



Government of Orissa

Memorandum on Floods -2011

**Special Relief Commissioner, Orissa
Revenue & Disaster Management Department**

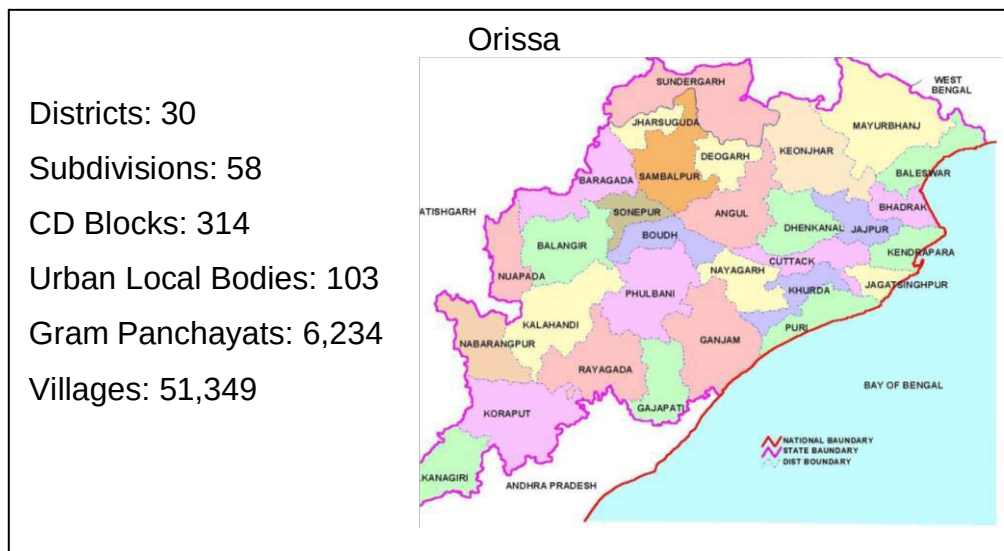
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Chapter-I

Overview



The State of Orissa is located between $17^{\circ} 48' \text{ N}$ and $22^{\circ} 35' \text{ N}$ latitudes, and $81^{\circ} 47' \text{ E}$ and $87^{\circ} 32' \text{ E}$ longitudes. It extends over an area of 1,55,707 square km and is bounded by Bay of Bengal on the east (with coast line of about 480 km); Chhattisgarh on the west; Andhra Pradesh on the south and Jharkhand & West Bengal on the North. According to 2011 Census, the State has a total population (provisional) of 4,19,47,358; the rural population being 3,49,51,234.

The State on account of its unique geo-climatic conditions has been vulnerable to natural disasters. Floods, droughts and cyclones have been recurrent phenomena. In each year between 1995 and 2011, the State has experienced one calamity or the other without respite. The State which encountered severe drought situation in 18 districts in 2009 was also affected by drought in 17 districts and faced unseasonal cyclonic rain in 24 districts during 2010. Now, 19 districts of the State are writhing under the destructive impact of floods in the major river systems i.e., Mahanadi, Brahmani, Baitarani & Subarnarekha.

The recurring phenomena of natural disasters in quick succession and their destructive implications on land, labour, livelihood, assets and infrastructure have severely impacted all sectors of socio-economic life.



River Systems of Orissa

The river systems of Orissa comprises the Mahanadi, the Brahmani, the Baitarani, the Subarnarekha, the Budhabalanga, the Vansadhara, the Rusikulya, the Nagabali, the Indravati and their tributaries and distributaries.



Mahanadi River System:

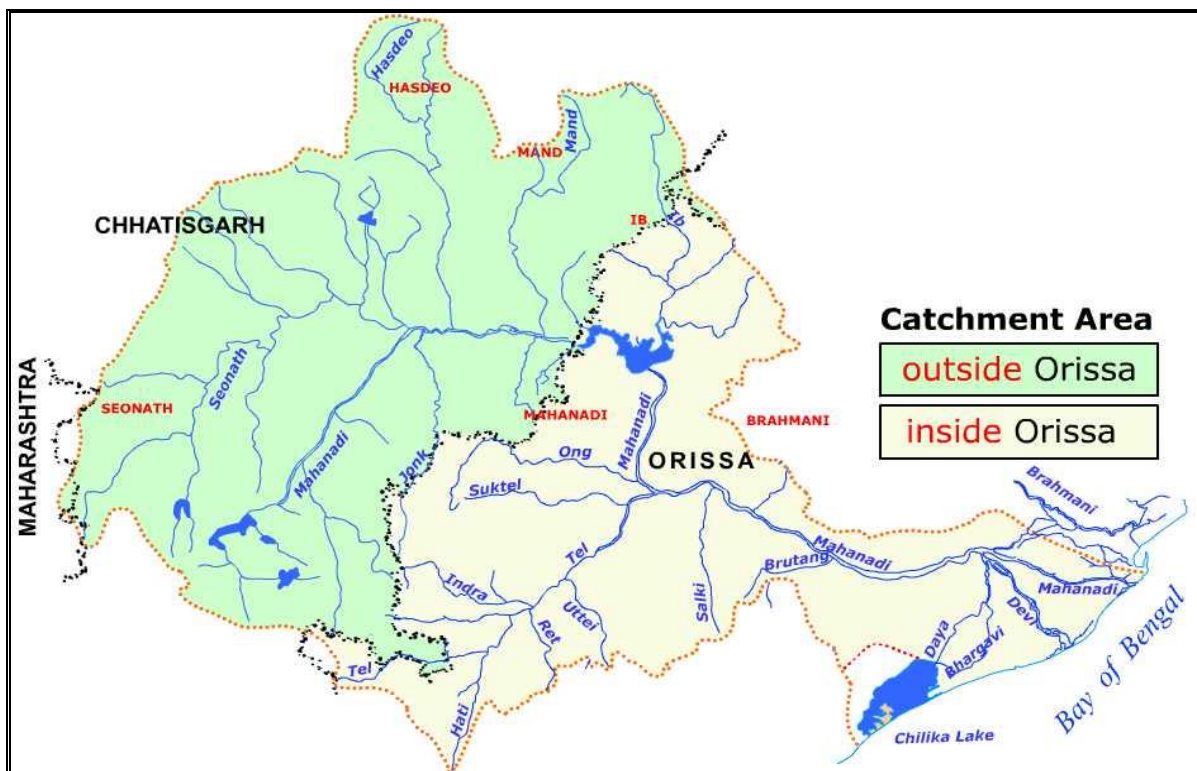
River Mahanadi is the sixth largest river of India and the largest river in Orissa. It originates from the Amarkantak hills of the Bastar Plateau near Pharasiya village in Raipur district of Chhattisgarh. After entering the old Bilaspur district, it is joined by its first major tributary, the Seonath. Subsequently and before entering into Orissa it is joined by the Jonk and Hasdeo rivers.

