of the EVM Strong Rooms in the vulnerable districts. All the field personnel concerned also monitored it on a daily basis.

Teams, each headed by a Chief Engineer, were deployed in the vulnerable districts of Puri, Khordha, Kendrapara, Cuttack, Jagatsinghpur, Jajpur and Balasore on 01<sup>st</sup> May, to review and monitor the preparedness for post-cyclone restoration works. A Special team comprised of One Chief Engineer, two Superintending Engineers and other senior engineers of the Department were deployed at Puri for 24x7 monitoring of post-cyclone restoration works. All the field officials were fully alert at strategic locations, with adequate equipment, and manpower to clear the Roads and restore connectivity. Central Control Rooms were made operational on 01<sup>st</sup> May, at Department level, at Heads of the Department level and at Division levels, to monitor every hour activities.

The Cyclone made landfall near Puri on 03<sup>rd</sup> May, with a gusting wind in the

range of 220–250 kmph and caused massive devastation. The communication network had suffered a substantial disruption. 1016 nos. of Roads of length 4695 km were affected by the Cyclone and 995 nos. of Roads were blocked due to the uprooting of trees and electric poles. Hence, the immediate concern of the Department was to restore the Road connectivity.

The Department closely coordinated with the NDRF, ODRAF, State Fire Service, and CESU personnel in cutting down large trees and shifting of fallen electrical utilities off the Road. There was an acute shortage of Diesel & Petrol required for the operations of machineries engaged at various sites. The Department was able to procure the same in time with the help of respective District Administration. Every activity at the field level were closely monitored by the Control Rooms established at different levels. All the Main Roads in Bhubaneswar were cleared within 24 hours of the Cyclone. Since the devastation at Puri was the most, it took about 72 hours to restore connectivity in all the Trunk Roads of the district. In rest of the places, the Road connectivity and normal traffic movement were completely restored within 48 hours of the Cyclone!

11612 nos. of Residential buildings and 1801 nos. of non-residential buildings were affected by the Cyclone. The buildings had received damages to roofs, doors, windows, grills, interior false ceilings, glazing, AC, Fan and fittings, cables, and many buildings had developed cracks on the walls. In many places, the outer walls of the buildings and compound walls had collapsed. The restoration/repair works such as replacement of A.C Sheet roofing, door and window shutters and reconstruction of compound walls were undertaken on priority basis.

Food and water were served to police personnel engaged in restoration works at Puri Zilla School. Water bottles were given to CESU for distribution among electricians in the field. Sincere effort was made by the Department to supply the basic requirements to the personnel engaged in the field for restoration works.

The sincere and dedicated effort of individual officers deployed at field level and the teamwork of the Department officials, both at headquarters and field level was key to overcome the immediate effect of the disaster and to restore various community activities to the pre-disaster level. The Control Rooms established at different levels of the Department, played a pivotal role in providing a well-coordinated and proficient repair and restoration works. The cooperation extended by the District administration and other departments proved a vital factor in making the Post Cyclonic restoration works an efficient one. ■

**Works Department  
Government of Odisha**

## AWARENESS

### "Which is the priority in a Disaster? Necessities of life or Response to Disaster?"

I was stunned by the incidents during Extremely Severe Cyclonic Storm "FANI" while deployed with NDRF team near Chilka lake and lost in deep thoughts over the happenings in a helpless state as if I was visualizing a motion film.

At that time, all the government and non-government Search and Rescue organizations were pre-positioned in the areas likely to be affected by the cyclone for rescue and response duties as per the advance warning and circulars issued. I supposed to be part of the team and area where the cyclone had to make landfall eventually.

Prior to the disaster our team entered into the nearby villages through road for making the people aware about the upcoming disaster. Some people in the villages were ignorant and unaware about the upcoming disaster, some were adamant on not leaving their houses to safer places on the fear of losing their valuable earnings and properties and some were stubborn enough not to leave their houses and prepare to face the disaster by staying at their homes.

The thoughts of day to day requirements and its fulfillment, social insecurities and the fear of limited amenities at the temporary shelters are coming ahead of the imminent disaster in the people's mind. Those who were aware about the impending danger were capable enough to tackle the situation.



Amidst such adverse situation, all the Search and Rescue forces were engaged tirelessly in convincing the people to move to safer places by deep and heart touching words, at times by folded hands and evacuating them to the safer places till the penultimate hour before the cyclone strike. For the dedicated efforts by the Search and Rescue forces and the whole administrative mechanism of Odisha, the whole world came to know the preparedness of Odisha and India to tackle a severe disaster and calamity and several laurels and accolades were conferred upon for successful management of the Extremely Severe Cyclonic Storm "FANI".

But it is to be admitted that time is all powerful in the long run and giving priority to the necessities of life during a disaster situation may cause severe damage to families, society and to the country as a whole. As such, everybody should shoulder the responsibility and accept the stark truth about disaster that it affects equally to all rich and poor, powerful and ordinary people alike.

(Dedicated to the Nation from the pen of the SAR force) □

*Navin Kumar Bhaskar.*  
*Sub-Inspector (Exe.),*  
*NDRF 3 BN, Mundali*



## H & UD DEPARTMENT'S RESPONSE TO FANI

**T**he cyclone "FANI" made land fall at 8.30 AM on 3<sup>rd</sup> May, 2019 between Satpada and Puri as an Extremely Severe Cyclonic Storm. As reported by IMD, the maximum sustained surface wind speed of 170-180 kmph gusting to 205 kmph was absorbed during land fall.

Public buildings were damaged by FANI and many roofs of houses of slum dwellers were blown away. On 3<sup>rd</sup> May itself, electricity, water supply and other basic amenities ceased to function. Prior to that :

- i) H and UD Department had taken lots of precautionary measures were taken by all ULBs regarding management of pre-cyclone.
- ii) Around 5,000 sanitation workers and 600 senior officers were mobilized in 42 ULBs for pre-cyclone management.
- iii) Resource machineries and equipment were made availability in the ULBs as a precautionary measure.
- iv) Arrangements had been made in all the ULBs for public announcement over mike for evacuation from low lying areas in case of need.
- v) School, Colleges, community Centres and other public buildings were identified and preparations made for shelter of people and their animals evacuated.
- vi) Removal of blockages and de-silting of critical drains were undertaken for free flow of flood water, with high capacity diesel pump sets in sate of readiness for draining out water from low lying areas.
- vii) All vulnerable road points were under vigil to prevent breaches and heavy rush of flood water and water logging.
- viii) Power generator sets were kept ready for street lighting and water supply (in accordance with PHEO) during power failure.
- ix) Sufficient stock of disinfectants (for sanitation of streets / drain water), diesel for DG sets and official vehicles were maintained.
- x) Sufficient food stuff, drinking water and cattle feeds were stored in all the identified cyclone / flood shelters.
- xi) The evacuated persons were provided with dry food, candles, match box and mosquito coils. Free kitchens were also provided on 2<sup>nd</sup> May' 2019 to the evacuated families.
- xii) Sanitary workers/work-charged staff and required equipment were kept ready to clear roads for free flow of traffic.
- xiii) PHEO had issued Standard Operating Procedure (SOP) on preparedness for cyclone on 29.4.2019 for guidance and implementation.
- xiv) PHEO mobilised 45 nos. of senior officers and arranged 171 DG sets and 211 tankers, 1356 PVC tanks along with chemicals etc. which were pre-positioned to ensure the water supply to urban areas.
- xv) Control rooms were set up in all ULBs to manage the water supply situation round



the clock and specific Whatsapp group was created for effective management.

- xvi) Before the onset of the cyclone, all storage reservoirs were kept full by continuous pumping operation to ensure availability of adequate stock of water in 24 hours immediately after the cyclone.
- xvii) WATSAN committee members of all ULBs expected to be affected by cyclone had been sensitised for community participation and creation of awareness on the cyclone related activities.

### Post-cyclone relief and restoration measures were taken like:-

- i) The evacuated people housed in various shelters in the cyclone affected ULBs were provided with dry food, candles, match box and mosquito coils. Free kitchen was provided to the affected persons for 3 days on and from 3<sup>rd</sup> May' 2019.
- ii) PHEO ensured water supply in the evening of 3<sup>rd</sup> May' 2019 from the stored reservoirs by gravity and from water tankers and PVC tanks at different places to ensure availability of water in adequate volumes.
- iii) Pre-positioned DG sets were made operational immediately after the cyclone to commence pumping from the production wells. Additional heavy duty DG sets, water tankers and PVC tanks were arranged from neighbouring States, Central and State PSUs and private sector organizations and required technicians were airlifted from Kolkata by IAF Helicopter in view of the emergent need for additional water.

