



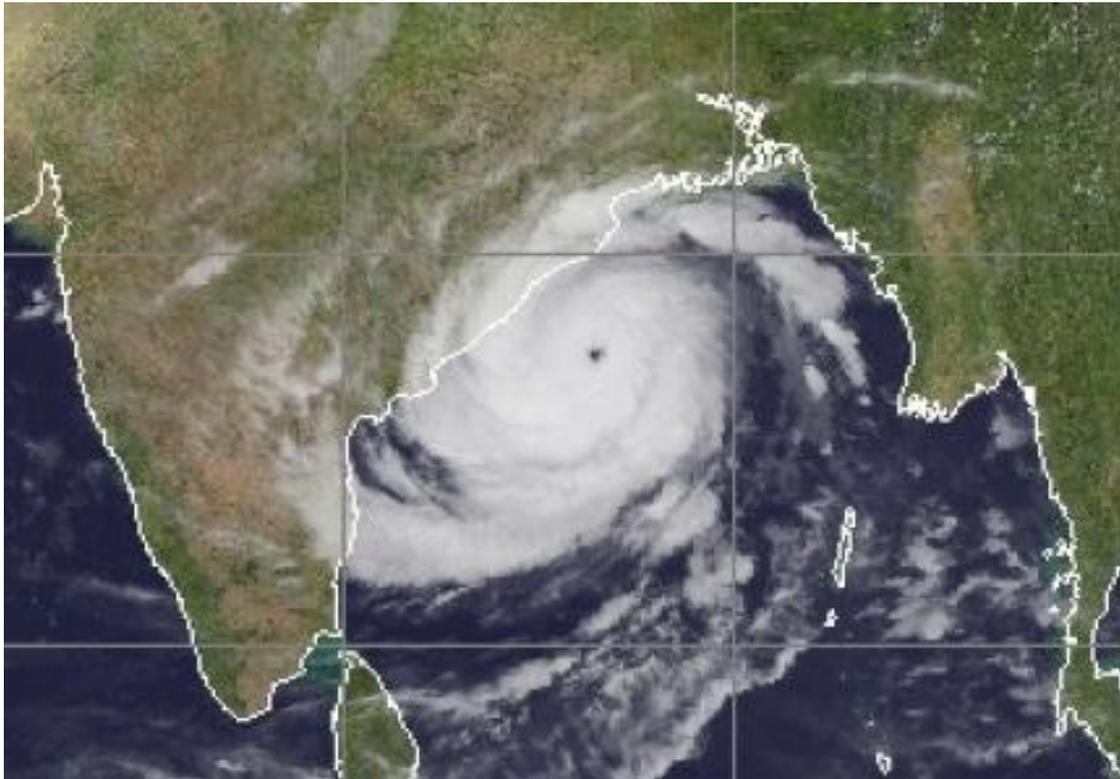
Government of Odisha

MEMORANDUM

On the Very Severe Cyclone

PHAILIN AND THE SUBSEQUENT FLOOD

12 -15 October 2013



SPECIAL RELIEF COMMISSIONER

REVENUE & DISASTER MANAGEMENT DEPARTMENT
Government of Odisha

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Chapter- I

Introduction

Odisha is situated in the East Coast of India between 17⁰ 49' N to 22⁰ 36' N Latitude and 81⁰ 36' E to 87⁰ 18' E Longitude. It has 480 km of coastline along the Bay of Bengal. Besides, the State is intercepted by peninsular river systems like Subarnarekha, Budhabalang, Brahmani, Baitarani, Mahanadi, Rushikulya and Vansadhara, apart from a number of tributaries and distributaries.

State's vulnerability to various disasters

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

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

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

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

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

[Source: IMD]

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

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

Very Severe Cyclonic Storm (VSCS) "PHAILIN"

The Very Severe Cyclonic Storm (VSCS) "PHAILIN" hit Odisha coast on 12.10.2013 and the landfall point was Gopalpur in Ganjam District. The wind velocity was recorded to be 205-220 kmph. After hitting the Gopalpur coast, the cyclonic storm with tidal waves of 3.0 to 3.5 meter height ravaged the coastal districts of Ganjam, Puri, Khordha, Jagatsinghpur and Kendrapada. Apart from the coastal districts, the adjoining districts namely, Gajapati, Nayagarh, Keonjhar, Kandhamal, Koraput, Mayurbhanj, Bhadrak, Balasore, Jajpur, Cuttack, Bolangir and Angul, have also been seriously devastated by this Very Severe Cyclonic Storm and the resultant

flood in some districts. The cyclone was accompanied with torrential rains for 3 days, leading to floods in a number of major rivers. Incessant rains and flood with high wind has also caused serious damage to other districts of the State.

In Ganjam district alone 2812 villages have been affected. Apart from loss of life, power supply, water supply system and communication system were totally disrupted and lakhs of people were rendered homeless. Public and private properties, agricultural crops and horticultural plantations have suffered severe damage. All surface communication systems, telecommunication, power supply and water supply were totally disrupted. For the first time after the Super Cyclone of 1999, the State has witnessed a **Very Severe Cyclonic Storm** of rare severity.

Following the cyclone, due to heavy rainfall, Baitarani, Budhabalanga, Rusikulya, Subarnarekha and Jalaka rivers witnessed floods/ flash floods affecting the downstream areas of mainly, Mayurbhanj, Balasore, Bhadrak, Keonjhar, Jajpur and Ganjam districts.

MAP OF ODISHA



Chapter- II

Cyclone Tracking

Pre- Cyclone Watch

On 08.10.2013 India Meteorological Department reported about the formation of a Depression over North Andaman Sea. The forecast of IMD was as follows:

“ The Depression over North Andaman Sea moved westwards with a speed of 18 Kmph during past 3 hours and lay centered at 1130 hrs IST of today, the 8th October 2013 over north Andaman Sea near latitude 12.0⁰ N and longitude 95.5⁰ E about 1350 km east-southeast of Paradip. The system would intensity into a deep depression and further into a cyclonic storm by tomorrow. It would move west-northwestwards towards north Andhra Pradesh and Odisha coast during next 72 hours”.

On getting this information from the IMD, the State Government started closely monitoring the situation. The track of the system i.e.” Depression over Bay “ was thoroughly analyzed in GIS at regular intervals on 9th, 10th, 11th and 12th October 2013. The position and movement of the system was intimated to all the Collectors and to the print and electronic media.

On 10.10.2013, the IMD reported through an “Orange Message” that the Deep Depression had intensified into a Very Severe Cyclonic Storm named as “PHAILIN”, indicating the threat to Odisha Coast along with track & intensity of the system, basing on NWP model with conventional technique.

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

Tracking of the Very Severe Cyclonic Storm “PHAILIN”

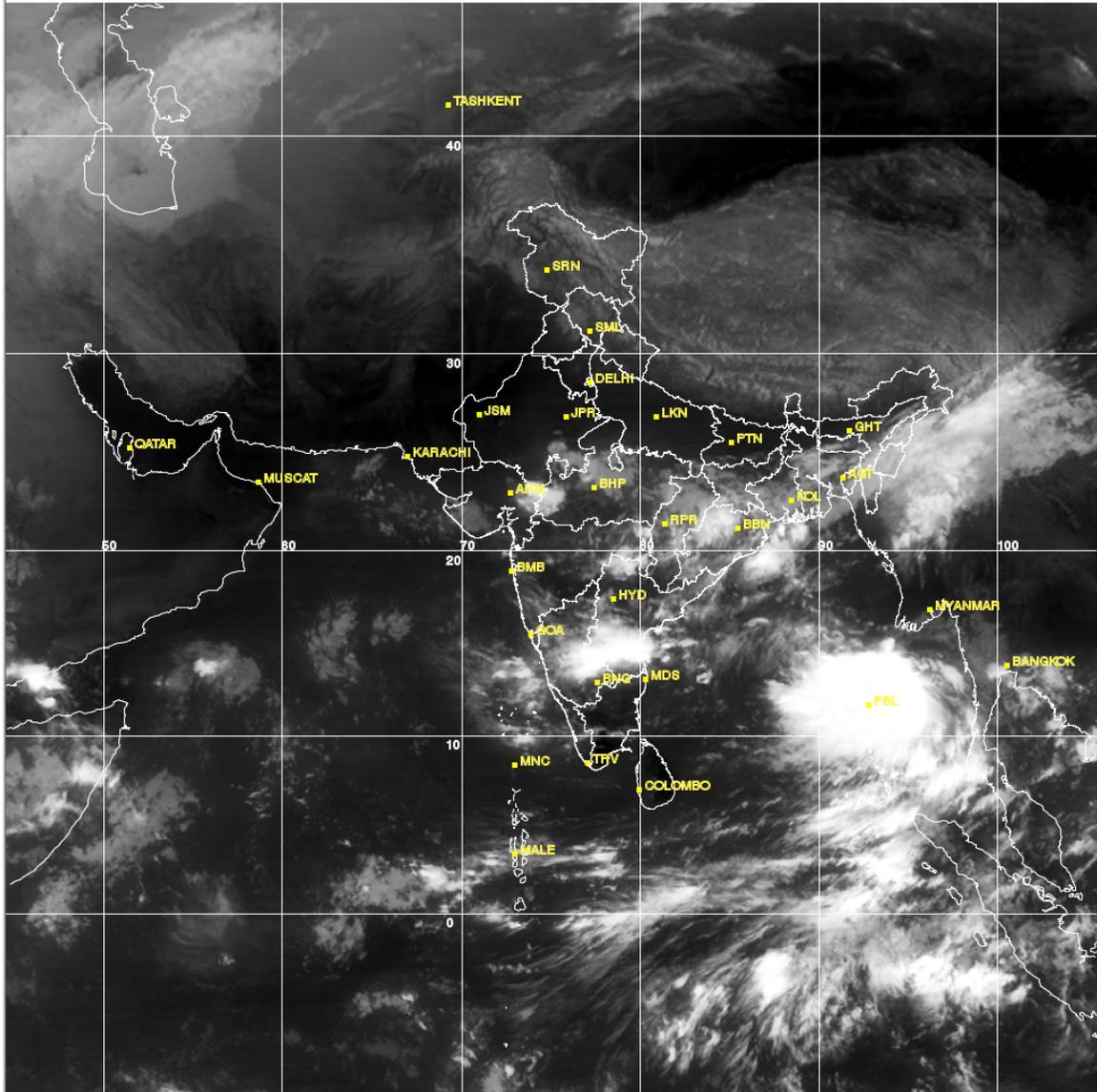
Date	Time	Watch/Observation
08.10.2013	8.30 AM	Tracking of PHALIN started: IMD indicated about depression, at 1450 km east-southeast of Paradip
08.10.2013	11.30 AM	Depression, about 1350 km east-southeast of Paradip
08.10.2013	5.30 PM	Depression, about 1250 km east-southeast of Paradip

09.10.2013	5.30 AM	Depression, about 1100 km east-southeast of Paradip
09.10.2013	5.30 PM	Deep depression became cyclonic Storm "PHAILIN, about 950 km south-east of Paradip
10.10.2013	8.30 AM	Intensified into severe cyclonic storm "PHAILIN - at 820 km south-east of Paradip coast
10.10.2013	11.30 AM	– 800KM south-east from Paradip coast
10.10.2013	8.30 PM	Intensified into very severe cyclonic storm "PHAILIN – 650 km south-east of Paradip coast & 700 km from Gopalpur
11.10.2013	5.30 AM	520 km south south-east of Paradip coast & 530 km south-east of Gopalpur
11.10.2013	11.30 AM	500 km south south-east of Paradip coast & 490 km south-east of Gopalpur
11.10.2013	5.30pm	400 KM south south-east of Paradip coast & 400 km south-east of Gopalpur
11.10.2013	11.30PM	375 km south south-east of Paradip coast & 345 km south-east of Gopalpur
12.10.2013	2.30AM	355 km south south-east of Paradip coast & 320 km south-east of Gopalpur
12.10.2013	8.30 AM	200 km south-east of Gopalpur & 280 km from south south-east of Paradip coast
12.10.2013	11.30 AM	150 km south-east of Gopalpur & 260 km from south south-east of Paradip coast
12.10.2013	2.30PM	90 km south-east of Gopalpur
12.10.2013	8.30PM	LANDFALL PROCESS STATRED
12.10.2013	8.30 PM to 9.30 PM	LANDFALL NEAR GOPALPUR WITH WIND SPEED OF 200-220 KMPH

The forecast of IMD about Very Severe Cyclonic Storm "PHAILIN" from 08.10.2013 to 13.10.2013 are in Chapter- X. The satellite images depicting the track and movement of the cyclone are given below.