This river in its onward journey through erosional plains bifurcates into a number of branches and sub-branches forming the Mahanadi delta (9063 sq. km) before out-falling into the Bay of Bengal. The major tributaries of river Mahanadi in Orissa are Ib, Ong, Tel, Suktel, Jira, Hati etc. The major branches and sub-branches are Kathjori, Kuakhai, Kushabhadra, Bhargavi, Daya, Sirua, Biluakhai, Devi,



Chitrotpala, Luna, Karandia, Paika, Birupa and Badagenguti. Daya and Bhargavi fall into the Chilika Lake while the other branches and sub- branches including the river Mahanadi fall into Bay of Bengal.

The catchment area of Mahanadi spreads over 141600 square km (65,628 square km in Orissa). Hirakud dam constructed in 1957 across Mahanadi near Sambalpur drains an area of 83,400 square km. It is the largest earthen dam in the world measuring 24 km including dykes; having reservoir spread of 743 square km and live storage capacity of 5.37×10^9 cum. However, it is the only such structure to moderate the downstream floods.



The Brahmani:

It is the second largest river in Orissa. It originates as two major rivers namely the Sankh and the Koel from the Chhotangpur Plateau and both join at Vedavyasa near Rourkela in Sundargarh district of Orissa forming the major river Brahmani. It flows through Sundargarh, Keonjhar, Dhenkanal and the coastal plains of Kendrapara and Jajpur districts before out-falling into the Bay of Bengal at Dhamra.



The Brahmani is 799 km long and its catchment area spreads over 39,033 square km in Orissa. There are 45 major tributaries of the Brahmani.

The Baitarani:

It rises from the Gonasika in the Guptaganga hills of Keonjhar district. It is 365 km long and its catchment area spreads over 12,790 square km. It enters into the Bay of Bengal after joining the Brahmani at Dhamra mouth near Chandabali.

Flood protection works:

The total length of protective embankments provided in all river basins is 6515 km out of which Puri, Kendrapara, Cuttack and Jagatsinghpur districts are having embankments of 1133 km, 1033 km, 713 km, and 597 km respectively. There are 1952 spurs and 253 Km of stone packing in the embankments of the river system.

Information relating to river embankments (length in km) has been summarized below:

Sl. No.	Name of the river system	Capital Embankment (C.E.)	Other Agricultural Embankment (O.A.E.)	Test Relief Embankment (T.R.E.)	Saline Embankment	Total
1	Vamsadhara	4.98	1.70	82.91		89.59
2	Rushikulya		486.46		30.00	516.46
3	Mahanadi	1281.10	1205.78	428.69	961.72	3877.29
4	Brahmani	144.21	218.67	258.35	323.20	944.43
5	Baitarani	127.87	122.13	184.54	161.80	596.34
6	Budhabalanga		20.50	144.85	12.95	178.30
7	Subarnarekha	30.00	28.70	225.60	28.00	312.30
	Total	1588.16	2083.94	1324.94	1517.67	6514.71



History of High Floods in Orissa

Floods in Mahanadi river system is a recurrent phenomenon. The Mahanadi basin has experienced high floods in 1982, 2001, 2003, 2006, 2008 and also 2011. Incidents of high flood have been summarized in the table below:

Year	Month	Duration (In Days)	Peak Discharge at Naraj (in lakh cusecs)
1958	July	13	12.00
1959	September	9	12.55
1961	July	10	12.85
1980	September	12	12.07
1982	August	6	15.84
1991	August	10	12.71
2001	July	19	14.09
2003	Aug/Sept.	19	13.50
2006	August	12	12.83
2008	September	15	15.82
2011	September	10	13.67

Initial Drought Situation in 2011

Due to persistent deficient rainfall during June, July and August (till 15th August), 2011, agriculture operation was adversely affected and the prospects of the Kharif crop was seriously threatened. The National Remote Sensing Centre, Hyderabad in its Drought Monitoring Report for July 2011, assessed under National Agriculture Drought Assessment and Monitoring System (NADAMS) project indicated 20 districts of Orissa namely Mayurbhanj, Balasore, Baragarh, Angul, Bhadrak, Dhenkanal, Jajpur, Nuapada, Bolangir, Boudh, Cuttack, Kandhamal,



Nayagarh, Kalahandi, Ganjam, Nawarangpur, Rayagada, Gajapati, Koraput and Malkanagiri to be under “Alert” and 8 districts namely Keonjhar, Jharsuguda, Deogarh, Subarnapur, Kendrapada, Khurda, Jagatsinghpur and Puri under ‘Watch’.