- iv) For cleaning the roads, removal of fallen trees and piled up garbages and for maintaining sanitation in the urban areas, around 5,000 sanitation workers and 600 senior officers from within the ULBs and brought from various ULBs are working round the clock including night sweeping and cleaning.
- v) More than 860 JCBs, Dumpers, Tractors and Tata ACEs were pressed into service in these cleaning operations. Disinfectants were used extensively in the sanitation works to ensure preventive health care.
- vi) The NDRF team were deployed in all cyclone-affected ULBs for cutting of fallen trees and removal of electric and street light poles, debris and clearing of roads.



Due to the proactive approach of the State Government and well before preparedness for face the extremely severe cyclone storm "FANI", casualties to human being were minimised significantly along with speedy relief and restoration works. ■

**Department of Housing and Urban Development,  
Govt. of Odisha**



# “AAPADA MITRAS” - DURING FANI - 2019

## 1. Introduction:

Community is the first responder to any kind of disaster. Quick and prompt response of community members during initial few hours of occurrence of any disasters save many precious lives and properties. Community level volunteers play a very crucial role in saving lives and properties during the initial period of disaster. If these community level volunteers are trained on different techniques of disaster response like Search and Rescue and First-Aid techniques, they can respond to any disaster effectively and efficiently.

Odisha State Disaster Management Authority (OSDMA) has implemented the scheme on “Training of Community level volunteers in disaster response- Aapada Mitra” sponsored by the National Disaster Management Authority (NDMA). Two flood prone districts of Odisha, namely, Puri and Jagatsinghpur have been selected by NDMA for the scheme. NDMA has provided overall technical guidance and full funding support. A good nos. of volunteers in these two districts have been created under the scheme. These volunteers can be used not only during disasters but their skills can be utilized during day to day incidences at the community level.

The basic objectives of the Aapada Mitra scheme are:

1. To train able-bodied community volunteers in disaster response (flood relief and rescue) at the taluka/block level in each of the project districts. These trained volunteers will be called as “Aapda Mitra”.
2. To develop standardized training modules for the set of trainings under the scheme.
3. To train the volunteers in life saving skills of disaster response, coordination and assistance, and protective equipment and emergency responder kit.

4. To disseminate training and education tools developed under the project to more number of flood prone districts in subsequent phases of the scheme

## 2. Status of the Scheme in the State of Odisha:

The “Aapada Mitra” scheme provides good platform to train the community level volunteers in disaster response and the volunteers are good resources during emergencies. In Odisha 400 community level volunteers have been trained in Puri and Jagatsinghpur districts. The training programmes have been organized in 16 batches (8 batches in each district), where 25 volunteers have been trained in one batch. Sixteen Multi-Purpose Flood and Cyclone Shelters were selected as training venue in Jagatsinghpur and Puri Districts. The resource persons were instructors from OSDMA, ODRAP (Odisha Disaster Rapid Action Force), Civil Defence, St. John Ambulance and Odisha Fire Services. The detail of the programme is given in the flowing table.

Description	Jagatsinghpur District	Puri District	Total
No. of volunteers trained	200	200	400
No. of Batches	8	8	16
No. of female volunteers trained	67	33	100 (25%)



*(Training Programmes of Aapada Mitra Volunteers)*



### 3. Services rendered by the "Aapada Mitra" Volunteers during the Extremely Severe Cyclonic Storm "FANI"

The Extremely Severe Cyclonic Storm "FANI" made landfall at about 8.30 AM on 3<sup>rd</sup> May 2019 between Satapada and Puri. As reported by IMD, the maximum sustained surface wind speed of 170-180 kmph gusting to 205 kmph was observed during landfall. Since the formation of the cyclonic system, the State Government started closely monitoring the situation. Based on the forecast issued by India Meteorological Department and other International Agencies the system was continuously tracked and analyzed on GIS platform. Massive preparedness measures were undertaken by the Government of Odisha soon after receipt of warning from IMD and analysis of forecast from different Meteorological Agencies. The districts were alerted based on the probable cyclone track and impact area

Including all the preparatory measures undertaken by the State Government Response Forces like Odisha Disaster Rapid Action Force (ODRAF), National Disaster Response Force (NDRF), Odisha Fire Service, Civil Defence and Community level Task Forces including the trained Aapada Mitras were pre-positioned in the likely to be affected districts by the Cyclone FANI. Odisha is having 400-trained Aapada Mitras volunteers in the District of Jagatsinghpur and Puri, who have been trained in Search and Rescue and First-Aid techniques and other live savings skills.

On 1<sup>st</sup> of May 2019 the AapadaMitras of Jagatsinghpur and Puri were directed by the

District Administrations to report to the Block Development Officers (BDOs) of their concerned Blocks and work as per their directions. As per the instructions given by the concerned Block Development Officers, the volunteers were engaged in Early Warning Dissemination and evacuating the vulnerable sections of the community like old age persons, pregnant women, children, Persons with Disabilities, patients and other vulnerable section of the community. The volunteers were tagged to the nearby Multi-Purpose Cyclone and Flood Shelters and other safe shelters and started evacuating the vulnerable persons from 2<sup>nd</sup> of May.

Cyclone FANI crossed the Odisha coast near Puri and Satapada in the morning of 3<sup>rd</sup> May 2019 leaving behind devastation. 14 districts



were affected by the Cyclone. 3 districts (Puri, Cuttack and Khorda) were severely affected. The Aapada Mitras volunteers moved to action as soon as Cyclone FANI started losing its grip and the wind speed receded. They started clearing the roads, which were blocked by uprooted trees and electric poles and assisted the Odisha Fire Service





personnel in clearing the roads. Apada Mitras were also engaged in providing First Aid to the injured persons at the Shelters.

Apart from road clearance and providing First Aid to the injured persons the Aapada Mitras were also engaged in managing free kitchen at the Cyclone and Flood Shelters. They were also involved in debris clearance in some schools in Jagatsinghpur and Puri districts. As per the directions of District Collector and District Magistrate the Aapada Mitra were also engaged in monitoring the PDS distribution in the district of Puri.

The remarkable work done by the Aapada Mitras during the Extremely Severe Cyclonic Storm FANI were appreciated from all corners of the State

#### 4. Way Forward:

In view of recurrence of extreme weather events and climate change manifestation, many multi-diverse natural hazards have increased manifold in all districts of Odisha. Aapada Mitra



scheme is a good platform to develop the skill and knowledge of community level volunteers on disaster response at the grass roots. This would immensely contribute towards building disaster resilience. The already trained Aapada Mitras in the state of Odisha are doing remarkable jobs in extending support at the community level and district level at the time of needs. Up scaling the scheme in other vulnerable districts of Odisha would be of great support for quick and prompt response of community volunteers during the emergency situations. There is a need to create community level volunteers and enhance their knowledge and skills in disaster response in all the districts of the state. The volunteers will be trained on basic skills like Search and Rescue, First Aid and other response techniques so that, they can carry out disaster response activities successfully and their resources can be utilized by the district administration not only during floods but during all other disasters. □

**Sutanu Kumar Thakur**  
State Project Officer  
OSDMA

## MANAGING DISASTER THROUGH “SATARK” APPLICATION

State of Odisha is highly prone to disasters and vulnerable due to geographic and socio-economic conditions. Its location on the East Coast of India, makes it one of the 6 most cyclone prone region in the world as well as vulnerable to other hazards related to weathers like Drought, Flood, Lightning, etc.

Since, issuing warning to mass population of Odisha through appropriate administrative level has been a greater challenge for the state, macro size of causalities have been witnessed due to some region specific disasters like Heatwave, Lightning, Snakebite, Road Accident, etc. in the past years.

Odisha State Disaster Management Authority (OSDMA) in collaboration with Regional Integrated Multi-Hazard Early Warning System (RIMES) is implementing the project on “Operational Systems for Integrated Disaster Risk Management”, for strengthening OSDMA’s technical capacities through development of various Decision Support System (DSS) tools to carry out dynamic assessment of risk in key sectors and keeping officials informed of the potential situations.

Under the project, “SATARK” (System for

a web as well as smartphone-based application is developed to provide real time Watch, Alert and Warning information for different hazards like Heatwave, Lightning, Agriculture risk (Drought), Flood monitoring, Ocean state information and Tsunami risk, Earthquake monitoring, Cyclone/ Storm surge, Road accident and Snakebite monitoring to improved disaster management.