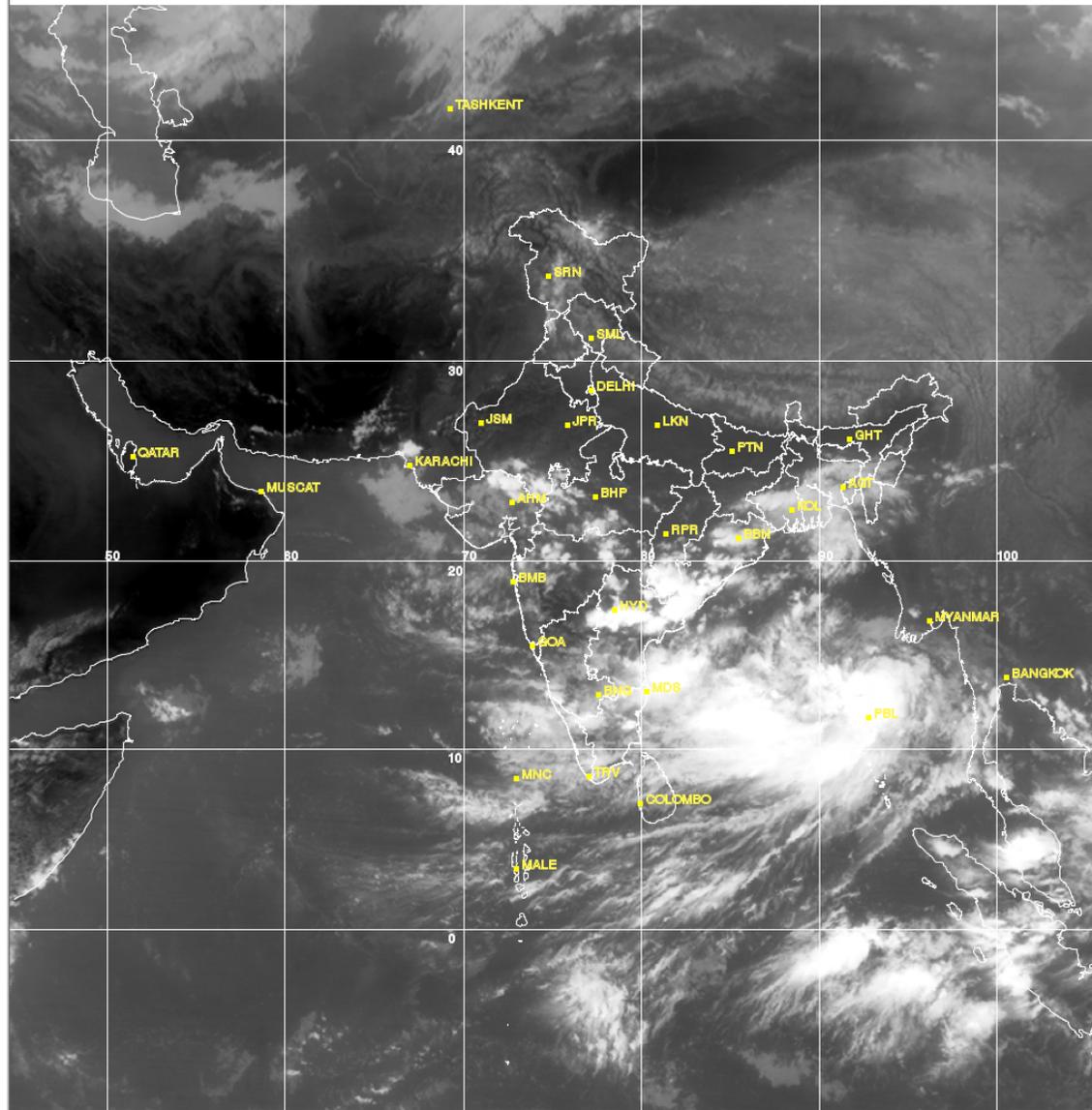


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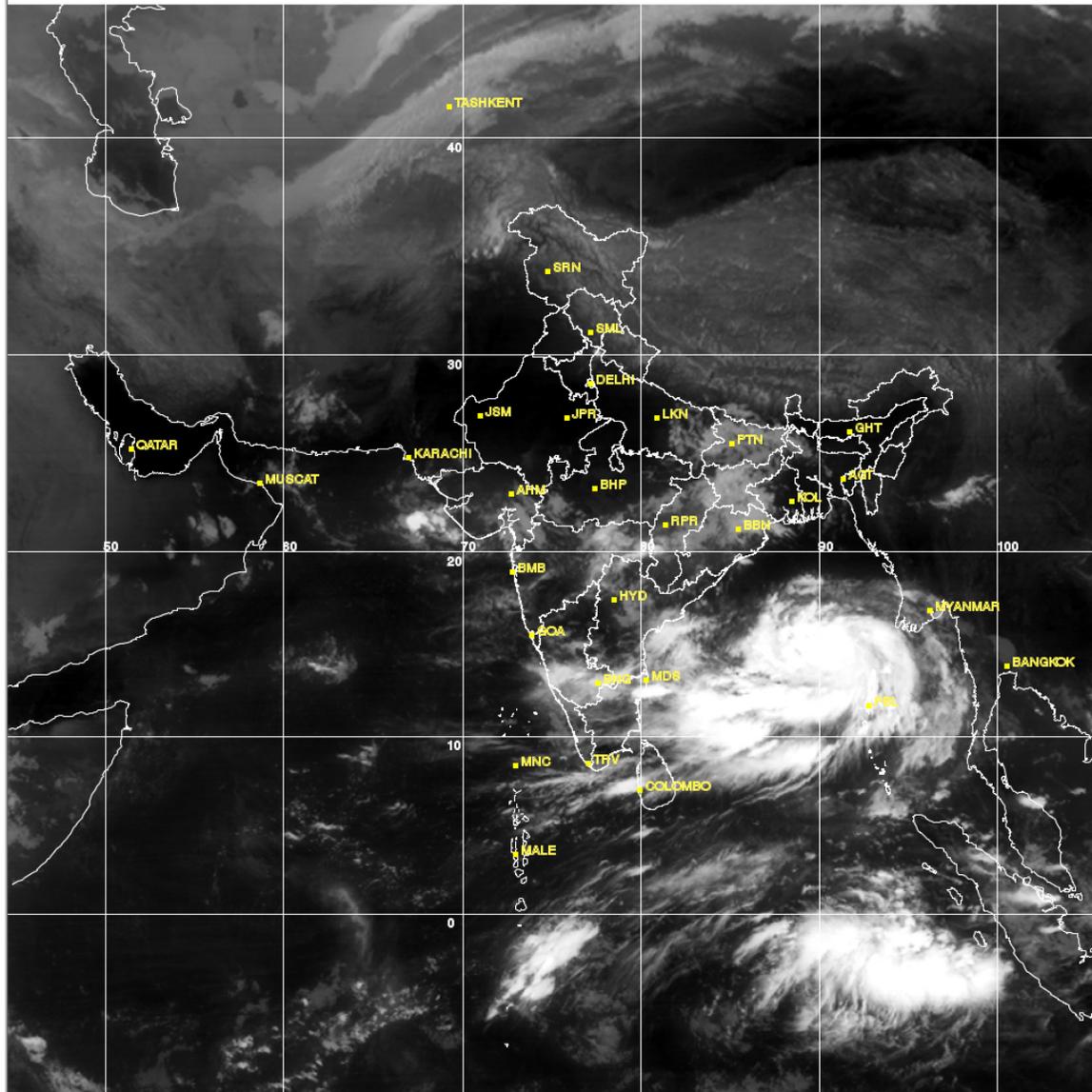


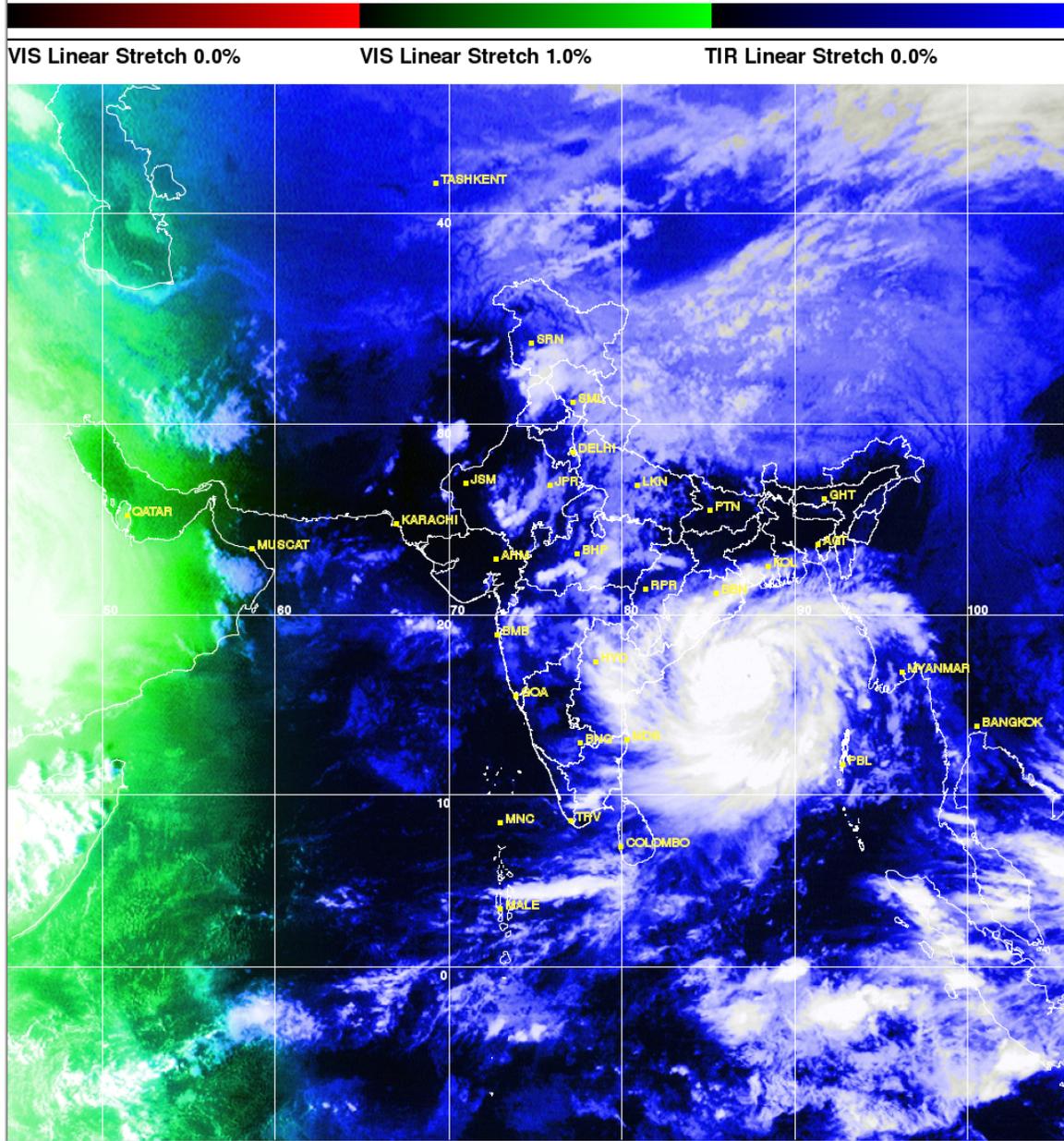
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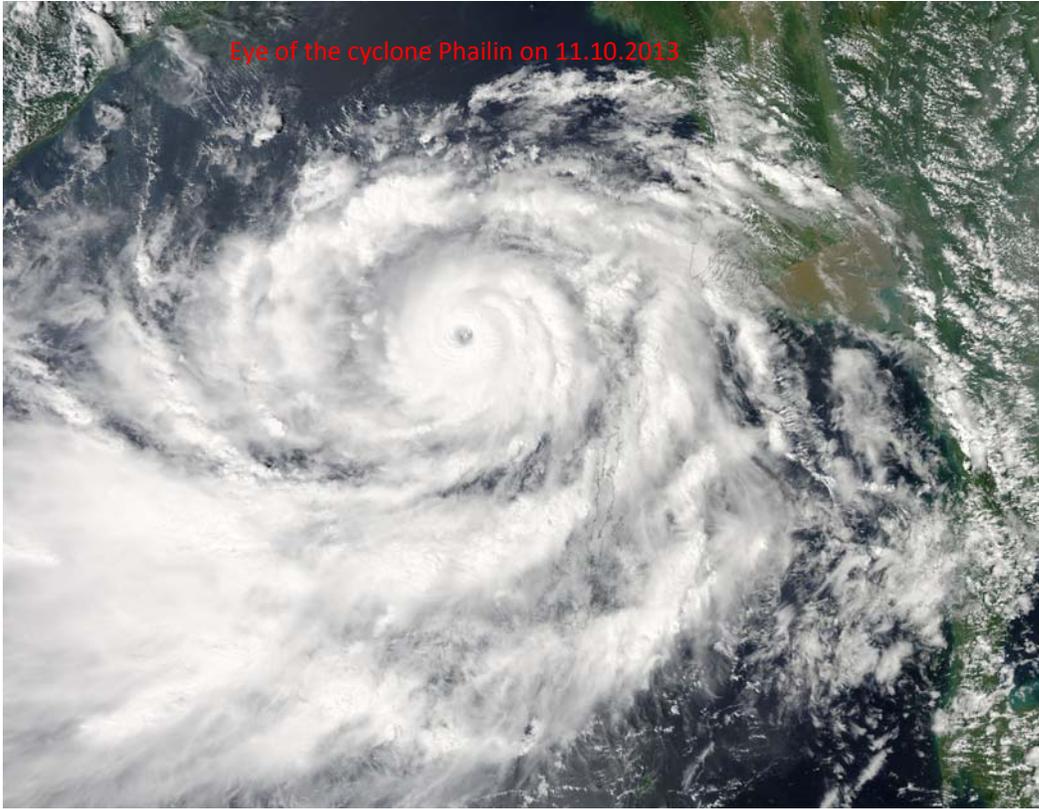