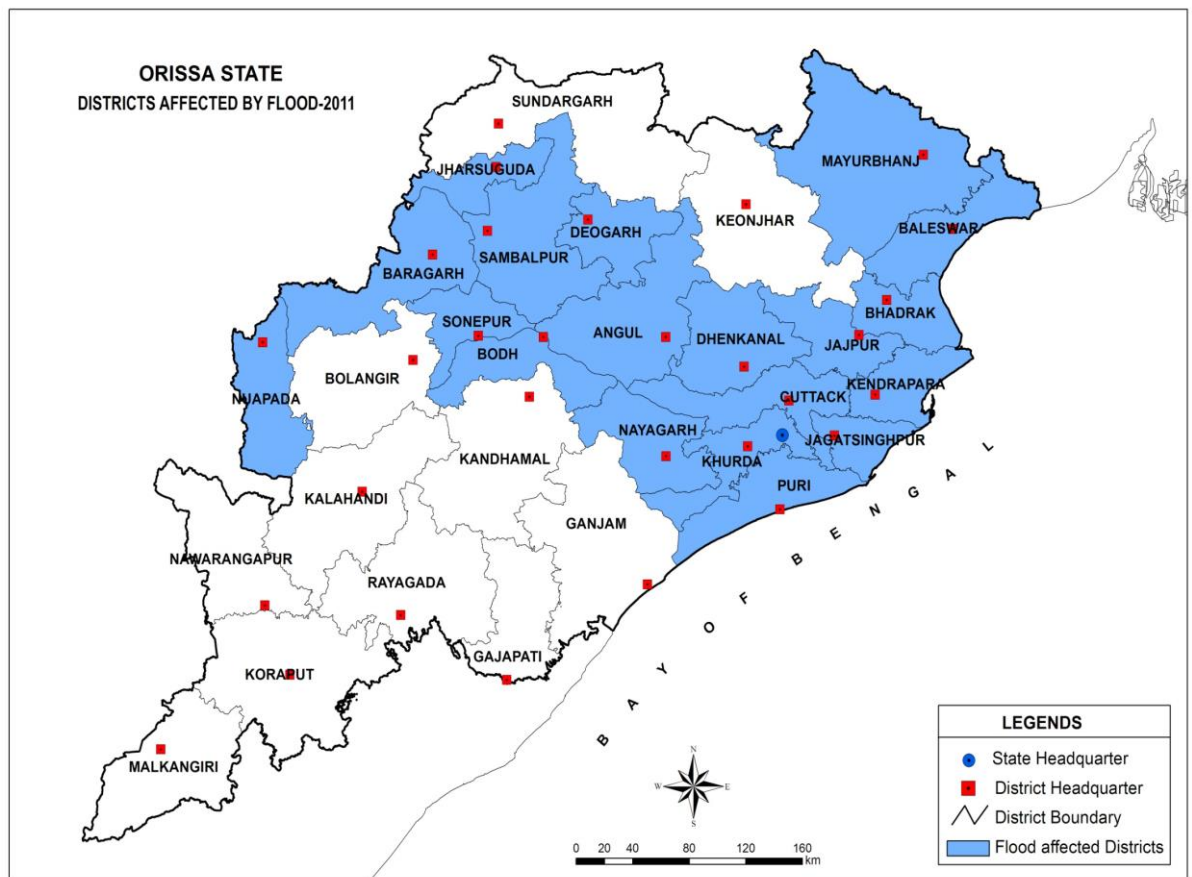
At that time the weather and crop situation of the State indicated that 45 blocks of 18 districts had received less than 50 per cent rainfall from 1st June to 31st July and 113 blocks had received deficient rainfall in the range of 25-50 percent. Thus, the State was almost staring at a drought like situation. The overall rainfall deficiency was manifest in the crucial month of July (accounting for 40.4 percent) which adversely affected crop coverage, intercultural operations and growth of crops.

However, the situation started looking up during August with a few lucky showers. As per the NADAMS report for August 2011, 7 districts namely Nuapada, Bolangir, Kalahandi, Ganjam, Nawarangpur, Koraput and Malkanagiri remained under “Alert” and 11 districts namely, Jharsuguda, Deogarh, Subarnapur, Baragarh, Angul, Dhenkanal, Boudh, Kandhamal, Nayagarh, Rayagada and Gajapati were under ‘Watch’.

Floods 2011

The flood of September 2011 in the Mahanadi river system was triggered by enormous precipitation in its upper catchment in Chhattisgarh. The inflow into the Hirakud reservoir was almost twice the full reservoir capacity and the outflow was to be balanced. The flood in river Mahanadi during September 2011 is a calamity of severe nature. The magnitude of the flood and the severity of its impact are comparable to the high floods of 2001, 2003, 2006 & 2008. Massive devastation has taken place in the districts of Sambalpur, Baragarh, Subarnapur, Boudh, Angul, Nayagarh, Dhenkanal, Cuttack, Jagatsinghpur, Kendrapara, Puri, Khurda and Jajpur. Normal life, livelihood and infrastructure have been severely impacted.