SATARK system is an one-stop risk management system with a simplified dashboard to monitor and evaluate the risk associated with different hazards using standard scientific basis. The application integrates the data from India Meteorological Department (IMD) forecast products and the best available global forecast products. This application has the capabilities to integrate real-time lightning data from the lightning detection sensors installed over Odisha. The tool allows advanced users to formulate advisories and disseminate to the line departments/end users, directly from the portal, after validation of the information. Further, the system enables operational users to feed real time data from the local context into the system through data panels, which allows the “Knowledge Base” of the portal to grow and assists the “systems learning algorithm” in providing improved advisory in every cycle.



Assessing, Tracking and Alerting Disaster Risk Information based on Dynamic Risk Knowledge )

The web-based tool is available at <https://satark.rimes.int>. Users can register to the tool for free.



The user-friendly risk information is available on Weather forecast, Heatwave and Lightning at present. The Flood ,Drought , Cyclone, Tsunami, Earthquake, Road Accident and Snake Bite modules are under development. These are available through the mobile application in English and Odiya language. The mobile app uses different level of warnings and issues corresponding advisories based on the event scenario. Also assist users to understand historical disaster profiles, monitor the current risks and prepare for the anticipated hazard .The collaborative efforts established by OSDMA with various associated departments in SATARK would collectively strengthen disaster management capacity of the State. Government officers and public can download the mobile

application and stay tuned for receiving location-based alerts for different disasters

This mobile App can be installed by searching 'SATARK' in Google and IOS Play store

Steps to follow to install the mobile App:

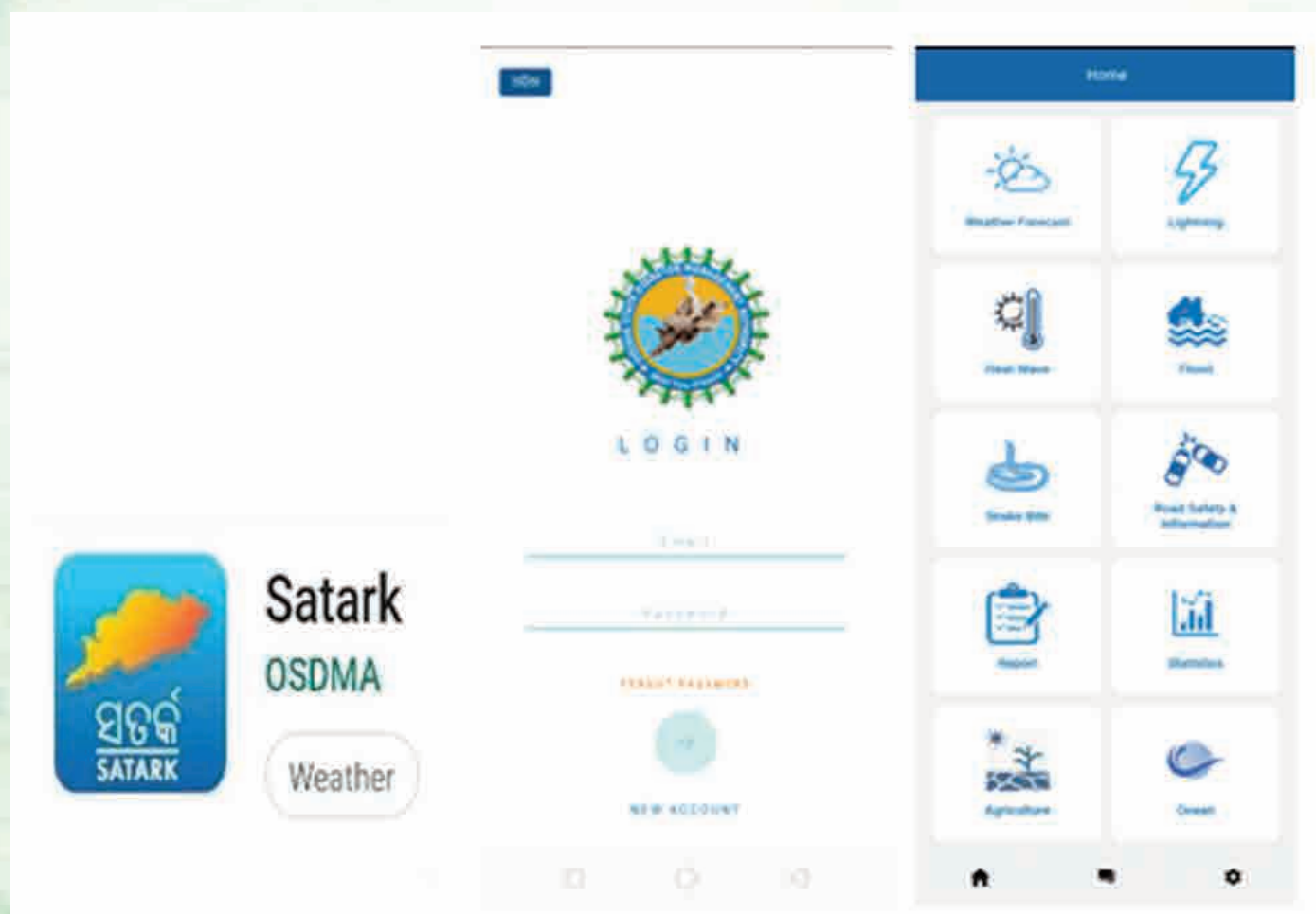
Step 1: Search ,Download and Install the SATARK App from the play store.

Step 2: To login, select "New Account" and fill in the required details. 

**Tarakesh Lakshman.B**

**Disaster Risk Modelling Specialist (DRMS)**

**Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), Thailand.**



# COMMUNITY LEVEL TRAININGS: SCHOOL SAFETY PROGRAMME

## CUTTACK MUNICIPAL CORPORATION: GOI-UNDP-USAID PROJECT



### Background Note

Cuttack, the commercial capital of Odisha, is one of the oldest cities and is located at the confluence of two big rivers, namely, the Mahanadi in the north and Kathajodi and is about 30 km away from the State capital. It has a population of 6.5 lakhs (2017) distributed among 59 wards with a spatial spread of 82.43 sq. km. It has a population density of about 7,823 people per sq. km with trade and commerce as the key economic activities. The city is vulnerable to cyclone, flood, earthquake, and heat wave that affect the socio economics of the city. The city was impacted severely by the 1999 super cyclone, Phailin 2013 and Fani 2019 and the floods of 1982, 2008, 2011 and 2013.

### Introduction:

School Disaster Risk Reduction is an initiative in Cuttack City to protect the young lives and provide them with a safe and fear free learning environment. The integration of Disaster Management in

the day to day activities of the school involving the teachers, non-teaching staff, students, parents, school management committees, Parent Teacher associations, School Education Committees and others are related to the development of Schools. This involves capacity building and training programmes for children on life saving skills and development of effective response mechanism by the safe school community.

### Objectives:

- i. To train the teachers of High Schools, Primary Schools and Private Schools in CMC Areas.
- ii. Preparation of School Safety Plan and its implementation for ensuring a disaster free environment and resilience.
- iii. Involve the teachers to encourage them to think about innovative ideas for disaster risk reduction.
- iv. Indirectly to encourage the involvement of the students in changing their thinking from the disaster point of view for preparation of effective school disaster management plans
- v. Assessment of the hazard profile of the school and its periphery and identifying the issues related to Disaster Risk Reduction in the schools







- vi. To help the students for preparing disaster resilient low cost models disaster risk reduction.
- vii. To create an environment in the school for taking an inclusive approach towards DRR.

## Major Stakeholders involved:

- Cuttack Municipal Corporation / DDMA / OSDMA / ODRAF / CIVIL DEFENCE
- District Education Office /School and Mass Education Department
- USAID / UNDP

## Steps towards :

1. Three Schools e.g. Govt. High School, Mansinghpata / Tulasipur High School / Kamalakanta Vidyapitha has been piloted with School Safety Programme.
2. Almost 200 schools in most vulnerable areas have been covered for the integration of safe shelter and community engagement.
3. 100 teachers have been trained for the development of School Safety Plan.
4. Community and School as safe Shelter co-ordination meeting conducted. 5,150 student volunteers trained in First Aid /Rescue and 3 Schools are equipped with FA/ Rescue Kit.
6. 10 Nos of pvt Schools are also been sensitised under School Safety Planning.
7. IEC materials supplied and Wall Paintings have been conducted in the Schools.
8. Mock Drill Have been conducted in three schools.
9. It has been proposed for Training of all schools in CMC area.
10. School Teachers have also been trained in Psycho Social Support (PSS) for students. □

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# CHALLENGES ON MANAGEMENT OF CHEMICAL (INDUSTRIAL) DISASTERS

## Introduction

For better living standard of life, man developed science and technology and plunder natural resources which thereby polluting the environment and causing chemical disasters. Our society is hooked on chemicals of its own making which are highly toxic, explosive, flammable, or poisonous or having a combination of all these characteristics; the impact of which is very high and cause harm to human, living creatures, plant, property and environment. According to ILO, every year 250 million accidents occur worldwide, the equivalent of 6,85,000 accidents every day, 475 accidents every minute, 8 accidents every second. ILO estimates that, the fatality rate in China and India is almost double that of advanced industrialized economies like USA, UK etc.