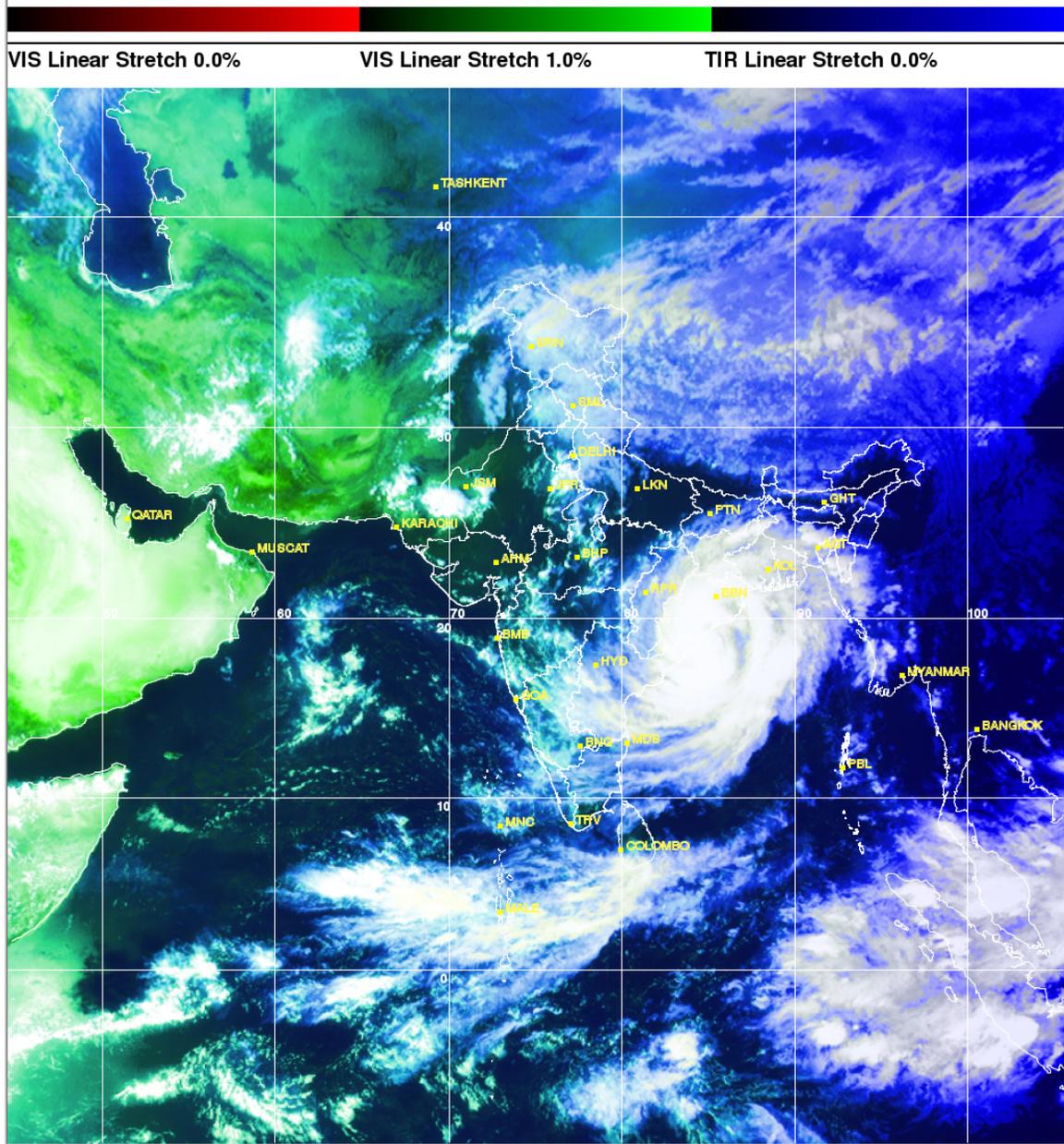


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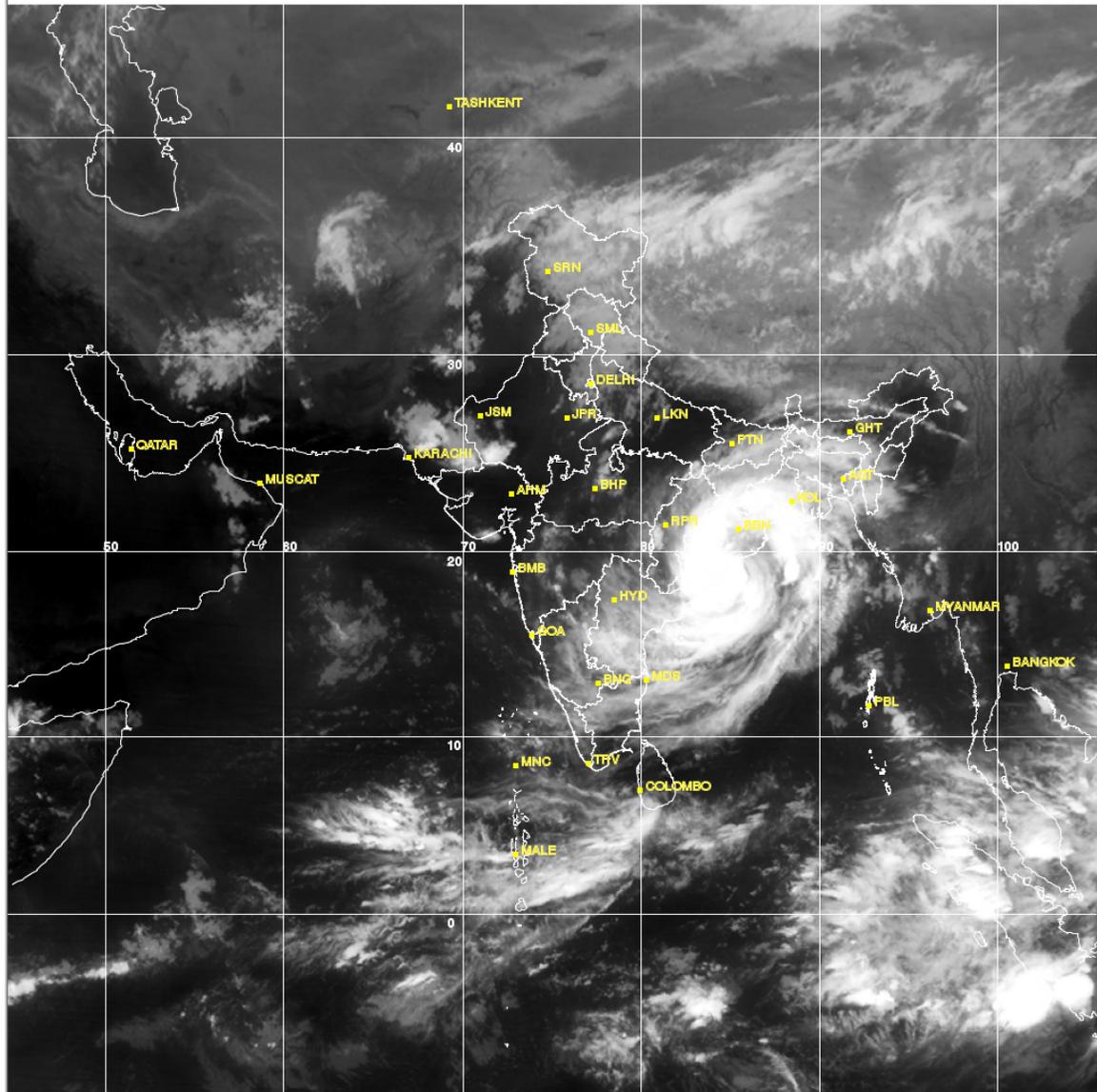


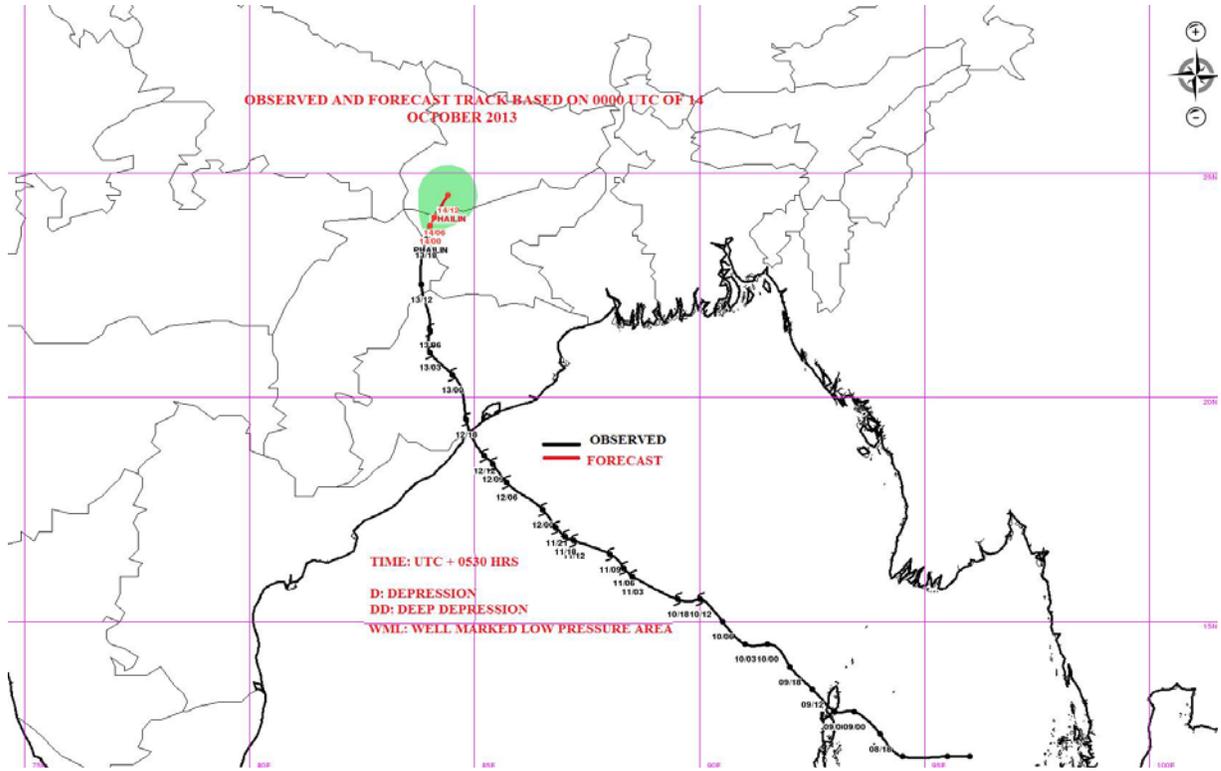






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Chapter – III

Occurrence & Intensity

According to IMD's classification, the cyclonic storm which crossed Odisha coast near Gopalpur in the evening of 12th October 2013 is a very severe cyclonic storm. The intensity of the cyclone can be better represented by the maximum sustained wind speed experienced due to the cyclone.

The wind data (Speed) received from IMD during cyclone is mentioned below.

Sl.	Places	Date	Velocity of wind in kmph
1	Gopalpur	12.10.2013	214 kmph
2	Puri	12.10.2013	223 kmph
3	Paradeep	12.10.2013	121 kmph
4	Bhubaneswar	12.10.2013	112 kmph
5	Chandbali	13.10.2013	112 kmph
6	Balasore	12.10.2013	84 kmph

Rainfall

Due to the effect of cyclonic storm the State faced torrential rainfall from 9th to 14th October 2013. The cumulative amount of rainfall during this spell was as high as 241.1 mm in Ganjam district. The details of rainfall recorded at various stations are given below:

Sl. No.	District	DATE						Total [mm]
		9 th	10 th	11 th	12 th	13 th	14 th	
1	Angul	13.3	16.1	0.4	4.7	101.0	8.7	144.2
2	Balasore	32.5	18.5	0.0	25.4	125.4	34.9	236.7
3	Bhadrak	23.3	9.9	0.0	49.5	99.3	22.8	204.8
4	Bolangir	1.4	4.0	0.6	4.9	38.4	13.6	62.9
5	Cuttack	14.8	13.4	0.0	24.2	124.2	26.8	203.4
6	Gajapati	5.8	14.5	1.1	10.0	120.2	0.2	151.8
7	Ganjam	4.6	25.0	4.1	24.4	183.0	0.0	241.1

8	Jagatsinghpur	19.4	9.4	0.0	62.5	88.8	9.6	189.7
9	Jajpur	23.3	5.8	0.0	36.9	129.7	44.3	240
10	Kandhamal	16.8	9.0	0.8	9.3	153.2	9.0	198.1
11	Kendrapada	43.3	9.2	0.0	29.8	95.7	11.4	189.4
12	Keonjhar	24.0	19.8	0.0	13.1	125.4	33.4	215.7
13	Khurdha	12.8	28.8	0.0	42.2	185.2	4.3	273.3
14	Koraput	8.2	12.3	4.8	0.7	13.9	3.3	43.2
15	Mayurbhanj	25.9	10.8	0.1	15.8	159.8	55.9	268.3
16	Nayagarh	2.0	21.9	0.6	35.0	201.5	0.8	261.8
17	Puri	15.7	13.0	10.5	55.3	106.5	20.6	221.6
18	Deogarh	2.2	20.8	0.0	0.0	60.0	17.1	100.1

(Note: The rainfall is recoded at 08.30 AM for the past 24 hours)

Rivers flooding

Due to heavy rainfall from 12th to 14th October 2013, Baitarani, Budhabalanga, Rusikulya, Subarnarekha and Jalaka rivers witnessed floods/flash floods affecting the downstream areas of Bhadrak, Keonjhar, Balasore, Mayurbhanj, Ganjam and Jajpur districts. The water level of rivers is given below:

River	Forecast station	DL	WL	Water Level in Meter			
				12 th	13 th	14 th	15 th
Baitarani	Anandapur	38.36	37.45	35.86	40.72	39.74	37.14
	Akhuapada	17.83	16.83	17.22	19.57	19.85	19.80
Budhabalanga	N.H-5 (Govindpur)	8.13	7.21	5.46	9.21	9.15	8.20
Subarnarekha	Rajghat	10.36	9.45	8.25	11.50	12.40	12.38
	Jamsholaghat	49.15	48.10	46.94	54.02	54.04	50.04
Rushikulya	Purushottampur	16.83	15.83	15.16	18.65	17.10	16.21
Jalaka	Balasore (Mathani)	5.50		05.94	7.32	07.75	6.08

Chapter – IV

Response

Chronology of response measures taken up by Government after receipt of the warning from the IMD were as follows:

08.10.2013:

- As soon as the 1st cyclone warning was received on 8th October 2013, the Collectors of all the 14 cyclone prone districts such as Ganjam, Puri, Jagatsinghpur, Kendrapada, Bhadrak, Balasore, Mayurbhanj, Jajpur, Cuttack, Khordha, Nayagarh, Gajapati, Dhenkanal and Keonjhar were alerted through e-mail, fax & telephone.
- They were instructed to take immediate steps to activate the preparedness and ensure that the District Administration is fully prepared to meet the possible disaster.
- The Collectors were advised to convene meeting of the District Disaster Management Authority to review the status of preparedness of all the Departments & organisations at the district level and below having a role in cyclone disaster management and give necessary directions to take further measures as may be necessary. The preparedness of the local authorities in the district may also be assessed and ensured.
- Collectors were asked to ensure that all the officers and staff are in position and those on leave may be recalled.
- The District EOC was directed to be activated immediately to function round the clock with adequate manpower, essential equipment and logistics.
- All the Departments of the State Government were requested to take immediate steps to alert their field officers in the cyclone prone districts to take necessary preparedness measures in consultation with the concerned Collectors to meet the possible disaster.
- Special DG of Police, HQRS in charge of ODRAF, Additional Director General of Police, Fire Services and Commandant, National Disaster Response Force (NDRF) located at

Mundali in Odisha were kept on alert for eventual deployment of response forces for evacuation, search and rescue operations.

- Collectors were also asked to mobilize district level officers and to alert local police, the telecom authorities and the police communication network.
- Odisha State Disaster Management Authority (OSDMA) was intimated to conduct mock response drill in all the cyclone shelters immediately during which besides rehearsal of the disaster management techniques, various equipment available in the cyclone shelters may be test-used and steps be taken to repair the defective ones.
- The Ministry of Home Affairs, Government of India and the NDMA were also requested to make necessary advance arrangements to keep the concerned authorities in readiness for deployment IAF helicopters/ NDRF force on short notice, if required.

09.10.2013

- 10.45 AM- The inter-departmental coordination meeting for cyclone preparedness was held under the chairmanship of Minister, Revenue and Disaster Management. The following preparedness arrangements were discussed in the meeting for implementation by different departments and organizations.
 - Dissemination of cyclone warning through various channels
 - Arrangement to keep the communication systems operational,
 - Mock Response drill in each multi-purpose cyclone shelters/ flood shelters
 - Test check of various equipment in cyclone shelters including Generator, Water Pump, Inflatable Tower Light and Mechanized Tree Cutters; Steps for repair of defective ones
 - Identification of other school, college and other public buildings as cyclone shelters- Arrangement of Lighting, Drinking Water, Temporary Toilets
 - Readiness of ODRAF, Fire Services, NDRF for search & rescue operation

- Boats for rescue & relief operation
- Requisition of vehicles for evacuation/ transport of relief materials.
- Control of vehicular traffic
- Availability of stock of rice for relief operation
- Arrangement for procurement of chuda and sugar/ biscuit
- Availability of kerosene in cyclone flood districts/ areas
- Pre-positioning of sufficient stock of fuel
- Control rooms in different departments and the concerned district offices will be immediately activated to function round the clock.
- Deputing senior officers to Blocks likely to be affected to take stock of the situation.
- Special care to shift the old, infirm, physically challenged, pregnant women, nursing mothers and children to safer places and cyclone shelters much before the occurrence of the disaster
- Stocking of required medicines and arrangements for deployment of mobile medical teams
- Cattle health and supply of cattle feed for the affected cattle population.
- Immediate restoration of road communication for movement of relief materials to the affected areas and advance arrangements for the to get JCB, Earth Removers at short notice to clear the road blockades.
- Cancellation of Puja Holidays and keeping all Government offices open
- Keeping the response forces in readiness
- Coordinating with Government of India for assistance of Defence forces and helicopters for rescue operation and airdropping of food packets.
- Depleting the Reservoirs to manage the flood situation, if any.
- Supply of satellite phones to Collectors.
- Restricting use of unsafe buildings for accommodation of rescued persons.
- Closing all schools and Anganwadi Centres in view of the upcoming cyclone.