Besides the flood in the Mahanadi system, the State has experienced floods in two-three phases in river Subarnarekha, Budhabalanga and Baitarani between July & September 2011 affecting the districts of Balasore, Bhadrak, Kendrapara, Jajpur and Mayurbhanj. The flood affected districts have been delineated in the following map:



Observation by the Ministry of Home Affairs

a) Date: 10.09.11(Sub: HIGH FLOOD SITUATION); Vide letter No.11011 /15/2011- NDM-I Dt.10.09.2011

- As per Central Water Commission report Mahanadi at Naraj in dist- Cuttack, Orissa is flowing in high flood situation from 0900 hrs on 10.09.2011. At water level of 27.12m with rising trend which is 0.81m above the danger level of 26.41m and 0.49m below its previous HFL of 27.61m (31.08.1982), it is expected to rise further and reach a level of 27.45 m by today 20.00 hours.
- In view of above, the State Government is advised to keep a close watch on the situation regularly and take appropriate precautionary measures. It is also requested that MHA may be kept informed about any development in this regard at MHA control room, Telephone numbers, 23093565, 23093564 and Fax no. 23093750.



b) Date.11.09.11(Sub: UNPRECEDENTED FLOOD SITUATION); Vide letter No.11011 /15/2011- NDM-I Dt.11.09.2011

- The river Mahanadi at Naraj in District-Cuttack, Orissa **continues in “High Flood Situation”**. Today (11.09.2011) at 0600 hrs it was flowing at the level of 27.52 m with rising trend which is 1.11 m above the danger level of 26.41m and 0.09m below its previous HFL of 27.61 m (31.08.1982)
- The river Mahanadi at Allipingal in Jagatsinghpur district Orissa **continues in “High Flood Situation”**. Today (11.09.2011) at 0600 hrs it was flowing at the level of 13.04 m with rising trend which is 1.28 m above the danger level of 11.76m and 0.01m below its previous HFL of 13.05 m (20.09.2008).
- The river Mahanadi at Nimapara in Puri District, Orissa **continues in “High Flood Situation”**. **Today (11.09.2011)** at 0600 hrs it was flowing at the level of 11.20 m with rising trend which is 0.44 m above the danger level of 10.76m and 0.480m below its previous HFL of 11.60 m (31.08.1982)
- In view of above, the State Government is advised to keep a close watch, monitor the situation regularly and take appropriate precautionary measures. It is also requested that MHA may be kept informed about any development in this regard at MHA control room, telephone number-23093563, 23093564 and Fax No. 23093750.

Observation by Central Water Commission

a) Orange Bulletin No.41 Dt.10.09.11:

- The river Mahanadi in Cuttack District of **Orissa is flowing in “High Flood Situation”** from 0900 hours of 10.09.2011. Today at 0900 hrs it was flowing at the level of 27.12 m with rising trend which is 0.81 m above the danger level of 26.41m and 0.49m below its previous HFL of 27.61m (31.08.1982). It is expected to rise further and reach a level of 27.45m by today 2000 hrs.



b) Red Bulletin No.1 Dt.11.09.11:

- The river Mahanadi (Devi River) at Allipingal in Jagatsinghpur District of Orissa is **now flowing in “Unprecedented Flood Situation”**. Today at 0700 hrs it was flowing at the level of 13.06 m with rising trend which is 1.30m above the danger level of 11.76m and 0.01m above its previous HFL of 13.05 m (20.09.2008).

c) Red Bulletin No.3 Dt.11.09.11:

- The river Mahanadi (Devi river) at Allipingal in Jagatsinghpur District of Orissa is now flowing in **“Unprecedented Flood Situation”**. Today at 1200 hrs it was flowing at the level of **13.11m with rising trend which is 1.35m** above the danger level of 11.76m and 0.06m above its previous HFL of **13.05m** (20.09.2008).

d) Orange Bulletin No.44 Dt.11.09.11

- The river Mahanadi at Naraj in Cuttack district of Orissa **continues** in **“High Flood Situation”**. Today at 0600 hrs it was flowing at the level of 27.52 m with rising trend which is 1.11m above the danger level of 26.41m and 0.09m below its previous HFL of 27.61m (31.08.1982)
- 2. The river Mahanadi (Devi) at Allipingal in Jagatsinghpur district of Orissa **continues in “High Flood Situation”**. Today at 0600 hrs it was flowing at the level of 13.04 m with rising trend which is 1.28m above the danger level of 11.76m and 0.01m below its previous HFL of 13.05 m (20.09.2008)
- 3. The river Mahanadi at Nimapara in Puri District of Orissa **continues in “High Flood Situation”**. Today at 0600 hrs it was flowing at the level of 11.20 m with rising trend which is 0.44 m above the danger level of 10.76m and 0.40m below its previous HFL of 11.60 m (31.08.1982)