## Sources of Chemical Disasters

- Manufacturing and formulation installations including during commissioning and process operations; maintenance and disposal.
- Material handling and storage in manufacturing facilities, isolated storages, warehouses/godowns including tank farms in ports and docks and fuel depots.
- Transportation (road, rail, air, water, and pipelines).

## Causative Factors

- Fire.
- Explosion.
- Toxic release.
- Poisoning.
- Combinations of the above.

## Micro-meteorology of the area

- wind speed and direction,
- rate of precipitation,
- toxicity/quantity of chemical released,

- population in the reach of release,
- probability of formation of lethal mixtures (fuel-air or others) and
- other industrial activities being performed in closer vicinity.

## Legislation in India

The legislation which is of utmost relevance to the subject in question is the Disaster Management Act, 2005. The Act is aimed at prevention and mitigation of effects of disasters and for undertaking a holistic, coordinated and prompt response to any disaster situation. It is meant to provide for requisite institutional mechanisms for drawing up and monitoring the implementation of the disaster management plans and ensuring measures by various wings of government. Besides many other Acts and Rules, viz- Environment (Protection) Act 1986, Hazardous Wastes (Management and Handling) Rules 1989, Hazardous Chemicals Rules 1989, Public Liability Insurance Act 1991, Workmen's Compensation Act 1923, Employees' State Insurance Act 1948, Factories Act 1948 and Orissa Factories Rule 1950, Electricity Act 2003, Indian Electricity Rules 1956, National Green Tribunal Act 2010, Explosive Substances Act 1908, Inflammable Substances Act 1952, Boilers Act 1923, Mines Act 1952, Mines







Rules are some of the meaningful laws to check the chemical disaster.

## Legislative / Administrative Challenges

Challenge to mitigate chemical disaster is tough task. Coordinated efforts are required to be taken at different levels. Some of these are:

- Legislation on **land-use policy** (buffer zone around chemical industry) needs to be enacted.
- Rules on transport emergencies shall be enacted pertaining to by way of incorporation of specific roles and responsibilities of chemical units, transporters, drivers, authorities and aspects related to emergency communication systems and training of various stakeholders
- Guidelines for installations, storages (including isolated storages of HAZCHEM), operation and maintenance that contain good engineering practices for safety, accident prevention, reporting, investigation, analysis checklists etc shall be prepared. Similar guidelines on Transportation of hazardous chemicals on road, rail, water, air and through pipelines shall also be prepared in agreement with existing statutes.
- Disaster Management (DM) Plans prepared by different Departments and District Authorities shall include specific chapter on Chemical Accidents. The chapter shall include preparedness of the hospitals, highways and pipelines transporting hazardous substances.
- District Crisis Groups (**DCGs**) shall **periodically monitor compliance**, identify the salient gaps and develop mechanism for

management of chemical accidents, transport accidents and medical emergencies.

- A '**red book**' containing duties to be performed by authorities and agencies during an emergency shall be published annually (during May every year) and circulated. It shall contain names, addresses and telephone numbers of key functionaries of state governments, experts/ institutions, hazardous installations etc.
- **Web-based accident information system** shall be prepared for use of all stakeholders concerned, which will have better monitoring and management of chemical disasters.
- Brochures entitled, '**DOs and DON'Ts during a Chemical Accident**', to educate and enable the community for self-protection shall be published.
- Management of installations, districts and departments shall take steps for education, **training**, development of appropriate infrastructure, capacity development, awareness generation, institutional framework, networking and communication, RandD, and response, relief and rehabilitation of the people with in the vicinity of such installations for effective CDM.
- **Mobile hospital** and mobile teams shall be conceptualized.
- Establish a Crisis Control Room (**CCR**) and efficient **information network** for dissemination of alerts, warning and response messages.
- **Identify/recognise training institutions** to create awareness on CDM.
- **Strengthening** the ODRAF on CDM.
- **Revamping** of home guards and civil defense for CDM.

## Challenges on Technical Activities / Initiatives

- **Commissioning and decommissioning Plans** of chemical industries shall be prepared and reviewed before permission for operation.

- **Risk** associated with chemical accidents shall be **predicted and reduced** by
  - ❖ Identification of risk areas,
  - ❖ Risk Assessment, vulnerabilities and consequences studies, and
  - ❖ Ensure design of safe operative measures.
- **'Industrial Pocket-wise Hazard Analysis'** shall be carried out. Hazard analysis studies for identifying the accident potential of industrial areas/pockets, their possible consequence and prevention strategies including rapid safety audit of MAH units shall be initiated for 13 districts covering 35 MAH units.
- A pilot study entitled, **'GIS based Emergency Planning and Response System** for Chemical Accidents in MAH Installations in Major Industrial Clusters' like Paradeep, Khurda IE etc shall help existing response agencies in planning for and responding to major chemical emergencies to contain damage to a minimum.
- Hazardous installations shall carry out periodic **Safety Audit** and take steps for compliance to the audit observations.
- Management of hazardous installations shall prepare **On-Site Emergency Plans** and periodical **mock drills** thereof.
- District Administrations shall prepare Off-Site Emergency Plans of their districts and periodical mock drills thereof.
- **Mutual Aid Response Group (MARG)**, a voluntary initiative on developing 'mutual

aid arrangement' for effective emergency response on a voluntary basis among neighbouring units in an industrial pocket. This initiative of the association of industries in an industrial pocket is a forum to mutually help each other by sharing resources to tackle emergencies.

- Industries shall undertake **awareness programmes for communities** residing in the vicinity of industrial units.
- **Vulnerability and Risk Assessment of Transportation of HAZCHEM stretches** of national highways with a high density of hazardous material transportation shall be studied. Based on the identified risks, mitigation measures including DM Plans shall be prepared.
- **Hazardous Material (HAZMAT) Emergency Response Vans** in the Industrial Clusters having large number of chemical industries, such as Jharsuguda, Paradeep and Khurda shall be helpful to handle the chemical accidents.
- GIS based communication system shall be established for road transport and other modes of transportation which shall help continuously monitoring of the transport vehicle carrying HAZCHEM all along its route.

### Periodic Mock Drills

There has been a paradigm shift in the government's focus from its rescue, relief, and restoration-centric approach to a planning, prevention/mitigation and preparedness approach. It has been realised that regular statutory inspection, testing of emergency plans of all 35 MAH factories located in 13 districts and 545 other hazardous factories of the state of Odisha followed by assessment of response time through periodic mock drills (twice in a year) as required under Section 13 of the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.

**Dr M K Pradhan,**  
**General Manager (FandB),**  
**OSDMA, Govt. of Odisha**





## SACHETANATA HI NSURAKSHYA – II

### Small initiatives proved to be effective in reducing the human losses

**T**he State of Odisha is very much prone to cyclones. After 1999 Super Cyclone, many cyclones like Phailin (2013), Hudhud (2014), Titli (2018) and FANI (2019) had affected Odisha. But the loss of lives in these recent cyclones are very less as compared to Super Cyclone 1999. The effort put by the Administration, PRIs, Volunteers, NGOs, CBOs, infrastructural development in areas and most importantly the aware community joined their hands together to reduce the loss to a great extent.

Khordha district is one of the worst affected districts due to the Extremely Severe Cyclone (E.S.C), FANI which made landfall in the month of May 2019. All Blocks, Tehsils and NACs were affected by FANI limiting the casualty to 4 persons. The losses could be much more but due to proactive action by administration, timely dissemination of warning, interdepartmental coordination, massive evacuation, effective use of human resources and response forces, strategic planning, involvement of PRIs in evacuation and post disaster activities, preparedness drills at district, block, village levels, community awareness programmes, student awareness programmes, health preparedness, preparedness at the shelter levels prior to FANI, etc., helped to reduce the human loss.