- Call back the fisherman who are inside sea and also instructed not to allow any body to go inside sea.
 - All Concerned Departments were instructed to attend the Cyclone preparedness meeting at fixed time everyday to take stock of the situation till the cyclone emergency was over.
- At 11.30 AM, Hon'ble Chief Minister reviewed preparedness measures through video conferencing with the Collectors.
 - The Ministry of Defence, Govt. of India was requested for deploying 7-8 nos of MI-17 Helicopters at Bhubaneswar airport for air dropping operation in case of necessity.

10.10.2013

- 10.45 AM- The inter-departmental coordination meeting was held for cyclone preparedness under the chairmanship of Minister, Revenue and Disaster Management.
- It was decided to prepare one lakh food packets in advance for air dropping.
- ODRAF and NDRF teams were stationed/ deployed at strategic locations to carry out search & rescue operations without loss of time.
- Apart from deployment of the NDRF forces of 3rd Battalion, Mundali, fifteen more NDRF teams were mobilized from other States.
- It was decided to divert manpower and materials of neighboring unaffected districts to affected districts on requisition of the concerned district administration in case of necessity.
- To ensure **ZERO casualty**, the Collectors of Ganjam, Gajapati, Nayagarh, Khordha, Puri, Jagatsinghpur and Kendrapada were directed to evacuate all people living in low lying areas and in kutcha houses to the nearby cyclone/flood shelters or other identified buildings by morning of 12th October 2013, and to ensure that no one stays in a kutcha houses in the night of 12th October 2013 when the very severe cyclonic storm was expected to make land fall.
- Similar steps were advised to be taken to shift the livestock to safer places.

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

- The fishermen on sea were asked to immediately come back to the shore.
- BSNL authorities made necessary arrangements to ensure operation of the telephone/ cell phone with backup power system and pre-positioned adequate fuel for operation of generators at telephone exchange/ cell towers.
- Home Department issued instruction for maintenance of law and order and check stealing/ looting of public properties and providing security for transportation of relief materials.
- 5.45 PM- Hon'ble Chief Minister reviewed the preparedness measures.

11.10.2013

- The Collectors were specifically directed to ensure complete evacuation of people living in low lying areas and in kutcha houses to safer places by 11.10.2013 evening.
- People living adjacent to rivers and creeks up to 20 km upstream from the mouth were also evacuated to safer places.
- About one million people were shifted in the 36 hours preceding the landfall of the cyclone.
- Free Kitchen centers were opened from the night of 11th October 2013 for the evacuated people.
- The cattle population was also shifted to safety and cattle feed/ fodder arrangements were made for them.
- 9.84 lakh people were evacuated. Subsequently, 171083 persons were evacuated in 3 districts which were severely affected by flood following the cyclone. The district wise evacuation position is mentioned below:

SI.	District	No. of people evacuated due to cyclone	No. of people evacuated due to flood
1	Balasore	4185	126842
2	Bhadrak	48202	
3	Cuttack	114306	
4	Gajapati	36960	
5	Ganjam	180000	

6	Jagatsinghpur	101457	
7	Jajpur	91131	6900
8	Kandhamal	13310	
9	Kendrapada	59550	
10	Keonjhar	11825	
11	Khurdha	185291	
12	Koraput	3860	
13	Nayagarh	31565	
14	Puri	102000	
15	Mayurbhanj	-	37341
	Total	983642	171083

Search & Rescue

All 10 units of ODRAF, 28 units of NDRF, 12 units of CRPF and 10 platoons of OSAP were pre-positioned at strategic and vulnerable places for search & rescue operation. More than 350 teams consisting of mostly Fire Service personnel with some Home Guards and Civil Defence volunteers were formed for various tasks to be performed in the pre and post cyclone period. These response forces and teams are equipped with disaster response equipment like power saws, power boats, inflatable tower lights, cutters, spreaders with power pack and other tools. The teams assisted the local administration and police in evacuating people from low lying and unsafe buildings and moving them to cyclone shelters and relief camps. Post cyclone, the teams were engaged in cutting the fallen trees and clearing the roads to establish road connectivity. In addition, they also assisted in cutting the trees that was required for restoration of electricity.

Apart from these, 300 personnel of Indian Army divided into 4 groups were deployed in strategic locations of Ganjam, Puri and Cuttack districts for search, rescue & relief operation during cyclone.

Free kitchen

People evacuated and placed in cyclone / flood shelters & other relief camps were provided with adequate quantities of dry food and cooked food through free

kitchen centres. People whose houses were damaged also took shelter in relief centres. **4197** free kitchen centres were opened covering **2223953** beneficiaries.

Emergent Relief

In view of the extensive devastation, emergent relief was sanctioned for a period of 7 to 15 days for the affected people of the cyclone & flood affected Districts. Emergent relief in shape of chuda & guda and rice was distributed to the people in dire need of sustenance in the cyclone & flood affected villages. In addition to dry food, candles, matchboxes, kerosene and other essential materials were distributed.

Airdropping

The helicopters of Indian Air Force were requisitioned for airdropping of food packets in the inaccessible and marooned areas for cyclone and flood victims respectively. 5.7 MT of dry food have been air-dropped through 4 nos. helicopters in affected areas.

Temporary Shelter Materials

5.41 lakh families were provided with polythene sheets for temporary shelter since houses were damaged either fully or severely.

Clearance of Roads

The Departments of Works, Rural Development, Panchayati Raj and Housing & Urban Development Department took immediate steps for cutting of the fallen trees and clear the roads to restore road connectivity. JCB and other heavy earth moving equipments were used to clear the roads. The Police, ODRAF, NDRF, and Fire Service units helped them in the work. Most of the roads up to Block level were cleared within 2 days. There was excellent inter-department coordination in this work.

Energy Infrastructure

The energy infrastructure was the worst affected among all public properties. 1756 feeders, 38997 sub-stations, 36133.9 km of LT line, 4074 km length of EHT Line, 211014 electric poles and 93 EHT towers have been severely damaged due the

cyclone and the floods thereafter. Restoration of power supply has been taken up on war footing. In the meantime, 1446 feeders, 19053 sub-stations, 23317.4 km of LT line, 3231 km length of EHT Line, 48549 electric poles and 9 EHT towers have been restored. Power supply to 24789 out of 45960 affected villages has been restored. 38.09 lakh consumers were affected due the cyclone and flood out of which power supply has been restored to the house of 27.55 lakh. Additional technical manpower (gangs) and materials have been mobilized for restoration of electricity to all affected villages/ consumers.

Drinking Water

Due to the effect of cyclone, the energy infrastructure was ravaged in many of the district the worst being in the districts of Ganjam and Puri. On account of power breakdown, the piped water supply projects did not function. In the circumstances, elaborate arrangements were made for supply of safe drinking water in the cyclone & flood affected areas. 234 water tankers and 345 mobile vans were deployed. 28,97,500 water pouches were distributed in rural areas. Restoration of power to water supply systems has been accorded top priority. Besides, DG sets have been hired to run the water supply systems. In the affected urban areas, 194 water tankers, 67 diesel generator sets and 33 diesel pump sets have been deployed for supply of drinking water.

Disinfection of Drinking Water Sources

The cyclonic storm and the floods arising out of heavy rainfall due to the effect of cyclone badly affected all drinking water sources like tube wells, open wells, ponds etc. **58100** tube wells have been disinfected. **1661** bags of bleaching powder each of 25 kg. have been distributed. Similar steps have also been taken by the H&UD Department for disinfecting the water sources in the urban areas.

Health & Sanitation

In order to restore the health services in the affected areas, **185** medical teams and 338 medical relief centres were opened. 47 medical officers, 132 paramedics were mobilized from medical colleges and unaffected areas to the

districts like Puri, Balasore, Bhadrak, Jajpur, Kendrapada, Mayurbhanj and Ganjam. **1249670** ORS packets, **9655000** Halogen tablets and 16700 ASVs were supplied.

Animal Care.

31,062 animals were shifted to safer places. **283** veterinary teams were deployed in the cyclone & flood affected areas. **89840** livestock have been treated and 230400 cattle vaccinated. **849.25** MT of cattle feed of high quality has been distributed among **29248** livestock in **1284** cattle camps.

Chapter- V

Impact & Damages

The damages caused by the cyclone were mainly due to gusting action of wind with unprecedented velocity of up to 220 kmph and torrential rainfall from 11th to 13th October 2013. Due to storm surge up to 3.5m, large areas were inundated in Ganjam, Puri, Jagatsinghpur, Bhadrak, Kendrapada, Khurdha and Balasore districts.

Baitarani, Subarnarekha, Budhabalanga, Rushikulya and Jalaka rivers experienced floods as a result of torrential down pour during 11th to 14th October 2013. Even the interior districts of Gajapati, Nayagarh, Bolangir, Keonjhar, Mayurbhanj, Sundargarh, Jharsuguda and Cuttack also reported heavy cyclonic rain and flash floods.

As per report received from Collectors, 132.35 lakh people in 171 Blocks, 44 Urban Local Bodies, 2164 GPs and 18374 villages in 18 Districts have been affected. 44 persons have lost their lives due to cyclone and the floods thereafter. The standing crops in 6.71 lakh hectares have been damaged. The fishing communities have been severely affected due to huge loss to their boats and nets. The poor artisans have lost their looms, equipment, accessories and raw materials. The farmers have lost their livestock and sericulture farms. Some other districts also suffered from damage of houses and crop due to the wind and heavy rainfall activity of the cyclone.

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

Extent of Damages

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

Sl.	Name of the districts	Blocks Affected (Nos.)	Villages Affected (Nos.)	ULB Affected (Nos.)	Population Affected (Nos.) due to flood & cyclone	Human Casulaty due to cyclone	Human Casulaty due to flood
1	2	3	5	6	7	8	9
1	Angul	8	589			1	1
2	Balasore	11	1725	4	1140309	3	5
3	Bhadrak	7	179	1	145000	1	2
4	Bolangir	5		1		1	
5	Cuttack	14	800		1553722		
6	Deogarh	3	140	1			
7	Gajapati	7	1528	2	480300		
8	Ganjam	22	2812	18	1502000	10	3
9	Jagatsinghpur	8	1230	2	900000	1	
10	Jajpur	6	1813	2	630000		
11	Kandhamal	12	124	1	13310		1
12	Kendrapara	9	1592	2	1445891		1
13	Keonjhar	13	263		65123		1
14	Khurda	10	1355	2	2234706	1	1
15	Koraput	2	19				
16	Mayurbhanj	15	854	2	326845		5
17	Nayagarh	8	1582	2	984000		2
18	Puri	11	1769	4	1814775	3	1
TOTAL		171	18374	44	13235981	21	23

House Damage

430 pucca houses and 121246 kutcha houses have been fully damaged due to the cyclone and the flood thereafter. Besides, 7174 pucca houses and 80406 kutcha houses have been severely damaged and 180628 houses (both pucca and kutcha) have been partially damaged. These apart, 52161 huts and 99155 cowshed attached to houses have been damaged. The district-wise details are given under Appendix-VII.

Crop Damage

About 651490 hectare of agriculture and horticulture crops and perennial crops have sustained crop-loss more than 50% due to cyclonic storms & floods. The details are given under Appendix-IV & V.

Livestock Affected

70.59 Lakh livestock were affected due to cyclone & floods. The district-wise figures of affected livestock are given in following table.

Sl.	District	Livestock Affected			Total
		Large	Small	Poultry	
1	Balasore	301302	145018	0	446320
2	Bhadrak	170195	41530	72110	283835
3	Cuttack	525000	300000	325000	1150000
4	Dhenkanal	11	0	3000	3011
5	Gajapati	30000	12000	8000	50000
	Ganjam	632000	253500	1110000	1995500
6	Jagatsinghpur	314256	117374	157987	589617
7	Jajpur	539827	196516	156652	892995
8	Kendrapada	20684	2378	32920	55982
9	Keonjhar	42247	18913	18359	79519
10	Khurdha	2693	624	30	3347
11	Mayubhanj	40205	54277	111992	206474
12	Nayagarh	191809	106718	372815	671342
13	Puri	440581	190180	0	630761
Total		3250810	1439028	2368865	7058703

Loss of livelihood

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

Damage to Nets and Boats of Fishermen

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

Damage to Sericulture Farmers

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

Damage to public properties

The damages to public properties are given under Appendix-VIII.

Chapter-VI

Assistance sought for

Ex-gratia Payment to the families of deceased persons: *[Item -1(a) of SDRF Norms].*

44 Persons have lost their lives due to cyclone & floods in the State. Ex-gratia assistance @ Rs.1.50lakh as per SDRF Norms has been disbursed to the families of deceased persons.. The requirement of funds for the purpose comes to Rs 66.00 lakh.

Clothing and utensils for families: *[Item -1 (d) of SDRF Norms]*

About 209256 families whose houses have been fully damaged or severely inundated for a period more than 7 days have been provided with clothing and utensils. An amount of Rs.5649.91 lakh have been required for the purpose.

Gratuitous Relief for families in dire need of immediate sustenance after a calamity: *[Item -1 (e) of SDRF Norms]*

The affected persons of who were in dire need of immediate sustenance after the floods were provided with Gratuitous Relief for 7 to 15 days @Rs.40/- per adult per day and @Rs.30/- per child per day. The total expenditure incurred towards providing gratuitous relief till date comes to Rs 28134.49 lakh.

Cost of Search and Rescue measures: - (Item 2(a) of revised SDRF norms)

All 10 units of ODRAF, 28 Units of NDRF, 12 Units of CRPF and 10 Platoon of OSAP were pre-positioned at strategic and vulnerable places for search & rescue operation.

Apart from this, 300 personnel of Indian Army dividing into 4 groups were deployed in Strategic locations of Ganjam, Puri and Cuttack District for search, rescue & relief operation during cyclone. An amount of Rs.127.00 lakh has been spent for the purpose.

Evacuation of affected people: *[Item -2(a) of revised SDRF Norms]*

1154685 persons were evacuated by means of hired vehicle to safer places. An amount of **Rs.115.00 lakh** has been spent towards cost of POL and hire charges of vehicle.

Provision for temporary accommodation, food, clothing and medical care
[Item -3(a) of revised SDRF Norms]

- a) **4197 nos.** relief camps were also opened to accommodate **2223953** people. An amount of **Rs.3946.78 lakh** was spent towards cost of providing temporary accommodation, food, clothing and medical cares in the relief camps. The district-wise detail is given in **Appendix- III**.
- b) **541200** families whose houses have been either washed away or severely damaged were provided with polythene sheets for use as temporary shelter materials. The total amount spent @Rs.1500/- per family is **Rs.8118.00 lakh**.

Emergency supply of drinking water in rural areas and urban areas *[Item -3 (c) of SDRF Norms]*

For immediate provision of drinking water to the cyclone / flood victims 234 nos. of water tankers have been engaged in the affected for supply of drinking water. Besides, 3298000 water pouches were also been distributed. An amount of **Rs.122.34 lakh** have been spent for the purpose.