Chapter-II

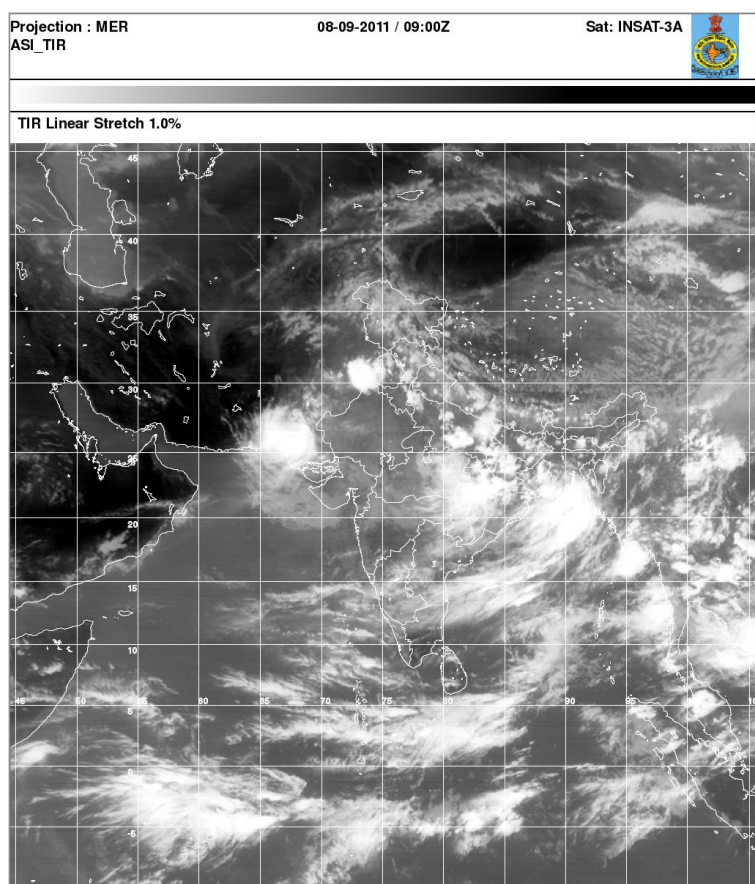
Cause & Occurrence

Formation of Low Pressure over Chhattisgarh:

IMD FORECAST:

1) On 08.09.2011:

Yesterday's Low Pressure area over Jharkhand and adjoining North interior Orissa and North Chhattisgarh lies over Jharkhand and adjoining North interior Orissa, some areas of North Chhattisgarh and West Gangetic West Bengal. Associated upper air cyclonic circulation extends up to mid-tropospheric level tilting southwestwards with height. The axis of monsoon trough on sea level chart passes through Jaisalmer, Ajmer, Jhansi, Satna, central region low pressure area, and moves South-East wards to North-West Bay of Bengal through Orissa across Northwest Bay of Bengal.



Rain or thunder-shower would occur at many places over all the catchments except Baitarani, Rushikulya and Vansadhara catchments where rain or thunder-shower would occur at a few places.

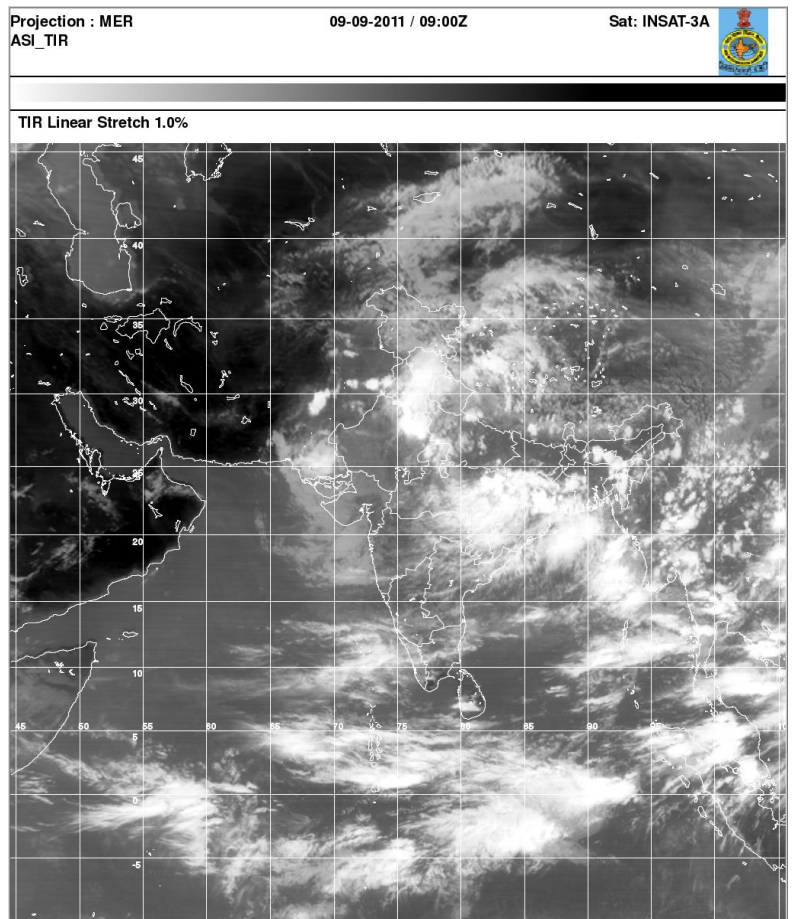


Heavy to very heavy rain would occur at one or two places over upper Brahmani & upper Mahanadi catchments and heavy rain would occur at one or two places over rest of the catchments except Rushikulya & Vansadhara catchments during next 24 hours.

2) On 09.09.2011:

South West Monsoon has been over Orissa.

Yesterday's Low Pressure area over Jharkhand and Chhattisgarh now lies over Jharkhand and West Gangetic West Bengal persists, associated upper air cyclonic circulation extends up to mid-tropospheric level tilting southwest wards with height. The axis of monsoon through on sea level chart passes through Jaisalmer, Ajmer, Jhansi, Sidhi, central region of Low Pressure Area, Asansole and thence South-East wards to North-East Bay of Bengal across Northwest Bay of Bengal.