Preparedness drills by the administration involves review for Heat Wave condition, flood situation, cyclone situation, etc., which empowers the administration in knowing the hazards in different areas and plan accordingly. Also, frequent cyclones teach a lesson not only to the administrators but also to the community to remain prepared in all respects.

Round the year district Administration conducts capacity building programmes for the administrators and grass root level workers, the mock drills at district / block / shelter level, school safety programmes in schools, Familiarisation exercises in schools and communities by different

response forces like National Disaster Response Force (NDRF), Odisha Disaster Rapid Action Force (ODRAF), Fire Services etc. has enabled the administration as well as community to respond to any eventuality.



A step has been taken by the Administration in collaboration with OSDMA, to plan with a bottom up approach from the village level to District level. In this context, Village Disaster Management Plans (VDMPs) are under preparation in all ten blocks and 310 villages by the community with the help of NGOs, so that they will plan for their village development from disaster management point of view. This will definitely add value to their participation in planning process and knowledge about the hazards in the area, how it becomes disaster, do's and don'ts about the disasters etc., which will make them disaster resilient. The community will be covered with capacity building which will enhance their ability to meet any eventuality.

Someone rightly said that "The more you sweat in practice the less you bleed in battle", similarly the more you became aware about the hazards in the area, what to do and what not to, participate in capacity building and planning programmes, you will become more disaster resilient and safer. □

**Sachidananda Pati**  
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# HELPING HANDS IN DISASTER MANAGEMENT- THE SPIRIT OF VOLUNTEERISM

Odisha is a Disaster prone state and its geo-climate condition makes the state vulnerable and the increasing climate change is multiplying the vulnerability. In the changing climatic condition the extreme events are more frequent and intensive. The Extreme Sever Cyclonic Storm FANI is the rarest of the rare cyclonic event hit Odisha in the month of May 2019 and Flash Flood in Bolangir, which is a drought prone district are recent examples.

Disaster Management is not the only business of Administration; it is the combine efforts of all fellow citizens to manage the disasters providing proactive support to the administration. The Administration requires support from all of us to manage any disaster like situation. The volunteers are being the vital force and always extend helping hands during disasters. It is experienced and also recognized the valuable contribution of volunteers in managing different extreme events in the State.

The remarkable contribution of volunteers was reflected in Cyclone FANI where the Apada Mitra volunteers have played very vital role and extended active support in search, rescue, evacuation and relief activities in Puri and Jagatsinghpur. The Community Volunteers of Gajapati, who were just trained by OSDMA with the support of UNDP, supported district administration in rescue and relief activities during FANI cyclone. Biju Yuva Vahini the volunteers who have played very crucial role in managing the sever cyclone TITLI and followed floods, 2018 in Gajapati and Ganjam and also in FANI. The Volunteers (Task Force Members) in Cyclone and Flood shelters always play the critical role in response activities since their formation after Super Cyclone 1999. Some of the NGOs in Puri and Khordha district took the help of volunteers and volunteers supported

the affected community in relief and rehabilitation activities. It can't be forgotten the support provided by volunteers of Andhra Pradesh and West Bengal who have extended support in restore the communication system during FANI, which help the state administration to communicate the affected districts through VHP/HAM Radio during FANI. The volunteers of Civil Defense, India Red Cross Society, St. John Ambulance, NSS and NCC are always active in extending supports for crisis management is praise worthy.

If we analyse involvement of volunteers in disaster management, it is clearly stated that the volunteers are confined only in crisis management or response activities. But the volunteers can play major role in disaster management cycle. It is pertinent to mention that the young population / volunteers are backbone for carrying out any activities. If we recognize the role of volunteers, it is important to say that making the state resilient and in achieving Sustainable Development Goals (SDGs), volunteers can play the crucial role, the young, especially, are central to this effort. They have the potential to be a positive force for transformational change. The mass mobilization of volunteers is very impressive; it relied on what could be viewed as the traditional model of volunteerism. The model is not structured to withstand of this magnitude. We have to create the Disaster Volunteer Ecosystem, which is a collection of organizations and individuals involved in the mobilization, engagement and management of volunteers within the disaster management cycle. They can be affiliated with a dedicated organization or function as a "humanitarian." These humanitarians use social media to bring attention to issues that develop during and after the disaster. Survivors are the boosting force behind



the ecosystem. Their needs for rescue, shelter, food, medical treatment and other necessities drive the actions and the volume of responses by ecosystem members. Survivors, beyond being just beneficiaries of support, often become part of the volunteer contingent as well, by assisting fellow survivors who are worse off or who have needs they can meet. It is suggested that the volunteers should be involved in the followings areas for their horizontal and vertical involvement

1. Preparing volunteers data base and engaging them in all phases of disaster management
2. Establish institutional linkages and promote convergence of initiatives

3. Build capacity of institutions and volunteers
4. Strengthen networks with civil society organisations; promote volunteerism
5. Creating a platform for volunteers database and certification to volunteers

Always we have to recognize the contribution of volunteers and take their support with proper respect. Volunteers should be used as helping hand to provide assistance during all phases of disaster management. Volunteers must be capacitated to develop their skill to handle disaster and climate change issues. ❑

**Meghanad Behera**  
State Project Officer, UNDP

## CALAMITY

**T**he fisticuffs of calamity  
knocked the door  
"Temples Garland"  
'Central point' of culture  
'Orissa' ..... 'Coastal Orissa'  
25 feet tide surges  
heavy distress.....  
A great malediction:  
The 'Super cyclone'!  
Speed of wind  
was speed of bullet  
320 KM per hour  
growing too fast appetite  
like million lion at a throat.  
Distress of 'Typhoon'  
Severe status of nature  
wrapped the psyche of people,  
A shock of 'Heart -Broken'  
never had before happened.  
Roofs/ Asbestos were blowing  
like metallic sword  
encircling the tidal wave  
by drawing Arc and Chord.  
Thousands and thousands  
dragged the flats, bridge and tower  
Only mere and ...mere  
everywhere ... as ever.  
Paradip Port.... Demolished crest  
Horror 'Errasma'

Grieved 'Kujanga'  
How stupendous, the last tear!  
Street dogs and eagles  
Wondering around  
Metamorphosing doctors,  
To scrutinize corpse  
In 'Operation theatre'.  
Value of life became  
'Two full hand' of rice  
desire for life who has  
The sinner, that no one is!  
At the last phase of century  
juncture of jeopardy  
everywhere, sticky darkens and... dark-  
ens  
smashed/ washed out 'Orissa'.  
Oh! God 'Don't be mute'  
give reply  
when it will gain  
Peace, prosperity and dignity fate!! ❑

**Sukanta Kumar Patnaik**  
District Emergency Officer  
Collectorate, Nabarangpur

(The poem is extracted from my poetry edition  
"Flame & Bloom" published in the year 2000 at  
Mumbai)