Clearance of Debris in the public areas: (Item 4(a) of SDRF norm)

An amount of **Rs.1000.00 lakh** has been provided to the Forest & Environment Department for clearance of debris from the cyclone affected areas.

Disposal of Carcasses: (Item 4(c) of SDRF norm)

An amount of **Rs.20.00 lakh** has been spent for disposal of carcasses from the cyclone affected areas.

Agriculture input subsidy to SMF farmers where crop loss is 50% and above: *[Item -5(i)B of SDRF Norms]*

Out of **1100501** hectares of affected arable land, **555777** hectares of cropped area have sustained crop loss of more than 50%. An amount of **Rs.34449.14 lakh** is required for providing input subsidy to the affected farmers.

The District wise requirement of funds is at **Appendix- IV**.

Input subsidy to farmers other than small & marginal farmers: *[Item -5(ii) of Revised SDRF Norms]*

Crops in **37457** hectares of irrigated land, **52491** hectares of non-irrigated land and **4139** hectares of perennial crops of farmers other than small and marginal farmers have sustained crop loss of more than 50% due to the cyclone & floods. An amount of **Rs.4093.22 lakh** is required for providing input subsidy to affected farmers.

The District wise requirement of funds is at **Appendix- V**

Assistance to Small & Marginal Sericulture farmers: *[Item -5(i)B(c) of Revised SDRF Norms]*

157 hectares of Tasar Plantation and **196** hectare of Eri and **308** hectare of Mulberry crops have sustained crop loss more than 50%. An amount of **Rs. 19.968 lakh** is required for providing input subsidy to the affected beneficiaries.

Replacement of draught animals: *[Item -6(i) of Revised SDRF Norms]*

1500 nos. of large animals and **3002** small animals have lost lives due to Cyclone & floods. The total expenditure for replacement of these animals comes to **Rs.218.21 lakh**. The detailed calculation is given in **Appendix-VI**.

Medical Care for cattle & poultry against epidemics: *[Item -6 (ii) of revised SDRF Norms]*

Vaccinations of Livestock in the affected districts have been made to reduce the morbidity and mortality of the livestock. Health and De-worming camps were also conducted to check different contagious and infectious diseases. An amount of **Rs 675.50 lakh** is spent for the purpose.

Provisions of fodder / feed concentrate in the cattle camps: *[Item -6 (ii) of Revised SDRF Norms]*

An amount of **Rs.1124.00 lakh** has been spent towards providing fodder / feed concentrate @1 kg per animal per day for 3 days. 5620 MT cattlefeed has been used for the purpose.

Assistance to fishermen: *[Item -7(i) of Revised SDRF Norms]*

6209 nos. of boats, 9622 nos. of nets have been fully damaged and **1899 nos. of boats, 21436 nos of nets** have been partially damaged due to cyclone. An amount of **Rs.997.44 lakh** is required for providing assistance to the affected fishermen.

Input subsidy for fish seed farms: *[Item -7(ii) of SDRF Norms]*

10126.84 Hectares of fish seed farms have been damaged due to this cyclone & flood. The requirement for providing input subsidy @Rs 6000/- per hectare comes to **Rs.607.61 lakh**.

Assistance to Artisans in handicrafts sector by way of subsidy for repair / replacement of damaged equipments: *[Item -8 of SDRF Norms]*

a) Traditional Crafts

2300 Artisans have been affected due to cyclone/floods. Extensive damages have been caused to their equipment. **3455 Artisans** have also lost their raw materials. An amount of **Rs.172.65 lakh** is required for providing subsidy to them as per the revised SDRF Norms.

b) Handloom Weavers *[Item -8 of SDRF Norm]*

767 nos. of weavers have lost their Loom equipment and accessories due to this cyclone and need replacement. An amount of **Rs.46.02 lakh** is required for providing assistance to the beneficiaries.

Assistance for repair / restoration of damaged houses: *[Item -9 of revised SDRF Norms]*

541200 houses have been damaged due to cyclone & floods out of which **121676 houses** have been fully damaged and **87580 houses** have been severely damaged. **18628 Houses** have been partially damaged. This apart, **52161 Huts** and **99155 cowshed** have also been damaged. An amount of **Rs.27488.249 lakh** is required for providing assistance for repair / restoration of the damaged houses of

affected people. The detail expenditure as per revised CRF/SDRF Norms is given in **Appendix- VII.**

Repair / restoration of immediate nature of the damaged infrastructure in eligible sectors : - [Item -10 of revised SDRF Norms]

A sum of **Rs. 307049.77 lakh** is required for repair / restoration of immediate nature of the damaged infrastructure in eligible sectors.

Roads and bridges

1947.35 km of State Road, 8099 km of District Road, 17637.30 km of Village Roads, 790.939 km of National High way along with 253 nos. of bridges / culverts has been damaged due to the flood and the cyclone. An amount of **Rs.95571.00 lakh** is required for immediate repair and restoration of the above damage. There is no amount available in the related schemes / programme / other sources for above repair / restoration work.

Rural Water Supply / Urban Water Supply : (Repair/restoration of drinking water sources)

3040 nos. of Rural Pipe Water Supply System and 162170 nos. of Tube wells have been damaged / submerged in the rural areas due to the cyclone & flood. An amount of Rs.2760.87 lakh is required for immediate repair of above damage and Rs.68.00 lakh is available in the related scheme for the above purpose. So also damage have also been caused to the Urban Pipe Water System and Tube wells in Urban area. An amount of Rs.989.75 lakh has already been spent for immediate repair and restoration of tube wells and urban piped water supply systems. The total requirement for repair / restoration of drinking water system **Rs.3682.62 lakh** is required for the above purpose.

Irrigation

874.48 km of river embankment, 765.81 km of canal embankment, 700.67 km of drainage channels have been damaged by this cyclone and flood. So also 1269 nos. of minor irrigation projects, 4848 nos. of lift irrigation projects and 641

nos. of deep borewells have been extensively damaged by these instant calamities. An amount of **Rs.43086.39 lakh** is required for immediate restoration of above infrastructures.

Community Assets owned by Panchayat

5212 nos. of Community Assets like Anganwadi centres, Mahali Samitte, Multipurpose cyclone shelters and Panchayat ghars have been badly damaged due to this cyclone & flood. An amount of **Rs.24603.00 lakh** is required for repair of the above buildings.

Primary Health Centres

539 nos. of PHC have been damaged by cyclone & current floods. **Rs.1485.17 lakh** is required for immediate repair and restoration of the PHC buildings.

Primary School Buildings

5825 nos. of primary school buildings have been damaged by current cyclone & flood. **Rs.23858.61 lakh** is required for immediate repair of the above Primary School buildings.

College and University Buildings

Due to cyclone & flood 226 nos. of College / University Buildings have been extensively damaged and **Rs.4792.00 lakh** is required for immediate restoration of the above buildings.

Repair and restoration of power supply

1756 nos. of feeder, 38977 nos. of substations, 36133.9 km of conductor of LT line, 4074 km of EHT line, 211014 nos. of Electric Poles and 93 nos. of EHT Tower has been damaged and **Rs.104814.00 lakh** is required for immediate restoration of power supply in the affected areas.

Repair and restoration of other Govt. Buildings

An amount of **Rs.5156.98 lakh** is required for repair & restoration of buildings belong to F & ARD, Textile & Handloom, W.R & H & FW departments.

ABSTRACT OF ASSISTANCE SOUGHT FOR

(Rs. in lakh)

SI	Item	Amount required/spent
1	Ex-gratia for loss of life	66.00
4	Clothing & Utensils	5649.91
5	GR kind for dire need of sustenance	28134.49
7	Cost of search & Rescue measure	127.00
8	Cost of evacuation	115.00
10	Temporary accommodation	3946.78
11	Temporary shelter	8118.00
16	Emergence supply of drinking water	122.34
17	Clearance of debris	1000.00
19	Disposal of dead bodies/Carcasses	20.00
21	Agriculture input subsidy-SMF	34449.14
22	Agriculture input subsidy-other than SMF	4093.22
23	Input subsidy-Sericulture farmers	19.968
24	Replacement of Milch/ Draught animals	218.21
25	Provision of fodder	1124.00
26	Cattle Health Care	675.50
27	Assistance to fisherman	997.44
28	Input subsidy-Fish seed farm	607.61
29	Assistance for Artisan-Traditional crafts	172.65
30	Assistance for Handloom weavers	46.02
31	HB assistance	27488.249
39	Repair of Roads & Bridges	95571.00
43	Repair of Rural/Urban Water Supply System	3682.62
45	Repair of Irrigation works	43086.39
50	Repair of Community assets owned by Panchayat	24603.00
52	Repair of PHC/CHC	1485.17
53	Repair of Primary School Buildings	23858.61
55	Repair of community assets (college/university building)	4792.00
56	Restoration of Power supply	104814.00
57	Other govt. Buildings	5156.98
	Grand Total	424241.297

or say Rs. 4242.41 crore

Chapter-VII

State Disaster Response Fund (SDRF)

As per recommendations of the 13th Finance Commission, the State Disaster Response Fund has been constituted with the contribution of Central and State Government at a ratio of 75: 25. The ceiling of SDRF for the State of Odisha for the year 2013-14 has been fixed at Rs.453.31 Crore.

Center's share	-	Rs.339.98 Crore
State's share	-	Rs.113.33 Crore
Total	-	Rs.453.31 Crore

The State Disaster Response Fund is to be utilized for the purpose of providing immediate relief to the affected areas and population only on items of expenditure and as per norms contained in the guidelines issued by Government of India. Expenditure on immediate restoration of infrastructure which are intrinsically connected with relief operation and connectivity with the affected area and population can also be met out of SDRF.

For the Cyclone and subsequent flood of October 2013, a total sum of **Rs. 547.164 crore** has already been spent for providing immediate relief and rescue to the affected people.

Status of Expenditure from SDRF Account -2013 – Odisha

[Rs. in crore]

SI	Item	Amount
	(i) receipts	
1	Opening balance in SDRF account as on 01.04.2013 (a)SDRF (b)NDRF (c)Total	184.320
2	SDRF releases during the year 2013-14(Central & State share)	
	# 1st Installment of current year [State + Central]	226.655
	# 2nd Installment of current year, if any[State + Central]	-
3	Interest accrued on investment made out of SDRF	-
4	NDRF releases during the year 2013-14 if any	-
5	Total funds available in SDRF Account (1+2+3)	410.975

6	Expenditure incurred as per norms on approved natural calamities as per the scheme of SDRF/NDRF on calamities during 2013-14	
	# Avalanches	-
	# Cloud Burst	-
	# Drought	1.559
	# Earthquake / Tsunami	-
	# Fire	3.066
	# Hailstorm	0.331
	# Landslides	0.238
	# Pest Attacks	-
	Sub-total	76.76
7	Expenditure incurred on training during 2013-2014	-
8	Expenditure incurred upto 10% on procurement of search and rescue equipments etc. during 2013-2014	10.833
9	Expenditure incurred on instant cyclone/ floods of October 2013.	547.164
10	Total expenditure incurred on all calamities (6+7+8 +9)	639.948
11	Balance available in SDRF account (5-10)	(-)228.943

≠ Though the second instalment of **Rs.226.655 crore** of the current year 2013-14 (both State and Centre shares) has not been received till date, expenditure has been made in view of the budgetary provision for the amount.

≠ Rs. 185.318 crore also has been spent by the concerned Collectors/ executants out of the available fund with them and it will be reimbursed after augmentation of the opening balance i.e. Rs.184.31 crore in 1st supplementary budget.

Chapter-VIII

Appendix-I

District-wise rainfall data

Sl. No.	Affected District	DATE (Month of October)						Total [mm]
		9 th	10 th	11 th	12 th	13 th	14 th	
1	Angul	13.3	16.1	0.4	4.7	101.0	8.7	144.1
2	Balasore	32.5	18.5	0.0	25.4	125.4	34.9	236.8
3	Bhadrak	23.3	9.9	0.0	49.5	99.3	22.8	204.7
4	Bolangir	1.4	4.0	0.6	4.9	38.4	13.6	62.8
5	Cuttack	14.8	13.4	0.0	24.2	124.2	26.8	203.3
6	Gajapati	5.8	14.5	1.1	10.0	120.2	0.2	151.9
7	Ganjam	4.6	25.0	4.1	24.4	183.0	0.0	241.1
8	Jagatsinghpur	19.4	9.4	0.0	62.5	88.8	9.6	189.6
9	Jajpur	23.3	5.8	0.0	36.9	129.7	44.3	240.0
10	Kandhamal	16.8	9.0	0.8	9.3	153.2	9.0	197.9
11	Kendrapada	43.3	9.2	0.0	29.8	95.7	11.4	189.7
12	Keonjhar	24.0	19.8	0.0	13.1	125.4	33.4	215.8
13	Khurdha	12.8	28.8	0.0	42.2	185.2	4.3	273.3
14	Koraput	8.2	12.3	4.8	0.7	13.9	3.3	43.1
15	Mayurbhanj	25.9	10.8	0.1	15.8	159.8	55.9	268.2
16	Nayagarh	2.0	21.9	0.6	35.0	201.5	0.8	261.7
17	Puri	15.7	13.0	10.5	55.3	106.5	20.6	221.5
18	Deogarh	2.2	20.8	0.0	0.0	60.0	17.1	100.1

Appendix-II

Extent of damage due to natural calamities State-Odisha Nature and period of natural calamity

S.No.	Item	Details
1	Total number of districts in the state	30
2	Number and names of districts affected	18 (Angul, Balasore, Bhadrak, Bolangir, Cuttack, Deogarh, Gajapati, Ganjam, Jagatsinghpur, Jajpur, Kandhamal, Kendrapada, Keonjhar, Koraput, Khurda, Mayurbhanj, Nayagarh, Puri)
3	Number of villages affected	18374
4	Population affected (in lakh)	13235981
5	Total land area affected (in lakh ha)	
6	Cropped area affected in ha	
	(i) Total cropped area affected	1100501
	(ii) Estimated loss to crops	2300 crore
	(iii) Area in ha. where crop damage was more than 50 %	651590
7	Percentage of area held by SMF :	
	(i) In the State as a whole	53.10
	(ii) In the affected Districts	
8	Houses damaged :-	
	(a) No. of house damaged :-	541200
	(i) Fully damaged pucca houses	430
	(ii) Fully damaged kutcha houses	121246
	(iii) Severely damaged pucca houses	7174
	(iv) Severely damaged kutcha house	80406
	(v) Partly damaged houses	180628
	(vi) No. of huts damaged	52161
	(vii) No. of cowshed damaged	99155
(b) Estimated value of damage to houses (Rs.in lakh)	222147.00	
9	No. of human lives lost	44
10	No. of persons with grievous injuries	28
11	No. of persons with minor injuries	53
12	Animals lost:-	
	(a) No. of big animals lost	1500
	(b) No. of small animals lost	3002
	(c) No. poultry (birds) lost	170970

13.	<p>Damage to public properties:- (a) In physical terms (sector wise details should be given – e.g. length of State roads damaged, length of district roads damaged, length of village roads damaged, No. of bridges damaged, No. of culverts damaged, No. of school buildings damaged etc.)</p>	<p>Length of State Roads:1947.35 Km Length of District Roads:8099 Km Length of village Roads:17637.30 Km No of bridges/culverts damaged: 253 No of School buildings damaged: 5825 No of community assets damaged: 4199 Length of River embankments damaged: 874.48Km Length of canal embankment damaged: 765.81 Km No. of Minor Irrigation projects damaged: 1269 No of Lift Irrigation projects damaged: 4848 No of deep bore wells damaged: 641 Length of drainage channels damaged: 700.67 Km</p>
	(b) Estimated value of the damage to public properties.	9852 crore
14.	Estimated total damage to houses, crops and public properties.	14373.47 crore

Appendix-III

Assistance for provision of temporary accommodation, food, clothing, medical care etc. of people affected/evacuated.