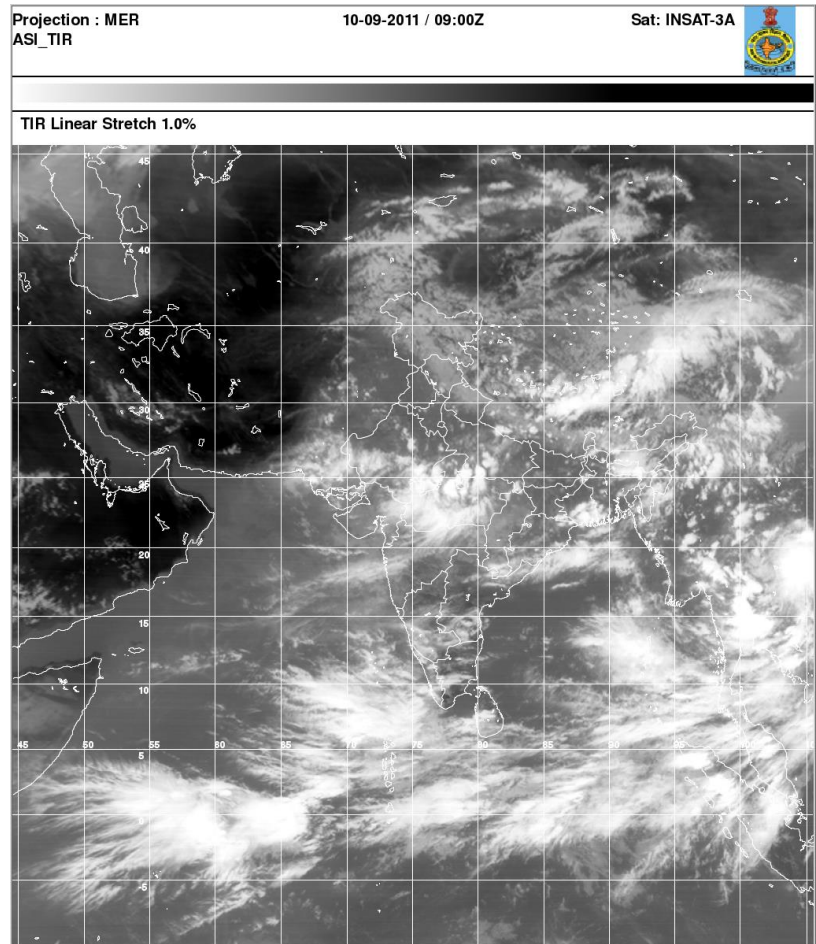
Rain or thunder-shower would occur at most places over Subarnarekha, Burhabalang, Upper Brahmani, Upper Mahanadi catchments at many places over Baitarani, Lower Brahmani, Lower Mahanadi catchments and at a few places over rest catchments.

Heavy to very heavy rain would occur at one or two places over Subarnarekha, Upper Brahmani & Upper Mahanadi catchments and heavy rain would occur at one or two places over Lower Mahanadi and Lower Brahmani catchments during next 48 hours.



3) On 10.09.2011

Yesterday's Low Pressure area over Jharkhand and Chhattisgarh now lies over North Chattisgarh and adjoining Madhya Pradesh with upper air cyclonic circulation extends up to mid-tropospheric level. The axis of monsoon trough on sea level chart passes through Jaisalmer, Swai, Madhopur, Jhansi, Centre of Low Pressure Area, Balasore and hence moves South-East wards to North-West Bay of Bengal.



Rain or thunder-shower would occur at many places over Brahmani and upper Mahanadi catchments at a few places over Subarnarekha, Burhabalanga, Baitarani, lower Brahmani, lower Mahanadi catchments and at one or two places over rest of the catchments.

Heavy to very heavy rain would occur at one or two places over upper Mahanadi during next 24 hours.



Rainfall at Chhattisgarh

			Rainfall in mm			
Sl	District	Places	06.09.11	07.09.11	08.09.11	09.09.11
1	Bastar	Makad	67.40			
		Kondagaon	25.40			
		Bodrepur	52.30	78.00		
		Kashok	36.40			
2.	Bilaspur	Bilaspur	10.00	50.00	52.00	15.00
		Masuri	8.20	35.40	103.30	61.00
		Pendaroad	61.90	27.10	9.30	13.00
		marBoti	45.40	22.60	26.20	19.00
		Peda	70.40	66.30	178.30	11.20
		Kato		49.20	59.40	21.20
		Larom		91.00	16.00	6.00
3.	Rayapur	Raipur	66.60		48.60	
		Sigma	34.00		67.20	
		Jilda	59.20		63.80	
		Rajim	35.00		22.00	
		Gariaboadd	76.20		15.00	
		Amarpur	55.00		49.00	
		Dhar	80.20		73.70	
		Arwa			91.00	
		Kesdaon			15.00	
		palari			40.60	
4.	Rawarbong	Chowki	40.60	95.40	28.40	
		Marapur	56.40	79.00	15.40	
		Deogarh		104.80	16.00	
		Rawarneng		107.60	16.20	
		Dagarbeng		95.40	16.00	
		Matiol		60.20	11.20	
		Dhoriya		88.00	21.00	
5.	Dastewada	Darrewada		22.00	51.00	
		Kotakalyon		56.40		
		Korta			54.00	
		Gablm			32.10	
6.	Jargorichmpa	Jorgori		117.00	23.10	
		Paragad		25.20	20.00	
		Sakti		30.20	69.70	
		Dashr		41.40	127.20	
		Nabogorh		52.60	45.60	
		Akmtar		45.20	31.30	
		Balwe		98.30	45.30	
		Champa			24.00	
		Jajepur			60.20	