## ତରଭା ବନ୍ୟା ଓ ଏହାର ପରିଚାଳନା

ତା ୧୩.୦୮.୨୦୧୯ ରିଖ ମଙ୍ଗଳବାର ଥିଲା ତରଭା ବୁକ୍ସ ତଥା ସୁବର୍ଣ୍ଣପୁର ଜିଲ୍ଲା ପାଇଁ ଏକ ଦୁଃଖମୟ ଦିବସ । ଦୀର୍ଘ ପାଞ୍ଚ ବର୍ଷ ଅର୍ଥାତ ୨୦୧୪ ମସିହା ପରେ ବନ୍ୟା ପୁଣି ତାର କରାଳ ରୂପ ସୁବର୍ଣ୍ଣପୁର ଜିଲ୍ଲାରେ ଦେଖାଇବାସହ ତରଭା ବୁକ୍ସରେ ତାଣ୍ଡବ ରଚିଥିଲା । ୧୨ ଓ ୧୩.୦୮.୨୦୧୯ ତାରିଖର ଅବିଶ୍ରାନ୍ତ ମୁଷଳ ଧାରାର ବର୍ଷା କଳାହାଣ୍ଡି, ବଲାଙ୍ଗିର ଓ ସୁବର୍ଣ୍ଣପୁର ଜିଲ୍ଲାରେ ଜନଜୀବନକୁ ଅସ୍ତବ୍ୟସ୍ତ କରିଦେଇଥିଲା । ଉକ୍ତ ବର୍ଷା ଜଳ ତେଲ ନଦୀରେ ପ୍ରବାହିତ ହୋଇଥିଲା ଏବଂ ତେଲ ନଦୀର ବନ୍ୟାଜଳ ତରଭା ବୁକ୍ସର ୧୪ଟି ପଞ୍ଚାୟତର ୪୬ଟି ଗ୍ରାମରେ ପ୍ରବେଶ କରିବାସହ ଗ୍ରାମଗୁଡ଼ିକୁ ଓ ତରଭା ପୌରପରିଷଦର ସମସ୍ତ ୧୨ ଗୋଟି ଡ୍ୱାର୍ଡକୁ ଜଳମଗ୍ନ କରିଥିଲା । ଅତ୍ୟଧିକ ବର୍ଷା ଯୋଗୁ ସୋନପୁର, ବୀରାମହାରାଜପୁର, ଉଲୁଣ୍ଡା, ବିନିକା ଓ ଭୁଞ୍ଜୁରିପାଲି ବୁକ୍ସ ଏବଂ ସୋନପୁର ପୌରାଞ୍ଚଳର ଡ୍ୱାର୍ଡ ନଂ ୫, ୬, ୧୨ ଏବଂ ବିନିକା ପୌରପରିଷଦର ୪ ଓ ୧୧ ନମ୍ବର ଡ୍ୱାର୍ଡ ପ୍ରଭାବିତ ହୋଇଥିଲେ । ମୋଟ ୬ ଗୋଟି ବୁକ୍ସର ୪୧୬ ଗୋଟି ଗ୍ରାମ ଓ ୩ ଗୋଟି ପୌରାଞ୍ଚଳର ୧୭ ଟି ଡ୍ୱାର୍ଡର ମୋଟ ୧,୦୭,୯୧୬ ଜଣ ବନ୍ୟା ଦ୍ୱାରା ପ୍ରଭାବିତ ହୋଇଥିଲେ । ବନ୍ୟାରେ ପ୍ରଭାବିତ ହେବାର ସମ୍ଭାବନା ଥିବା ବା ପ୍ରଭାବିତ ହୋଇଥିବା ମୋଟ ୯୫୩୪ ଜଣ ଲୋକଙ୍କୁ ୪୮ ଗୋଟି ସୁରକ୍ଷିତ ଆଶ୍ରୟସ୍ଥଳମାନଙ୍କରେ ଆଶ୍ରୟ ବ୍ୟବସ୍ଥା ଓ ରକ୍ଷା ଖାଦ୍ୟର ବ୍ୟବସ୍ଥା ଜିଲ୍ଲା ପ୍ରଶାସନ କରିଥିଲା । ତରଭା ବୁକ୍ସରୁ ସର୍ବାଧିକ ୬୪୫୩ ଜଣ, ତରଭା ପୌରପରିଷଦର ୨୪୩୨

ଜଣ, ବୀରାମହାରାଜପୁର ବୁକ୍ସର ୩୧୬ ଜଣ, ଭୁଞ୍ଜୁରିପାଲି ବୁକ୍ସର ୨୨୩ ଜଣ ଏବଂ ସୋନପୁର ପୌରାଞ୍ଚଳର ୧୦୦ଜଣ ଲୋକଙ୍କୁ ସ୍ଥାନାନ୍ତରିତ କରାଯାଇ ବିଭିନ୍ନ ସ୍କୁଲ, ପଞ୍ଚାୟତ ଅଫିସ ଗୃହ, ମାରାଡ଼ାତି ଧର୍ମଶାଳା, ଅଙ୍ଗନବାଡ଼ି ଏବଂ ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳରେ ଆଶ୍ରୟ ପ୍ରଦାନ କରାଯାଇଥିଲା । ସୁବର୍ଣ୍ଣପୁର ଜିଲ୍ଲାରେ ଓଡ଼ିଶା ରାଜ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା କର୍ତ୍ତୃପକ୍ଷ (ଓଏସଡିଏମଏ) ଦ୍ୱାରା ନିର୍ମିତ ୬ ଗୋଟି ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳ ମଧ୍ୟରୁ ସୋନପୁର ପାଢ଼ଶାଳା ନିକଟସ୍ଥ ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳ ସୋନପୁର ପୌରାଞ୍ଚଳର ୧୦୦ ଜଣ ବନ୍ୟା ବିପନ୍ନମାନଙ୍କୁ ସୁରକ୍ଷିତ ଆଶ୍ରୟ ପ୍ରଦାନ କରିଥିଲା । ତରଭାରେ ବନ୍ୟା ବିପନ୍ନମାନଙ୍କୁ ସ୍ଥାନାନ୍ତରିତ ଓ ଉଦ୍ଧାର କରିବା ନିମିତ୍ତ ସ୍ୱେଚ୍ଛାଲ ରିଲିଫ କମିଶନର, ଓଡ଼ିଶାଙ୍କ ଦ୍ୱାରା ପ୍ରଦତ୍ତ ପାଣ୍ଡାର ବୋଟ, ଜାତୀୟ ବିପର୍ଯ୍ୟୟ ପ୍ରଶମନ ବଳ (ଏନଡିଆରଏଫ)ର ୩ ଗୋଟି ବୋଟ ଏବଂ ଓଡ଼ିଶା ବିପର୍ଯ୍ୟୟ ତ୍ୱରିତ ପ୍ରଶମନ ବଳ (ଓଡ୍ରାଫ)ର ଗୋଟିଏ ବୋଟ କାର୍ଯ୍ୟରେ ନିଯୋଜିତ କରାଯାଇଥିଲା । ରକ୍ଷା ଖାଦ୍ୟ ବ୍ୟତୀତ ୭୮.୬୬ କ୍ୱିଣ୍ଟାଲ ରୁଟା ଓ ୧୮.୬୧ କ୍ୱିଣ୍ଟାଲ ଗୁଡ଼ ଶୁଖିଲା ଖାଦ୍ୟ ଭାବେ ଲୋକମାନଙ୍କୁ ଯୋଗାଇ ଦିଆଯାଇଛି ଏବଂ ଅତ୍ୟାବଶ୍ୟକ ମହମବତୀ, ଦିଆସିଲି ଓ ୪୨୬୯ ପଲିଥିନସିଟ ମଧ୍ୟ ଯୋଗାଇଦିଆଯାଇଥିଲା । ବନ୍ୟା ତଥା ଅତ୍ୟଧିକ ବର୍ଷା ଦ୍ୱାରା ତରଭା ବୁକ୍ସର ୨୧ ଗୋଟି ଗ୍ରାମପଞ୍ଚାୟତର ୧୬୦ଟି ଗ୍ରାମ ଓ ତରଭା ପୌରପରିଷଦର ସମସ୍ତ ୧୨ଟି ଡ୍ୱାର୍ଡ ପ୍ରଭାବିତ ହୋଇଥିଲା । ସୋନପୁର ବୁକ୍ସର ୮ ପଞ୍ଚାୟତର ୩୯ଟି ଗ୍ରାମ,





ସୋନପୁର ମୁନିସିପାଲିଟିର ୩ ଗୋଟି ଡ୍ଵାର୍ଡ, ବିରାମହାରାଜପୁରର ୪ ଗୋଟି ଗ୍ରା:ପ ର ୧୦ଟି ଗ୍ରାମ, ବିନିକା ବ୍ଲକର ୧୪ ଗୋଟି ଗ୍ରା:ପ ର ୨୩ଟି ଗ୍ରାମ, ଉଲୁଣ୍ଡା ବ୍ଲକର ୧୬ଗୋଟି ଗ୍ରା:ପ ର ୮୭ଟି ଗ୍ରାମ ଓ ତୁଙ୍ଗୁରିପାଲି ବ୍ଲକର ୨୬ଗୋଟି ଗ୍ରା:ପ ର ୯୭ଟି ଗ୍ରାମ ପ୍ରଭାବିତ ହୋଇଥିଲା ଓ ବା ୧୫.୦୮.୨୦୧୯ ପରେ ସ୍ଥିତି ସୁଧୁରିଯିବା ପରେ ଥଇଥାନ ଓ ପୁନଃ ନିର୍ମାଣ କାର୍ଯ୍ୟ ଆରମ୍ଭ କରାଯାଇଥିଲା। ମୁଖ୍ୟତଃ ଯାତାୟାତ, ପାନୀୟ ଜଳ, ପରିମଳ ଓ ବିଦ୍ୟୁତ ସେବା ଆଦି ବିଷୟରେ ବିଶେଷ ଧ୍ୟାନ ଦିଆଯାଇଥିଲା। ଜିଲ୍ଲାପାଳଙ୍କ ଆଦେଶମତେ ସମସ୍ତ ବିଭାଗ କ୍ଷୟକ୍ଷତି ଆକଳନ ନିମିତ୍ତ ସେମାନଙ୍କ କାର୍ଯ୍ୟ ଆରମ୍ଭ କରିଦେଇଥିଲେ।