(Operation of relief camps)

Sl. No.	Name of the affected district	Average No. (in a day) of relief camps	Average duration of operation of relief camps	Average No. of people accommodated per day in the relief camps	Expenditure incurred on				
					Temporary accommodation	Food	Clothing	Medical care	Other essential items (to be specified)
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
1	Angul	44	1	15664	0	548240	0	0	0
2	Balasore	54	5	131004	230000	22925700	0	150000	122650
3	Bhadrak	82	2	44772	0	3134040	0	0	0
4	Bolangir	1	1	385	0	13475	0	0	0
5	Cuttack	32	2	27520	0	6125000	0	0	0
6	Gajapati	297	3	204930	0	614790	5000	0	36649
7	Ganjam	2210	7	1033950	0	253317750	0	125800	785690
8	Jagatsinghpur	123	2	66420	0	4649400	0	53500	85950
9	Jajpur	181	2	94482	0	6613740	0	63650	52400
10	Kandhamal	69	2	15387	500000	1077090	0	150000	193695
11	Kendrapada	159	2	100170	0	7011900	0	82000	127500
12	Keonjhar	103	3	44290	0	4650450	0	2241494	145000
13	Khurdha	51	1	25704	20000	899640	0	41000	720000
14	Koraput	8	1	5360	0	187600	0	0	0
15	Mayurbhanj	180	3	97200	0	10206000	0	0	92500
16	Nayagarh	158	3	72680	0	7631400	0	0	0
17	Puri	440	7	242880	0	59505600	0	56500	195000
18	Deogarh	2	1	1150	0	40250	0	0	0
Total		4197	52	2223953	750006	389152072	5008	2963953	2557044

Per day per person expenditure incurred Rs. 35/- (average)

Appendix-IV

Calculation of assistance for agricultural Input subsidy- SMF

Sl.No.	Name of the affected district	Total agricultural (Horticultural) area affected (in ha)	Total agricultural area where crop loss is > 50%	Out of (4) area belonging to SMF			Assistance sought for different categories of crops			Total assistance sought (Rs. in lakh)
				Rainfed	Irrigated	Perennial	Rainfed (Rs.4500 x Col.5A)	Irrigated (Rs.9000 x Col. 5B)	Perennial (Rs.12000 x Col.5C)	
1	2	3	4	5A	5B	5C	6A	6B	6C	7 (6A + 6B + 6C)
1	Angul	12382	254	80	40	0	3.60	3.60	0.00	7.20
2	Balasore	95967	80121	65269	4938	185	2937.11	444.42	22.20	3403.73
3	Bhadrak	46332	32096	17576	10183	165	790.92	916.47	19.80	1727.19
4	Bolangir	35000	0	0	0	0	0.00	0.00	0.00	0.00
5	Cuttack	39283	23222	20480	1660	82	921.60	149.40	9.84	1080.84
6	Deogarh	3349	1507	990	12	40	44.55	1.08	4.80	50.43
7	Gajapati	16966	10677	9927	130	95	446.72	11.70	11.40	469.82
8	Ganjam	293900	216749	50097	108466	4650	2254.37	9761.94	558.00	12574.31
9	Jagatsinghpur	9049	3726	2917	288	55	131.27	25.92	6.60	163.79
10	Jajpur	57464	44940	33720	2403	45	1517.40	216.27	5.40	1739.07
11	Kandhamal	1160	260	90	40	35	4.05	3.60	4.20	11.85
12	Kendrapara	23804	16480	14582	190	354	656.19	17.10	42.48	715.77
13	Keonjhar	39848	6016	5198	175	143	233.91	15.75	17.16	266.82
14	Khurda	68699	50334	31972	15263	110	1438.74	1342.62	13.20	2773.94
15	Mayurbhanj	50696	24009	17451	4225	0	785.30	380.25	0.00	1165.55
16	Nayagarh	96040	47489	38554	5477	611	1734.93	492.93	73.32	2301.18
17	Puri	140171	93610	44593	43451	670	2006.69	3910.59	80.40	5997.68
	Total	1030110	651490	353496	196941	7240	15907.32	17693.64	868.80	34449.14

Appendix - V

Agricultural Input Subsidy - farmers other than SMF

Sl. No.	Name of affected district	Total agricultural area where crop loss is >50% (in ha.)	Out of (3) area belonging to farmers other than SMF			No. of farmers other than SMF affected by the instant calamity (only)		
			Rainfed	Irrigated	Perennial	Rainfed	Irrigated	Perennial
1	2	3	4A	4B	4C	5A	5B	5C
1	Angul	254	65	59	10	82	198	0
2	Balasore	80121	9434	230	65	4242	262	73
3	Bhadrak	32096	2056	2046	70	911	927	77
4	Cuttack	23222	400	404	196	662	1011	217
5	Deogarh	1507	427	8	30	357	14	36
6	Gajapati	10677	525	0	0	525	0	0
7	Ganjam	216749	19983	30174	3379	12538	23070	4215
8	Jagatsinghpur	3726	430	25	11	498	107	59
9	Jajpur	44940	8120	625	27	2591	270	36
10	Kandhamal	260	60	20	15	82	26	17
11	Kendrapara	16480	1315	0	39	629	0	46
12	Keonjhar	6016	400	100	0	502	122	0
13	Khurda	50334	2673	251	65	1322	296	79
14	Koraput	0	90	155	9	112	186	13
15	Mayurbhanj	24009	1548	785	0	1514	1067	0
16	Puri	93610	2697	1979	220	1237	943	280
	Total	604001	50223	36861	4136	27804	28499	5148

Contd..

Sl. No.	Name of affected district	No. of farmers other than SMF affected by successive calamities			Assistance sought for different categories of crops						Total assistance sought (Rs. in lakh)
		Rainfed	Irrigated	Perennial	Affected first time			Affected for successive calamities			
					Rainfed	Irrigated	Perennial	Rainfed	Irrigated	Perennial	
1	2	6A	6B	6C	7A	7B	7C	8A	8B	8C	9 (7A + B + C) + 8 (A+B+C)
1	Angul	0	0	0	2.93	5.31	1.20	0.00	0.00	0.00	9.44
2	Balasore	0	0	0	190.80	20.70	7.80	0.00	0.00	0.00	219.30
3	Bhadrak	0	0	0	40.46	82.44	8.40	0.00	0.00	0.00	131.30
4	Cuttack	0	0	0	18.00	36.36	23.52	0.00	0.00	0.00	77.88
5	Deogarh	0	0	0	15.75	0.72	3.60	0.00	0.00	0.00	20.07
6	Gajapati	0	0	0	23.63	0.00	0.00	0.00	0.00	0.00	23.63
7	Ganjam	0	0	0	549.18	2023.92	405.48	0.00	0.00	0.00	2978.58
8	Jagatsinghpur	0	0	0	22.41	9.45	1.32	0.00	0.00	0.00	33.18
9	Jajpur	0	0	0	115.88	21.78	3.24	0.00	0.00	0.00	140.90
10	Kandhamal	0	0	0	2.70	1.80	1.80	0.00	0.00	0.00	6.30
11	Kendrapara	0	0	0	28.31	0.00	4.68	0.00	0.00	0.00	32.99
12	Keonjhar	0	0	0	18.00	9.00	0.00	0.00	0.00	0.00	27.00
13	Khurda	0	0	0	58.95	20.16	7.80	0.00	0.00	0.00	86.91
14	Koraput	0	0	0	4.05	13.95	1.08	0.00	0.00	0.00	19.08
15	Mayurbhanj	0	0	0	58.82	66.33	0.00	0.00	0.00	0.00	125.15
16	Puri	0	0	0	55.31	79.83	26.40	0.00	0.00	0.00	161.54
	Total	0	0	0	1205.15	2391.75	496.32	0.00	0.00	0.00	4093.22

Appendix – VI
Animal Husbandry (Replacement of Animals)

Sl. No.	Name of affected District	No of Cattle lost				No of animals qualifying for relief grant (i.e. subject to ceiling of 1 large milch animal or 4 small milch animals or 1 large draught animal or 2 small draught animal per household)				Assistance sought (Milch animals @ Rs. 16400/ Buffalo / cow / camel / yak etc and Rs. 1650/ Sheep / Goat & Draught Animals @ Rs. 15000/- Camle/horse/bullock etc & Rs. 10,000/- Calf / Donkey / pony / Mule				Total Assistance sought (11 + 12+13+14)
		Milch Animal		Draught Animal		Milch Animal		Draught Animal		Milch Animal		Draught Animal		
		Buffalo / Cow / Camel	Sheep / Goat	Camel / Horse / Bullock	Calf Donkey & Pony	Buffalo / Cow / Camel	Sheep / Goat	Camel / Horse / Bullock	Calf Donkey & Pony	Buffalo / Cow / Camel	Sheep / Goat	Camel / Horse / Bullock	Calf Donkey & Pony	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Balasore	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Bhadrak	3	7	0	0	3	4	0	0	49200	6600	0	0	55800
3	Cuttack	7	34	2	3	7	16	2	3	114800	26400	30000	30000	201200
4	Dhenkanal	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Ganjam	827	2645	89	143	756	2218	62	119	12398400	3659700	930000	1190000	18178100
6	Gajapati	10	12	7	11	9	8	6	6	147600	13200	90000	60000	310800
7	Jagatsinghpur	7	4	0	7	7	4	0	7	114800	6600	0	70000	191400
8	Jajpur	0	2	0	0	0	2	0	0	0	3300	0	0	3300
9	Kendrapara	3	0	2	2	3	0	2	2	49200	0	30000	20000	99200
10	Keonjhar	0	34	3	0	0	34	3	0	0	56100	45000	0	101100
11	Khordha	14	11	3	7	13	9	3	6	213200	14850	45000	60000	333050
12	Mayurbhanj	5	18	0	0	1	10	0	0	16400	16500	0	0	32900
13	Nayagarh	0	80	3	2	0	54	2	2	0	89100	30000	20000	139100
14	Puri	277	155	29	34	95	95	16	22	1558000	156750	240000	220000	2174750
	Total	1153	3002	138	209	894	2454	96	167	14661600	4049100	1440000	1670000	21820700

Appendix- VII
Assistance sought for repair /restoration of damaged houses

Sl. No.	Name of the affected districts	Fully damaged pucca houses @ Rs. 70000 per house		Fully damaged kutcha houses @ Rs. 15000 per house		Severely damaged pucca houses @ Rs. 6300 per house		Severely damaged kuktcha houses @ Rs. 3200 per house	
		No.	Amount	No.	Amount	No.	Amount	No.	Amount
1	2	3	4	5	6	7	8	9	10
1.	Angul	0	0	18	270000	1	6300	124	396800
2.	Balasore	0	0	508	7620000	93	585900	612	1958400
3.	Bhadrak	0	0	375	5625000	0	0	2829	9052800
4.	Bolangir	0	0	0	0	0	0	27	86400
5.	Cuttack	13	910000	351	5265000	146	919800	995	3184000
6.	Gajapati	0	0	84	1260000	4	25200	1458	4665600
7.	Ganjam	365	25550000	102309	1534635000	5882	37056600	42292	135334400
8.	Jagatsinghpur	1	70000	71	1065000	2	12600	74	236800
9.	Jajpur	0	0	242	3630000	0	0	1596	5107200
10.	Kandhamal	6	420000	300	4500000	150	945000	380	1216000
11.	Kendrapada	0	0	0	0	83	522900	1931	6179200
12.	Keonjhar	0	0	216	3240000	10	63000	775	2480000
13.	Khurdha	0	0	81	1215000	13	81900	5559	17788800
14.	Mayurbhanj	45	3150000	10947	164205000	220	1386000	6252	20006400
15.	Nayagarh	0	0	1008	15120000	0	0	4835	15472000
16.	Puri	0	0	4736	71040000	570	3591000	10642	34054400
17.	Deogarh	0	0	0	0	0	0	25	80000
	Total	430	30100000	121246	1818690000	7174	45196200	80406	257299200

Contd..

Sl. No.	Name of the affected districts	Partially damaged pucca / kutcha houses @ Rs. 1900 per house		Huts/vvs damaged/ destroyed @ Rs. 2500 per house		Cowshed damaged / destroyed @1250 per shed		Total Amount in lakh
		No.	Amount	No.	Amount	No.	Amount	
1	2	11	12	13	14	15	16	17
1.	Angul	3244	6163600	1	2500	40	50000	68.892
2.	Balasore	212	402800	884	2210000	462	577500	133.546
3.	Bhadrak	11050	20995000	265	662500	109	136250	364.716
4.	Bolangir	197	374300	0	0	0	0	4.607
5.	Cuttack	9774	18570600	909	2272500	79	98750	312.207
6.	Gajapati	16450	31255000	406	1015000	0	0	382.208
7.	Ganjam	547	1039300	13234	33085000	65371	81713750	18484.141
8.	Jagatsinghpur	1509	2867100	648	1620000	813	1016250	68.878
9.	Jajpur	6723	12773700	1467	3667500	118	147500	253.259
10.	Kandhamal	3937	7480300	7374	18435000	136	170000	331.663
11.	Kendrapada	3	5700	0	0	115	143750	68.516
12.	Keonjhar	11315	21498500	2117	5292500	468	585000	331.590
13.	Khurdha	32207	61193300	166	415000	1498	1872500	825.665
14.	Mayurbhanj	18785	35691500	10042	25105000	0	0	2495.439
15.	Nayagarh	14694	27918600	2284	5710000	1995	2493750	667.144
16.	Puri	49603	94245700	12363	30907500	27906	34882500	2687.211
17.	Deogarh	378	718200	1	2500	45	56250	8.570
	Total	180628	343193200	52161	130402500	99155	123943750	27488.249

Appendix-VIII

Format for working out the requirements under the head of repair of damaged infrastructure of immediate nature.
(Rs.in Lakh)

Sector	Damage in physical terms	Requirement of funds for repair of immediate nature	Out of (3), amount available from available from related Schemes/ programmes / Other sources	Out of (3), amount available from related Schemes/ programmes / other sources	Out of (3), amount proposed to be met from SDRF/ NDRF in accordance with list of works indicated in the Appendix to the revised items and norms
1	2				
Roads & Bridges	Length of State Roads:1947.35 Km Length of District Roads:8099 Km Length of village Roads:17637.30 Km No of bridges/culverts damaged: 253 NH damaged : 790.939 km	95571.00	0	0	95571.00
Drinking water Supply works	Urban	989.75	0	0	989.75
	Rural	PWS: 3040 nos. & Tube wells: 162170 nos.	2760.87	68.00	2692.87
Irrigation	Length of River embankments damaged: 874.48Km Length of canal embankment damaged: 765.81 Km No. of Minor Irrigation projects damaged: 1269 No of Lift Irrigation projects damaged: 4848 No of deep bore wells damaged: 641 Length of drainage channels damaged: 700.67 Km	43086.39	0	0	43086.39
Power	No. of feeder:1756 No. of Substation: 38997 Length of conductor of LT line:36133.9 Km Length of EHT line: 4074 Km No. of Electric pole:211014 No. of EHT tower: 93	104814.00	0	0	104814.00

Primary education	No of School buildings damaged: 5825	27858.61	4000.00	0	23858.61
Primary health Centres	No. of primary health Centres:539	1485.17	0	0	1485.17
Community assets in social sector owned by panchayats	No of community assets damaged: 5212	24603.00	0	0	24603.00
Higher Education	No of College/University building: 226	4792.00	0	0	4792.00
Other Govt. buildings	No. of buildings:5809	5656.98	500.00	0	5156.98
Total		311617.77	4568	0	307049.77

Chapter- IX

Conclusion

State Government by this Memorandum seeks the following assistance from the Government of India:

- A total financial assistance of Rs.4242.41 crore out of NDRF may be provide immediately to complete the process of relief and restoration measures caused due to cyclone and flood thereafter.
- An Inter Ministerial Central Team may be deputed immediately to the State for assessment of damage.