State Average Rainfall of Chhattisgarh

(Rainfall in MM)

SI	District	06.09.11	07.09.11	08.09.11	09.09.11	10.09.11
1	Bastar	22.25	22.55	12.07	18.40	3.44
2	Bilaspur	29.77	47.25	36.46		21.57
3	Koria	12.00				
4	Rayapur	35.16		45.59		
5	Raworbang	19.60	74.72	18.98	1.91	
6	Dastewada		15.59	22.40	1.20	2.84.2.66
7	Ragariotopppa		49.16		52.16	
State Average		25.06	42.11	28.84	20.26	2.90

Rainfall at Upper Mahanadi Basin

Rainfall in M.M

SI	Place	06.09.11	07.09.11	08.09.11	09.09.11	10.09.11
1.	Ambabhona	11.20	140.0	235.0		0.0
2.	Ambikapur	5.8	33.5	31.5	71.0	81.7
3.	Andhiyakore	10.8	71.4	32.8	11.8	6.0
4.	Baikunthapur	12.0	17.2	6.2	66.6	74.8
5.	Bamandhi	31.0	40.8	40.8	48.6	10.4
6.	Bangodam	4.2	34.2	101.2	32.0	30.0
7.	Bargaon	21.0	23.2		39.0	
8.	Basantpur	17.2	33.8	48.2	46.6	9.2
9.	Bodanda	62.0	146.0	40.0	4.2	1.8
10.	Champa	30.0	37.4	63.6		10
11.	Deogan	130.0	241.0	125.0	74.8	43.6
12.	Dharmjaygarh	18.0	10.6	47.0	58.4	83.6
13.	Ghatora	18.6	42.8	62.2	29.8	13.6
14.	Ghorari	155.8	81.0	116.4		0.0
15.	Hemgiri	75.4	133.0		65.0	



SI	Place	06.09.11	07.09.11	08.09.11	09.09.11	10.09.11
15	Jagadalpur	5.3	8.7	10.8	5.2	1.1
16.	Jamadarpalli	61.8	55.8	26.8	74.8	4.2
17	Jamankira	155.0		16.0	117.0	7.8
18.	Jharsuguda	55.9	171.1	170.4	41.9	22.2
19.	Kelo	36.8	66.2	485.2	68.0	55.6
20	Lorba	24.2	65.0	244.8	66.0	25.2
.21	Kuchinda	81.6	144.2	57.8	51.6	24.6
22.	Kurbhatta	51.8	47.8	94.4	76.2	22.8
23.	Laikera	46.2	125.5	100.2	62.2	46.0
24.	Mamemdragarh	24.4	34.8	23.0	36.8	91.2
25.	Mahupali	56.0	130.8	43.4	42.6	55.6
26.	Nandaghat	24.0	96.2	17.6		9.0
27.	Nuapara	136.0		92.0	12.0	2.0
28.	Paramanpur	46.8	153.6	64.8	50.6	44.0
30.	Pendraroad	87.8	31.6	12.4	13.4	27.2
31.	Raipur	48.6	86.4	55.7	6.0	3.2
32.	Rajim	81.4	95.0	44.4	4.6	0.8
33.	Rampur	23.0	84.8	43.6	26.8	8.4
34.	Sankara	38.6	78.0	185.6	37.2	7.0
35	Saradihi	81.4	60.2	76.0		18.0
36.	Seorianarayan	23.2	55.0	39.2	29.8	8.0
37.	Sigma	32.8	51.8	55.8	8.2	4.2
38.	Sundergarh	44.6	7.2	4.8	38.0	36.8
39.	Surajgarh	61.8	38.4	224.6	132.6	9.0
40.	Tarapur	66.0	104.0	102.0		31.0
41.	Thettang	28.8	75.6	2.2	46.6	61.8



Hirakud Reservoir Position

Commencing from 6th September there was heavy rainfall for about 5 days in the upper catchments of river Mahanadi in the neighboring Chhattisgarh State. From 08.09.2011 noon the Hirakud reservoir started receiving more than 9 lakh cusecs of water and on 09.09.2011 the inflow into the reservoir dangerously exceeded 11 lakh cusecs. As the reservoir level steadily approached the Full Reservoir Level (FRL) i.e 630 feet, commensurable flood water had to be discharged into river Mahanadi. There was also heavy rain in the upper catchment of the tributaries of river Mahanadi and the tributaries rose in flood; adding to the out flow from Hirakud Reservoir.

The intensity of rainfall can be well imagined from the above mentioned weighted average rainfall for upstream and downstream of Hirakud Dam. Due to enormous inflow into the reservoir, the level of dam was maintained nearing FRL at 630.00 ft for safety of the dam. The inflow into the reservoir increased from 7.50 lakh cusecs on 8th September to a peak of 11.07 lakh cusecs on 9th September. On 10th September at 12.00 hrs the reservoir level was 629.27 ft with an inflow of 9.94 lakh cusecs. The outflow from Hirakud reservoir had to be balanced with the inflow keeping in view the safety of dam and also the flood situation in delta area. Due to heavy discharge of water, the mighty Mahanadi created floods in delta areas. The peak flood discharge at Mundali i.e. delta head was 13.67 lakh cusecs on 11.09.2011.