କ୍ଷୟକ୍ଷତି ଆକଳନରୁ ଜଣାପଡିଲା ଯେ, ମୋଟ ୪୦୦୭ଟି ଘର, ୬୦୯୬ ହେକ୍ଟର ଚାଷ (୨୧୬୫.୫ ହେ ବାଲିଚର), ୩୭୬.୧୯୨ କିଲୋମିଟର ରାସ୍ତା, ୨୨ କି.ମି ନଦୀ ବନ୍ଧ, ୨୦୬ ଗୋଟି ଉଠା ଜଳସେଚନ, ୨୮ଟି ନଳକୂପ, ୨୨ଟି ପାନୀୟ ଜଳ ଯୋଗାଣ ପଏଣ୍ଟ ଇତ୍ୟାଦି କ୍ଷତିଗ୍ରସ୍ତ ହୋଇଛି । ବନ୍ୟାରେ ମୋଟ ୧୮୯୫୫ ଗୃହପାଳିତ ପଶୁପକ୍ଷୀ ପ୍ରଭାବିତ ହୋଇଥିଲେ ଓ ୨୬୭ଟି ଗୃହପାଳିତ ପଶୁ ମୃତ୍ୟୁ ବରଣ କରିଥିଲେ । ସେଥିମଧ୍ୟରେ ତରଭା ବ୍ଲକରୁ ସର୍ବାଧିକ ୧୩୮୯୧ ପ୍ରଭାବିତ ଗୃହପାଳିତ ପଶୁଙ୍କ ମଧ୍ୟରୁ ୫୭ଟି ଗାଈ/ମଇଁଷି, ୧୩ ଟି ବାଛୁରୀ, ୨ଟି ବଳଦ ଓ ୧୭୭ଟି ଛେଳି ମୋଟ ୨୪୯ଟି ଗୃହପାଳିତ ପଶୁ ମୃତ୍ୟୁ ବରଣ କରିଥିଲେ। ସେହିପରି ତରଭା ପୌରପରିଷଦରେ ୧୦ଟି ଗାଈ ୫ଟି ଛେଳି ଓ ୩ଟି ବାଛୁରୀ ସମେତ ମୋଟ ୧୮ଟି ଗୃହପାଳିତ ପଶୁ ମୃତ୍ୟୁ ବରଣ କରିଥିଲେ।

ଅଗଷ୍ଟ ମାସ ୧୨ ତାରିଖର ସ୍ୱେଚ୍ଛାଳ ବୁଲେଟିନ ଅନୁସାରେ ସୁବର୍ଣ୍ଣପୁର ଜିଲ୍ଲାରେ ଅତ୍ୟଧିକ ବର୍ଷାର ସମ୍ଭାବନା ଥିବାରୁ ଜିଲ୍ଲା ଜରୁରୀ କାଳୀନ ସମ୍ପାଦନ କେନ୍ଦ୍ର ତଥା ଜିଲ୍ଲା ପ୍ରଶାସନ ତରଫରୁ ବ୍ଲକ ପ୍ରଶାସନ ଏବଂ ଜିଲ୍ଲା ସ୍ତରୀୟ ଅଧିକାରୀଙ୍କୁ ସଜାଗ ରହିବା ପାଇଁ ନିର୍ଦ୍ଦେଶ ପ୍ରଦାନ କରାଯାଇଥିଲା। ବିପଦ ଶଙ୍କୁଳିତ ଗ୍ରାମମାନଙ୍କୁ ଆଖି ଆଗରେ ରଖି ଜିଲ୍ଲା ଯୋଗାଣ ବିଭାଗ ପୂର୍ବରୁ ଖାଦ୍ୟ ସାମଗ୍ରୀ ସହ ଅନ୍ୟାନ୍ୟ ଜରୁରୀ ଜିନିଷ ମହଜୁଦ କରି ରଖିଥିଲେ । ସ୍ୱାସ୍ଥ୍ୟ ବିଭାଗ ତରଫରୁ ସମସ୍ତ ସ୍ୱାସ୍ଥ୍ୟ କେନ୍ଦ୍ରରେ ଜୀବନ ରକ୍ଷାକାରୀ ଔଷଧ, ଓଆରଏସ ପକେଟ ଇତ୍ୟାଦି ଆଗୁଆ ମହଜୁଦ ରଖାଯାଇଥିଲା । ସେହିପରି ପଶୁପାଳନ ବିଭାଗ ପୂର୍ବରୁ ପ୍ରସ୍ତୁତ ରହିଥିଲା। ଜିଲ୍ଲା ପ୍ରଶାସନ ତରଫରୁ ସମସ୍ତ ସର୍ତ୍ତତା ମୂଳକ ଆଗୁଆ ପଦକ୍ଷେପମାନ ଗ୍ରହଣ କରାଯାଇଥିଲା ।

ଜିଲ୍ଲାରେ ଥିବା ୬ଗୋଟି ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳୀକୁ ସଜାଗ ରଖାଯାଇଥିଲା।

ଶ୍ରୀମତି ମୋନିଷା ବାନାର୍ଜୀ, ଜିଲ୍ଲାପାଳ ସୁବର୍ଣ୍ଣପୁର, ତରଭାର ପ୍ରଭାବିତ ଅଞ୍ଚଳମାନ ବୁଲି ଲୋକମାନଙ୍କ ସ୍ଥାନାନ୍ତରଣ, ଉଦ୍ଧାର କାର୍ଯ୍ୟ ତଥା ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ତଦାରଖ କରିଥିଲେ। ବ୍ରାହ୍ମଣୀ ଗାଁ କୁ ତଙ୍ଗାରେ ଯାଇ ଉଦ୍ଧାର କାର୍ଯ୍ୟ ତଦାରଖ କରିଥିଲେ । ପରେ ବିଭିନ୍ନ ଗ୍ରାମ ଓ ତରଭା ପୌରାଞ୍ଚଳରେ ଘର ଘର ବୁଲି ଲୋକମାନଙ୍କ ଅସୁବିଧା ବିଷୟରେ ଅବଗତ ହେଉଥିଲେ ଏବଂ ବିହୀତ କାର୍ଯ୍ୟାନୁଷ୍ଠାନ ଗ୍ରହଣ ନିମିତ୍ତ ବ୍ଲକ ପ୍ରଶାସନକୁ ସଜାଗ କରିଦେଉଥିଲେ । ଜିଲ୍ଲାପାଳଙ୍କ ଆଦେଶକ୍ରମେ ଜିଲ୍ଲା ସ୍ତରୀୟ ଅଧିକାରୀଙ୍କଠାରୁ ଆରମ୍ଭ କରି ଗ୍ରାମ ସ୍ତରର ସମସ୍ତ ଅଧିକାରୀ ପ୍ରଭାବିତ ଅଞ୍ଚଳରେ କାର୍ଯ୍ୟରତ ରହିଥିଲେ। ବନ୍ୟା ପରେ ପରେ ସ୍ୱାସ୍ଥ୍ୟ ବିଭାଗ ତରଫରୁ ତରଭାରେ ୧୭ ଟି ମେଡିକାଲ କ୍ୟାମ୍ପ କରାଯାଇଥିଲା। ୫ ଜଣ ଡାକ୍ତର ଓ ୩୧ଜଣ ପାରାମେଡିକାଲ ସ୍ଟାଫ୍ଙ୍କୁ ନେଇ ୫ଟି ଭ୍ରାମ୍ୟମାଣ ମେଡିକାଲ ଟୀମ ଗଠନ କରାଯାଇ ୩୭୪ ଜଣଙ୍କୁ ଚିକିତ୍ସା କରାଯାଇଥିଲା ଏବଂ ୫୫୯୮ ଓଆରଏସ ପକେଟ ଓ ୨୬୮୨ ହାଲୋଜେନ ଟାବ୍ଲେଟ ବଣ୍ଟନ କରାଯାଇଥିଲା। ସେହିପରି ପଶୁପାଳନ ବିଭାଗ ୩୬ଟି କ୍ୟାମ୍ପ କରିଥିଲେ। ୧୦ ଜଣ ଡାକ୍ତର ଓ ୧୫ଜଣ ସ୍ଟାଫ୍ଙ୍କୁ ନେଇ ୫ଟି ଭ୍ରାମ୍ୟମାଣ ପଶୁ ଚିକିତ୍ସା ଟିମ୍ କରି ୧୫୦୭ ପଶୁଙ୍କୁ ଚିକିତ୍ସା କରିଥିଲେ। ଜିଲ୍ଲା ପ୍ରଶାସନ, ବ୍ଲକ ପ୍ରଶାସନ, ଜିଲ୍ଲା ସ୍ତରୀୟ, ବ୍ଲକ ସ୍ତରୀୟ ତଥା ପଞ୍ଚାୟତ ସ୍ତରର ସମସ୍ତ ଅଧିକାରୀମାନଙ୍କ ମିଳିତ ପ୍ରଚେଷ୍ଟାରେ ବନ୍ୟା ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା ନିଷ୍ପାଦରୂପେ କରାଯାଇଥିଲା ଓ କୌଣସି ଲୋକ ମୃତ୍ୟୁ ବରଣ କରିନଥିଲେ ।