□□□□□

Chapter- X

Report of IMD about Very Severe Cyclonic Storm "PHAILIN"



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 13.10.2013 AT 0430EF

Very Severe Cyclonic Storm, "PHAILIN" over Northwest and adjoining West Central Bay of Bengal has crossed Coast close to Gopalpur (Odisha): (RED MESSAGE)

The very severe cyclonic storm, PHAILIN over northwest adjoining westcentral Bay of Bengal moved north-northwestwards during past 3 hours with a speed of 15 kmph and crossed Odisha & adjoining north coastal Andhra Pradesh near Gopalpur between 2030 to 2130 IST of 12th October 2013 and lay centred at 2330 hrs IST of 12th October 2013 near latitude 19.5° N and longitude 84.8° E, 25 km northwest of Gopalpur over south coastal Odisha. The system would move in north-northwestwards and weaken gradually.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over Odisha during next 48 hours.

Advice for hoisting Storm Warning Signals:

Great Danger Signal Number Ten (GD-X) for Gopalpur and Puri Ports and Great Danger Signal Number Nine (GD-IX) for Paradip and Chandbali Ports kept hoisted.

Likely impacts and actions:

Gale winds speed reaching 210-220 kmph gusting to 240 kmph along and off districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Cuttack, Bhadrak, Nayagarh and Kendrapara of Odisha during next 6 hours. State of Sea along and off Odisha coast will be phenomenal.

Damage expected over Odisha:-

Extensive damage to kutcha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris, Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Total suspension of fishing operations. Large scale evacuation of population from coastal areas. Total suspension of rail and road traffic in vulnerable areas. People in affected areas to remain indoors.

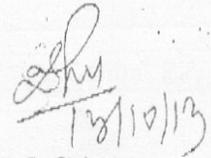
Fishermen Warning :-

Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Post landfall outlook:

The system is likely to maintain the intensity of very severe cyclonic storm for 6 hours and gradually weaken into cyclonic storm in subsequent 6 hours while moving northwestwards across interior Odisha. Under its influence rainfall at most places with heavy falls at a few places and extremely heavy falls at isolated places would occur over Odisha. Squally wind speed reaching 100-120 kmph would also prevail for 6 hours and 60-70 for subsequent 6 hours over Odisha during the same period.

To: 13/0430 EF



**(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar**

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M.D. OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0671-2507906) / Southern Division (0680-2292750) /
Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 12.10.2013 AT 1700EF

Very Severe Cyclonic Storm, "PHAILIN" over West Central and adjoining Northwest Bay of Bengal: Cyclone Warning-Nineteen for Odisha Coast: (RED MESSAGE)

The very severe cyclonic storm, PHAILIN over westcentral & adjoining northwest Bay of Bengal moved north northwestwards during past 3 hours with a speed of 20 kmph and lay centred at 1430 hrs IST of today, the 12th October 2013 over westcentral & adjoining northwest Bay of Bengal near latitude 18.6° N and longitude 85.4° E about 90 km southeast of Gopalpur. It would move northwestwards and cross north Andhra Pradesh and Odisha coasts close to Gopalpur (Odisha) during 6-8 P.M. of today i.e. the 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 210-220 kmph gusting to 240 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 48 hours.

Heavy R/F Warning: Heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Nayagarh, Cuttack, Bhadrak and Kendrapara in Coastal Odisha during next 48 hours and districts of interior Odisha from today afternoon for subsequent 48 hours.

Advice for hoisting Storm Warning Signals:

Great Danger Signal Number Ten (GD-X) for Gopalpur and Puri Ports and Great Danger Signal Number Nine (GD-IX) for Paradip and Chandbali Ports kept hoisted.

Likely impacts and actions:

Gale winds speed reaching 210-220 kmph gusting to 240 kmph along and off districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Cuttack, Bhadrak, Nayagarh and Kendrapara of Odisha at the time of landfall. State of Sea along and off Odisha coast will be phenomenal. Storm surge with height of 3.0 to 3.5 metre above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha.

Damage expected over Odisha:-

Extensive damage to kutcha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris. Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Total suspension of fishing operations. Large scale evacuation of population from coastal areas. Total suspension of rail and road traffic in vulnerable areas. People in affected areas to remain indoors.

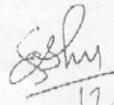
Fishermen Warning :-

Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Post landfall outlook:

Even after landfall the system is likely to maintain the intensity of very severe cyclonic storm for 6 hours gradually weaken into a cyclonic storm in subsequent 6 hours while moving northwestwards across into Odisha. Under its influence rainfall at most places with heavy falls at a few places and extremely heavy fall isolated places would occur over Odisha. Squally wind speed reaching 100-120 kmph would also prevail for 6 hours and 60-70 for subsequent 6 hours over Odisha during the same period.

Too: 12/1430 EF


12/10/13
(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M. D., OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0671-2507906) / Southern Division (0680-2292750) /
Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 12.10.2013 AT 1430EF

Very Severe Cyclonic Storm, "PHAILIN" over West Central and adjoining Northwest Bay of Bengal: Cyclone Warning-Eighteen for Odisha Coast: (RED MESSAGE)

The very severe cyclonic storm, PHAILIN over westcentral & adjoining northwest Bay of Bengal moved northwestwards during past 6 hours with a speed of 15 kmph and lay centred at 1130 hrs IST of today, the 12th October 2013 over westcentral & adjoining northwest Bay of Bengal near latitude 18.1° N and longitude 85.7° E, about 150 km southeast of Gopalpur and 260 km southeast of Paradip. It would move northwestwards and cross north Andhra Pradesh and Odisha coasts between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of today i.e. the 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 210-220 kmph gusting to 240 kmph.

Forecast: Rain/Thundershower would occur at most places over Odisha during next 48 hours.

Heavy R/F Warning: Heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Nayagarh, Cuttack, Bhadrak and Kendrapara in Coastal Odisha during next 48 hours and districts of interior Odisha from today afternoon for subsequent 48 hours.

Advice for hoisting Storm Warning Signals:

Great Danger Signal Number Ten (GD-X) for Gopalpur and Puri Ports and Great Danger Signal Number Nine (GD-IX) for Paradip and Chandbali Ports kept hoisted.

Likely impacts and actions:

Squally winds speed reaching 80-90 kmph gusting to 100 kmph would prevail along and off Odisha coast during next 06 hours. It would increase in intensity with gale wind speed reaching 100-150 KMPH from noon and 210-220 kmph gusting to 240 kmph along and off districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Cuttack, Bhadrak and Kendrapara of Coastal Odisha at the time of landfall. State of Sea along and off Odisha coast will be high and will become gradually phenomenal from afternoon of today. Storm surge with height of 3.0 to 3.5 mt above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Damage expected over Odisha:-

Extensive damage to kutchha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris. Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Total suspension of fishing operations. Large scale evacuation of population from coastal areas. Total suspension of rail and road traffic in vulnerable areas. People in affected areas to remain indoors.

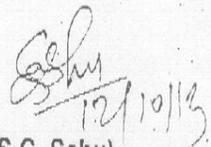
Fishermen Warning :-

Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Post landfall outlook:

Even after landfall the system is likely to maintain the intensity of very severe cyclonic storm for 6 hours and gradually weaken into a cyclonic storm in subsequent 6 hours while moving northwestwards across interior Odisha. Under its influence rainfall at most places with heavy falls at a few places and extremely heavy falls at isolated places would occur over Odisha.

Too: 12/1230 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M: D, OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0671-2507906) / Southern Division (0680-2292750) /
Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

2.30 AM
12/10/2013

PRESS BULLETIN

Press/AIR/Doordarshan

Date and Time of Issue: 12.10.2013 AT 0630EF

Very Severe Cyclonic Storm, "PHAILIN" over West Central and adjoining East Central Bay of Bengal: Cyclone Warning-Fifteen for Odisha Coast: (RED MESSAGE)

The very severe cyclonic storm, PHAILIN over westcentral and adjoining eastcentral Bay of Bengal moved northwestwards during past 6 hours and lay centred at 0230 hrs IST of today, the 12th October 2013 over westcentral and adjoining eastcentral Bay of Bengal near latitude 17.1° N and longitude 86.8° E, about 355 km south-southeast of Paradip and 320 km southeast of Gopalpur. It would move northwestwards and cross north Andhra Pradesh and Odisha coasts between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of today i.e. the 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 210-220 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 48 hours.

Heavy R/F Warning: Rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Nayagarh, Cuttack, Bhadrak and Kendrapara in Coastal Odisha during next 48 hours and districts of interior Odisha from tomorrow forenoon for subsequent 48 hours.

Advice for hoisting Storm Warning Signals:

Local Cautionary Signal Number Three (LC-III) kept hoisted at all ports in Odisha.

Likely Impacts and actions: Squally winds speed reaching 55-65 kmph gusting to 75 kmph would prevail along and off Odisha coast during next 06 hours. It would increase in intensity with gale wind speed reaching 100-150 KMPH from forenoon and 210-220 kmph along and off districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Cuttack, Bhadrak and Kendrapara of Coastal Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough and will become gradually phenomenal on 12th October 2013. Storm surge with height of 3.0 to 3.5 mt above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Damage expected over Odisha:-

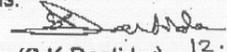
Extensive damage to kutcha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris. Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Mobilise evacuation from coastal areas. Judicious regulation of rail and road traffic. People in affected areas to remain indoors during cyclone landfall.

Fishermen Warning : Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Too: 12/0630 EF


(S.K. Dastidar) 12.10.13
For Director In Charge
M.C. Bhubaneswar

11.30 PM
11/10/2013



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 12.10.2013 AT 0430EF

Very Severe Cyclonic Storm, "PHAILIN" over West Central and adjoining East Central Bay of Bengal: Cyclone Warning-Thirteen for Odisha Coast: (RED MESSAGE)

The very severe cyclonic storm, PHAILIN over westcentral and adjoining eastcentral Bay of Bengal moved west-northwestwards during past 6 hours and lay centred at 2330 hrs IST of 11th October 2013 over westcentral and adjoining eastcentral Bay of Bengal near latitude 16.9° N and longitude 87.0° E, about 375 km south-southeast of Paradip and 345 km southeast of Gopalpur. It would move northwestwards and cross north Andhra Pradesh and Odisha coasts between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of today i.e. the 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 210-220 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 48 hours.

Heavy R/F Warning: Rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Nayagarh, Cuttack, Bhadrak and Kendrapara in Coastal Odisha during next 48 hours and districts of interior Odisha from tomorrow afternoon for subsequent 48 hours.

Advice for hoisting Storm Warning Signals:

Local Cautionary Signal Number Three (LC-III) kept hoisted at all ports in Odisha.

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Odisha coast during next 06 hours. It would increase in intensity with gale wind speed reaching 100-150 KMPH from forenoon and 210-220 kmph along and off districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Cuttack, Bhadrak and Kendrapara of Coastal Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough and will become gradually phenomenal on 12th October 2013. Storm surge with height of 3.0 to 3.5 mt above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Damage expected over Odisha:-

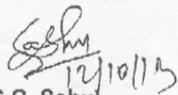
Extensive damage to kutcha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris. Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Mobilise evacuation from coastal areas. Judicious regulation of rail and road traffic. People in affected areas to remain indoors during cyclone landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Too: 12/0430 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 11.10.2013 AT 1430EF

Very Severe Cyclonic Storm: "PHAILIN" over East Central Bay of Bengal: Cyclone Warning-Ten for Odisha Coast: (ORANGE MESSAGE)

The very severe cyclonic storm, PHAILIN over east central Bay of Bengal moved northwestwards and lay centred at 1130 hrs IST of 11th October 2013 over west central and adjoining Bay of Bengal near latitude 16.2°N and longitude 88.3°E about 500 km south-southeast of Paradip and 490 km southeast of Gopalpur. It would move northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 210-220 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy to very heavy rainfall would occur at one or two places over districts of South Odisha and heavy rainfall at one or two places in North Odisha districts during next 12 hours. Under the influence of this system, rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over coastal Odisha commencing from 11th October 2013 night. It would continue and extend to interior Odisha from 12th October, 2013 night.

Advice for hoisting Storm Warning Signals:

Local Cautionary Signal Number Three (LC-III) kept hoisted at all ports in Odisha.

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Odisha coast during next 12 hours. It would increase in intensity with gale wind speed reaching 210-220 kmph along and off coastal districts of south Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough and will become gradually phenomenal on 12th October 2013. Storm surge with height of around 3.0 mt above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Damage expected over Odisha:-

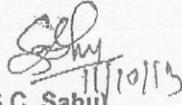
Extensive damage to kutcha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris. Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Mobilise evacuation from coastal areas. Judicious regulation of rail and road traffic. People in affected areas to remain indoors during cyclone landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Too: 11/1430 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 11.10.2013 AT 2030EF

**Very Severe Cyclonic Storm, "PHAILIN" over East Central Bay of Bengal: Cyclone Warning-
Twelve for Odisha Coast: (ORANGE MESSAGE)**

The very severe cyclonic storm, PHAILIN over eastcentral Bay of Bengal moved northwestwards and lay centred at 1730 hrs IST of 11th October 2013 over westcentral and adjoining eastcentral Bay of Bengal near latitude 16.8°N and longitude 87.7°E, about 400 km south-southeast of Paradip and 400 km southeast of Gopalpur. It would move northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 210-220 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 24 hours.

Heavy R/F Warning: Rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Nayagarh, Cuttack, Bhadrak and Kendrapara in Coastal Odisha during next 48 hours and interior Odisha from tomorrow afternoon for subsequent 48 hours.

Advice for hoisting Storm Warning Signals:

Local Cautionary Signal Number Three (LC-III) kept hoisted at all ports in Odisha.

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Odisha coast during next 12 hours. It would increase in intensity with gale wind speed reaching 100-150 KMPH from forenoon and 210-220 kmph along and off districts of Gajapati, Ganjam, Khurda, Puri, Jagatsinghpur, Cuttack, Bhadrak and Kendrapara of Coastal Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough and will become gradually phenomenal on 12th October 2013. Storm surge with height of 3.0 to 3.5 mt above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Damage expected over Odisha:-

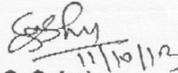
Extensive damage to kutchha houses. Some damage to old buildings. Large scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris. Flooding of escape routes. Extensive damage to agricultural crops.

Action Suggested:-

Mobilise evacuation from coastal areas. Judicious regulation of rail and road traffic. People in affected areas to remain indoors during cyclone landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Too: 11/2030 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 11.10.2013 AT 1000EF

**Very Severe Cyclonic Storm: "PHAILIN" over East Central Bay of Bengal: Cyclone Warning-
Eight for Odisha Coast: (ORANGE MESSAGE)**

The very severe cyclonic storm, PHAILIN over east central Bay of Bengal moved west-northwestwards with a speed of 15 kmph and lay centred at 0530 hrs IST of 11th October 2013 near latitude 16.0°N and longitude 88.5°E, about 520km south-southeast of Paradip and 530km southeast of Gopalpur. It would move northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 205-215 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy to very heavy rainfall would occur at one or two places over districts of South Odisha and heavy rainfall at one or two places in North Odisha districts during next 24 hours. Under the influence of this system, rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over coastal Odisha commencing from 12th October 2013 morning. It would continue and extend to interior Odisha.

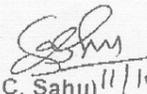
Advice for hoisting Storm Warning Signals:

Distant Warning Signal Number Two (DW-II) replaced by Local Cautionary Signal Number Three (LC-III) at Paradip and Gopalpur ports in Odisha. LC-III hoisted at Chandbali and Puri Ports

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would prevail along and off Odisha coast. It would increase in intensity with gale wind speed reaching 205-215 kmph along and off coastal districts of south Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough and will become phenomenal on 12th October 2013. Storm surge with height of around 2.5-3.0 m above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea. Total suspension of fishing operations.

Too: 11/1000 EF


(Dr. S.C. Sahu) 11/10/13
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 10.10.2013 AT 2330EF

Very Severe Cyclonic Storm, "PHAILIN" over East Central Bay of Bengal: Cyclone Warning-Five for Odisha Coast: (ORANGE MESSAGE)

The very severe cyclonic storm, PHAILIN over east central Bay of Bengal remained practically stationary slightly intensified further and lay centred at 2030 hrs IST of today the 10th October 2013 near latitude 15.5°N and longitude 90.0°E, about 650km southeast of Paradip and 700km southeast of Gopalpur. It would continue to move northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 190-200 kmph.

Forecast: Rain/Thundershower would occur at most places over Odisha during next 12 hours.

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 12 hours. Under the influence of this system, rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over coastal Odisha commencing from 12th October 2013 morning. It would continue and extend to interior Odisha.

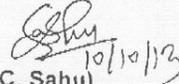
Advice for hoisting Storm Warning Signals:

Distant Warning Signal Number Two (DW-II) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would commence along and off Odisha coast from 11th morning. It would increase in intensity with gale wind speed reaching 190-200 kmph along and off coastal districts of south Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough from 11th morning and will become phenomenal on 12th October 2013. Storm surge with height of around 2.0-2.5 m above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea.

Too: 10/2330 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 10.10.2013 AT 1530EF

Very Severe Cyclonic Storm, "PHAILIN" over East Central Bay of Bengal: Cyclone Warning-Two for Odisha Coast: (ORANGE MESSAGE)

The Severe cyclonic storm, PHAILIN over east central Bay of Bengal moved Northwest wards, intensified into a very severe cyclonic storm and lay centred at 1130 hrs IST of today the 10th October 2013 near latitude 15.0°N and longitude 90.5°E, about 800km southeast of Paradip. It would continue to move northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 175-185 kmph.

Forecast: Rain/Thundershower would occur at most places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 24 hours. Under the influence of this system, rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls ($\geq 25\text{cm}$) would occur over coastal Odisha commencing from 12th October 2013 morning. It would continue and extend to interior Odisha.

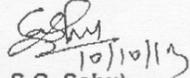
Advice for hoisting Storm Warning Signals:

Distant Warning Signal Number Two (DW-II) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would commence along and off Odisha coast from 11th morning. It would increase in intensity with gale wind speed reaching 175-185 kmph along and off coastal districts of south Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough from 11th morning and will become phenomenal on 12th October 2013. Storm surge with height of around 1.5-2.0 m above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea.

Too: 10/1530 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 10.10.2013 AT 1230EF

Severe Cyclonic Storm, "PHAILIN" over East Central Bay of Bengal: Cyclone Warning-One for Odisha

Coast: (ORANGE MESSAGE)

The cyclonic storm, PHAILIN over east central Bay of Bengal moved slightly west wards, intensified into a severe cyclonic storm and lay centred at 0830 hrs IST of today the 10th October 2013 near latitude 14.5^oN and longitude 91.0^oE, about 820km southeast of Paradip. The system would intensify into a very severe cyclonic storm during next 24 hours. It would continue to move northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip, close to Gopalpur (Odisha) by evening of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 175-185 kmph.

Forecast : Rain/Thundershower would occur at most places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 24 hours. Under the influence of this system, rainfall at most places with heavy to very heavy falls at a few places with isolated extremely heavy falls (≥ 25 cm) would occur over coastal Odisha commencing from 12th October 2013 morning. It would continue and extend to interior Odisha.

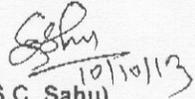
Advice for hoisting Storm Warning Signals:

Distant Warning Signal Number Two (DW-II) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally winds speed reaching 45-55 kmph gusting to 65 kmph would commence along and off Odisha coast from 11th morning. It would increase in intensity with gale wind speed reaching 175-185 kmph along and off coastal districts of south Odisha at the time of landfall. State of Sea along and off Odisha coast will be rough to very rough from 11th morning and will become phenomenal on 12th October 2013. Storm surge with height of around 1.5-2.0 m above astronomical tide would inundate low lying areas of Ganjam, Khurda, Puri and Jagatsinghpur districts of Odisha during landfall.

Fishermen Warning :- Fishermen out at sea are advised to return to coast. Fishermen are advised not to venture into sea.

Too: 10/1230 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 10.10.2013 AT 0530EF ✓

Cyclonic Storm, "PHAILIN" over East Central Bay of Bengal: Cyclone Alert-Five for Odisha Coast:

The cyclonic storm, **PHAILIN** over east central Bay of Bengal remained practically stationery, and lay centred at 2330 hrs IST of 09th October 2013 over near latitude 13.5^oN and longitude 92.5^oE, about 950km southeast of Paradip. The system would intensify into a severe cyclonic storm during next 24 hours. It would continue to move west-northwestwards for some time and then northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip by night of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 175-185 kmph.

Forecast: Rain/Thundershower would occur at a many places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 24 hours.

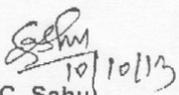
Advice for hoisting Storm Warning Signals:

Distant Warning Signal Number Two (DW-II) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally weather will prevail along and off Odisha Coast after 12 hours.

Fishermen Warning :- Fishermen who are in the deep sea are advised to return to the coast immediately. Sea will be rough to very rough after 12 hours.

Too: 10/0530 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M. D. , OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0671-2507906) / Southern Division (0680-2292750) /
Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 09.10.2013 AT 2030EF

Cyclonic Storm, "PHAILIN" over East Central Bay of Bengal: Cyclone Alert-Four for Odisha Coast:

The deep depression over east central Bay of Bengal remained practically stationary, intensified into a cyclonic storm, **PHAILIN** and lay centred at 1730 hrs IST of today, 09th October 2013 over near latitude 13.5^oN and longitude 92.5^oE, about 950km southeast of Paradip. The system would intensify into a severe cyclonic storm during next 24 hours. It would continue to move west-northwestwards for some time and then northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip by night of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 175-185 kmph.

Forecast: Rain/Thundershower would occur at a many places over Odisha during next 12 hours.

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 12 hours.

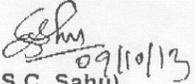
Advice for hoisting Storm Warning Signals:

Distant Cautionary Signal Number One (DC-I) replaced by Distant Warning Signal Number Two (DW-II) at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally weather will prevail along and off Odisha Coast after 12 hours.

Fishermen Warning :- Fishermen who are in the deep sea are advised to return to the coast immediately. Sea will be rough to very rough after 12 hours.

Too: 09/2030 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M. D. , OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0871-2507906) / Southern Division (0680-2292750) /
Northern Division (0683-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 09.10.2013 AT 1000EF

Deep Depression over North Andaman Sea: Pre Cyclone Alert-One for Odisha Coast:

The depression over North Andaman Sea moved northwestward with a speed of 13 kmph during past 6 hours, intensified into a deep depression and lay centred at 0530 hrs IST of today, the 09th October 2013 over north Andaman Sea near latitude 13.0°N and longitude 93.6°E, about 1100 km east-southeast of Paradip. The system would intensify into a cyclonic storm during next 12 hours. It would move west-northwestwards and cross Andaman islands near Mayabandar by noon of today, the 9th October 2013 as a cyclonic storm. It would then continue to move west-northwestwards for some time and then northwestwards and cross north Andhra Pradesh and Odisha coast between Kalingapatnam and Paradip by night of 12th October, 2013 as a very severe cyclonic storm with a maximum sustained wind speed of 175-185 kmph.

Forecast : Rain/Thundershower would occur at a many places over Odisha during next 24 hours.

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 24hours

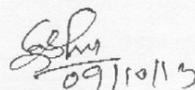
Advice for hoisting Storm Warning Signals:

Distant Cautionary Signal Number One (DC-1) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally weather will prevail along and off Odisha Coast after 24 hours.

Fishermen Warning :- Fishermen who are in the deep sea are advised to return to the coast immediately. Sea will be rough to very rough after 12 hours.

Too: 09/1000 EF


(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M. D. , OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0671-2507906) / Southern Division (0680-2292750) /
Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 08.10.2013 AT 2030EF

Depression over North Andaman Sea: Pre Cyclone Watch for Odisha Coast:

The depression over North Andaman Sea moved westward with a speed of 18 Kmph during past 6 hours and lay centred at 1730 hrs IST of today, the 08th October 2013 over north Andaman Sea near latitude 12.0°N and longitude 94.5°E, about 1250 km east-southeast of Paradip. The system would intensify into a deep depression and further into a cyclonic storm by tomorrow. It would move west-northwestwards and cross Andaman islands between Long island and Mayabandar by tomorrow morning as a deep depression. It would then continue to move west-northwestwards for some time and then northwestwards towards north Andhra Pradesh and Odisha coast during next 72 hours.

Forecast : Rain/Thundershower would occur at a many places over Odisha

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 36hours.

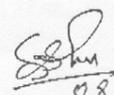
Advice for hoisting Storm Warning Signals:

Distant Cautionary Signal Number One (DC-1) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally weather will prevail along and off Odisha Coast after 36hours.

Fishermen Warning :- Fishermen who are in the deep sea are advised to return to the coast .Sea will be rough to very rough after 24 hours.

Too: 08/2030 EF


08/10/13
(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar.
M. D. , OSDMA, Government of Odisha, Bhubaneswar.
DG Police, Cuttack.
Dy. Commissioner of Police, Bhubaneswar
RDC, Central Division (0671-2507906) / Southern Division (0680-2292750) /
Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

Date and Time of Issue: 08.10.2013 AT 1430EF

Depression over North Andaman Sea: Pre Cyclone Watch for Odisha Coast:

The **Depression** over North Andaman Sea moved westward with a speed of 18 Kmph during past 3 hours and lay centred at 1130 hrs IST of today, the 08th October 2013 over north Andaman Sea near latitude 12.0°N and longitude 95.5.0°E, about 1350 km east-southeast of Paradip. The system would intensify into a deep depression and further into a cyclonic storm by tomorrow. It would move west-northwestwards towards north Andhra Pradesh and Odisha coast during next 72 hours.

Forecast : Rain/Thundershower would occur at a many places over Odisha

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 48 hours.

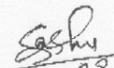
Advice for hoisting Storm Warning Signals:

Distant Cautionary Signal Number One (DC-I) kept hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally weather will prevail along and off Odisha Coast after 48 hours.

Fishermen Warning :- Fishermen who are in the deep sea are advised to return to the coast. Sea will be rough to very rough after 24 hours.

Too: 08/1430 EF


08/10/13
(Dr. S.C. Sahu)
Director-in-Charge
M. C. Bhubaneswar

To

The Chief Secretary, Govt. of Odisha, Bhubaneswar.
The Principal Secretary to Chief Minister, Govt. of Odisha, Bhubaneswar
The Commissioner cum Secretary to Governor, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Home Department, Govt. of Odisha, Bhubaneswar.
Principal Secretary, Revenue & Disaster Management, Govt. of Odisha, Bhubaneswar
SRC, Govt. of Odisha, Bhubaneswar
M. D. , OSDMA, Government of Odisha, Bhubaneswar.
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Northern Division (0663-2411645).



INDIA METEOROLOGICAL DEPARTMENT
CYCLONE WARNING CENTRE
BHUBANESWAR

PRESS BULLETIN

Press/AIR/Doordarshan

Date and Time of Issue: 08.10.2013 AT 1230EF

Information on Depression:

Latest satellite imagery and observations indicate that a depression has formed over north Andaman Sea and lay centred at 0830 hrs IST of today, the 08th October 2013 near latitude 12.0°N and longitude 96.0°E, about 1450 km east-southeast of Paradip. The system would intensify into a deep depression and further into a cyclonic storm by tomorrow. It would move west-northwestwards towards north Andhra Pradesh and Odisha coast during next 72 hours.

Forecast : Rain/Thundershower would occur at a many places over Odisha

Heavy R/F Warning: Heavy rainfall would occur at one or two places over Odisha during next 48 hours.

Advice for hoisting Storm Warning Signals:

Distant Cautionary Signal Number One (DC-I) hoisted at Paradip and Gopalpur ports in Odisha

Likely impacts and actions: Squally weather will prevail along and off Odisha Coast after 48 hours.

Fishermen Warning :- Sea condition will be rough to very rough along and off Odisha coast after 48 hours.

Too: 08/1230 EF


8.10.13
(S.K.Dastidar)
For Director In Charge
M.C.Bhubaneswar

Chapter- XI

Visual Accounts



Evacuation process



Evacuation process



Evacuation process



Evacuation process





Evacuation of domestic animals to shelter





Devastation by PHAILIN





Devastation by PHAILIN