ତେଲ ନଦୀ ଯୋଗୁଁ ତରଭା ବ୍ଲକରେ ସବୁ ବର୍ଷ ବନ୍ୟାଭଳି ଏକ ପ୍ରାକୃତିକ ବିପର୍ଯ୍ୟୟ ସମ୍ଭାବନା ଥିବାରୁ ଅଧିକ ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳ ନିର୍ମାଣ ହେବାର ଆବଶ୍ୟକତା ରହିଅଛି। ଓଡିଶା ରାଜ୍ୟ ବିପର୍ଯ୍ୟୟ ପରିଚାଳନା କର୍ତ୍ତୃପକ୍ଷ (ଓଏସଡିଏମଏ) ଦ୍ୱାରା ଏହି ବ୍ଲକରେ କୌଣସି ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳ ନିର୍ମାଣ କରାଯାଇ ନାହିଁ । ତେଣୁ ଓଏସଡିଏମଏ ଭବିଷ୍ୟତରେ ଏଠାରେ ଅଧିକ ବନ୍ୟା ଆଶ୍ରୟସ୍ଥଳ ନିର୍ମାଣ କଲେ ଜନଜୀବନ ଅଧିକ ସୁରକ୍ଷିତ ରହିପାରିବ। □

**Mukteswar Panigrahi**  
District Emergency Officer  
&  
**Biswanath Nayak**  
District Project Officer, Sambalpur

# STATE EMERGENCY OPERATION CENTRE AND IMPORTANCE OF EARLY WARNING SYSTEM DURING ESCS `FANI`

To cope up with the Disaster Management Act 2005, NDMA guidelines and Govt. instructions, the concept of Control Room restructured as State Emergency Operation Centre (SEOC) at State level and District Emergency Operation Centre (DEOC) at district level. The State Emergency Operations Centre (SEOC) and 30 District Emergency Operation Centers (DEOCs) play an important role in effectively and efficiently coordinating multi-agency and intergovernmental responses to disaster events.

The State Emergency Operation Centre has been made operational with communication net-work. It functions round the clock. Observation-Decision making-Dissemination is the main activity of SEOC. It responds immediately during an emergency situation. SEOC is equipped with various communication equipments / Tools / Disaster Management Applications. The major function is to collect, collate and transmit information relating to the natural calamities, dissemination of weather reports, flood bulletins, etc. received from different sources. The warnings received at the state level are communicated to the district Collectors through telephone / fax / Wireless / E-mail / social media. The SEOC is facilitated for communicating with all the stakeholders during the time of emergency or a disaster.

**Early Warning System:** Early Warning Dissemination System (EWDS) establishes a fail-proof communication system. It address the existing gap of disseminating disaster warning for cyclone and tsunami up to the community level by



establishing a robust communication system. This is the first of its kind in the country for cyclone and tsunami warning. Technical infrastructure to allow state District and block authorities to reach the villagers in the coastal districts in near real-time.

Five additional layer of communication system under EWDS is as follows-

- **Satellite Based Mobile Data Voice Terminals (SBMDVT)-**
  - SBMDVT provided at the State (SEOC) and 6 District Emergency Operation Centres (DEOCs) having multi-faceted communication facilities like Voice / Video/ Data/ E-mail/ Fax, etc.
  - Satellite technology used as fail-proof communication
- **Digital Mobile Radio (DMR)**
  - State Emergency Operation Centre, 6 District Emergency Operation Centres



(DEOCs), 22 Block Emergency Operation Centres (BEOCs), 14 Fish Landing Centres (FLCs) and 114 Alert Siren Tower locations.

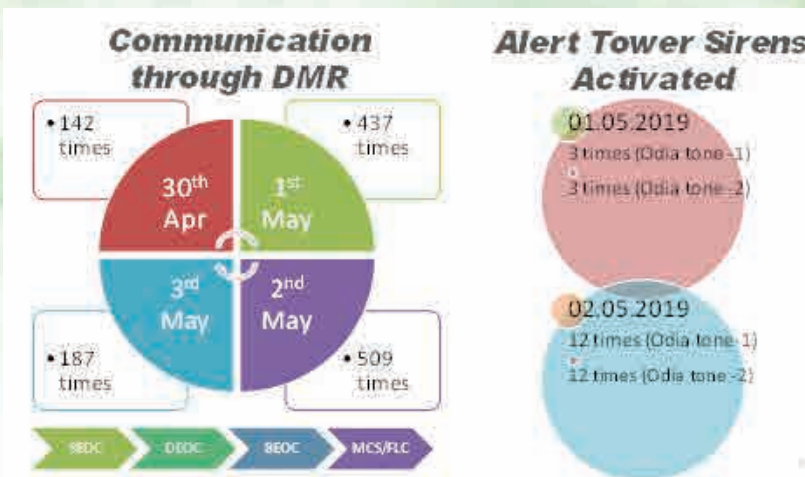
- **Mass Messaging System at the SEOC.**

- Sending of warning messages through SMS to mobile phone subscribers in a particular locality/ area likely to be affected by a threatening disaster.

- Web Based Application at SEOC

- **Alert Siren System**

- 122 locations near the coast (within 1.5 km approximately) to cover Tourist Places, Fish Landing Centres and coastal habitations.
- This system is helpful for communicating both cyclone and tsunami warnings to the coastal population directly from the State Headquarters.



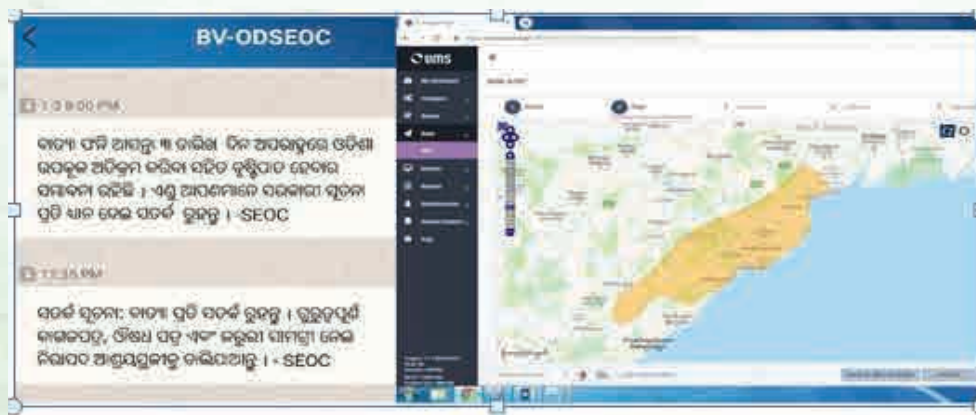
communication technologies like VHF/ HF/ TETRA/ Ham Radio/ DMR/ Mobile Phone/ Landline, etc.

Dissemination of Warning during ESCS "FANI": Cyclone related alert and action suggested had been delivered through Location Based Alert System (LBAS) SMS to 1.65 crore BSNL subscribers of the likely affected districts. Messages through Group Based Alert System (GBAS) had also been disseminated based on threat status to a particular area. All messages were in Odia language of different categories. Early warning sirens were

activated and voice messages disseminated every hour in the coastal area. Communication through Digital Mobile Radio (DMR) were activated in SEOC. 14 Satellite Based Mobile Data Voice Terminals (SBMDVT) under EWDS had also been activated for emergency communication. All cyclone bulletins and warning messages of IMD were disseminated with Key

State Level Officers, Collectors and Media.

State Emergency Operation Centre (SEOC) had played an important role in dissemination of warning in time during ESCS 'FANI'. □



- Central Command and Control Software at SEOC
- Speakers covers up to 1.5 Kms radius in Omni Direction

- **Universal Communication Interface (UCI)**

- Installed in the State EOC for inter-operability among different

**Shyamal Kumar Das**

Officer on Special Duty

Office of Special Relief Commissioner







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