The inflow and outflow of water of Hirakud reservoir was as follows:

Date	Time	Water level (in ft.)	Inflow (lakh cusecs)	Out flow (lakh cusecs)	No. of Gate opened
07.09.11	6AM	625.81	422038	320390	18
	9AM	626.12	529692	332744	21
	12Noon	626.31	543840	482907	18
	3PM	626.29	513012	612340	36
	6PM	626.15	584910	603853	36
	9PM	626.04	588263	612145	36
08.09.11	6AM	626.31	770868	612043	36
	9AM	626.89	750000	694004	41
	12Noon	627.27	950630	709215	42



	3PM	627.41	884208	795269	53
	6PM	627.54	965833	883242	53
	9PM	627.77	1032308	826188	53
09.09.11	6AM	628.45	1015093	888031	53
	9AM	628.50	1037000	974000	59
	12Noon	628.54	1051123	974888	59
	3PM	628.83	1107276	973129	59
	6PM	628.97	1061871	972928	59
	9PM	629.10	1056135	973544	59
10.09.11	6AM	629.15	1006109	974342	59
	9AM	629.25	989424	974014	59
	12Noon	629.27	994151	981446	59
	6PM	629.08	974414	974414	59
	9PM	629.00	920558	971382	59
11.09.11	6AM	628.56	795016	890312	53
	9AM	628.41	764127	859423	49
	12Noon	628.17	667955	795013	43
	3PM	628.08	634153	706704	41
	6PM	628.10	638139	625434	35
	9PM	628.15	597312	565545	29
12.09.11	6AM	628.52	470157	400271	23
	9AM	628.52	400840	400840	23
	12Noon	628.47	364919	396686	23
	3PM	628.43	305548	330958	16
	6PM	628.43	287378	287378	16
	9PM	628.41	246418	259127	10
13.09.11	6AM	628.60	158952	108128	5
	9AM	628.71	177865	107983	5
	12Noon	628.83	184133	107895	5
	3PM	628.93	171431	107902	5
	6PM	628.97	133513	108099	5
	9PM	629.04	152531	108059	5

Down stream flood water of Hirakud reservoir coupled with huge inflow from the neighbouring State Chhattisgarh caused severe damages in Sambalpur, Baragarh, Boudh, Subarnapur, Nayagarh Cuttack, Jagatsinghpur, Kendrapara, Jajpur, Puri and Khurda Districts in the Mahanadi basin. It is worth mentioning that



the safe carrying capacity of Mahanadi river system is around 9 lakh cusecs at delta head (Naraj / Mundali) against which the peak discharge went up to **13.00 & 13.67** lakh cusecs approximately on **10th & 11th September 2011**, which is at par with the severe floods that occurred in the year 2001, 2003, 2006, & 2008.

Discharge to Coastal Plain

The volume of water discharged at Mundali causes floods in Mahanadi delta areas. The water discharges at Khairmal, Barmul and Mundali in Mahanadi river system since 06.09.11 are as follows.

Date	TIME	Discharge in lakh cusec during Sept. 2011		
		Khairmal	Barmul	Mundali
07.09.11	6AM	614000	549750	582865
	9AM	654000	590000	568780
	12Noon	686000	622000	564000
	3PM	686000	640000	564085
	6PM	718000	658000	596950
	9PM	766000	679000	637585
08.09.11	6AM	1028000	745250	718000
	9AM	1044000	797500	748508
	12Noon	1044000	850000	766139
	3PM	1028000	914250	791184
	6PM	1036000	961000	820843
	9PM	1127000	991000	820843
09.09.11	6AM	1302000	1038250	925942
	9AM	1350000	1116500	948905
	12Noon	1366000	1152500	972013
	3PM	1382000	1250000	995120
	6PM	1390000	1357750	1018371
	9PM	1390000	1384000	1057604
10.09.11	6AM	1390000	1416500	1104970
	9AM	1270000	1439500	1250230
	12Noon	1246000	1439500	1291615
	3PM	1214000	1405000	1333000
	6PM	1198000	1384000	1333000
	9PM	1198000	1352500	1358266



Date	TIME	Discharge in lakh cusec during Sept. 2011		
		Khairmal	Barmul	Mundali
11.09.11	6AM	1163000	1237500	1366688
	9AM	1154000	1175000	1366688
	12Noon	1127000	1170500	1349844
	3PM	1109000	1170500	1333000
	6PM	1068000	1170500	1308169
	9PM	984000	1152500	1291615
12.09.11	6AM	686000	1072250	1250230
	9AM	583000	1038250	1233962
	12Noon	520000	570000	1225828
	3PM	508000	897750	1209560
	6PM	502000	825000	1185158
	9PM	490000	734250	1144920
13.09.11	6AM	400000	578000	964310
	9AM	350000	554250	895708
	12Noon	268500	518250	828257
	3PM	228000	472000	772016
	6PM	198000	426000	730877
	9PM	186000	385000	690000

Rivers

Due to heavy discharge at coastal plains in river Mahanadi, the water level of Mahanadi and its tributaries at coastal districts rose and crossed the danger level. The water level above danger level continued for 4 days. Further, due to heavy rainfall under the impact of low pressure over North Orissa during August and September, the rivers Subarnarekha, Brahmani, Baitarani and Budhabalanga crossed their respective danger level affecting the down stream areas of the districts namely Balasore, Bhadrak, Mayurbhanj, Keonjhar and Jajpur. The water level of different rivers is given below:

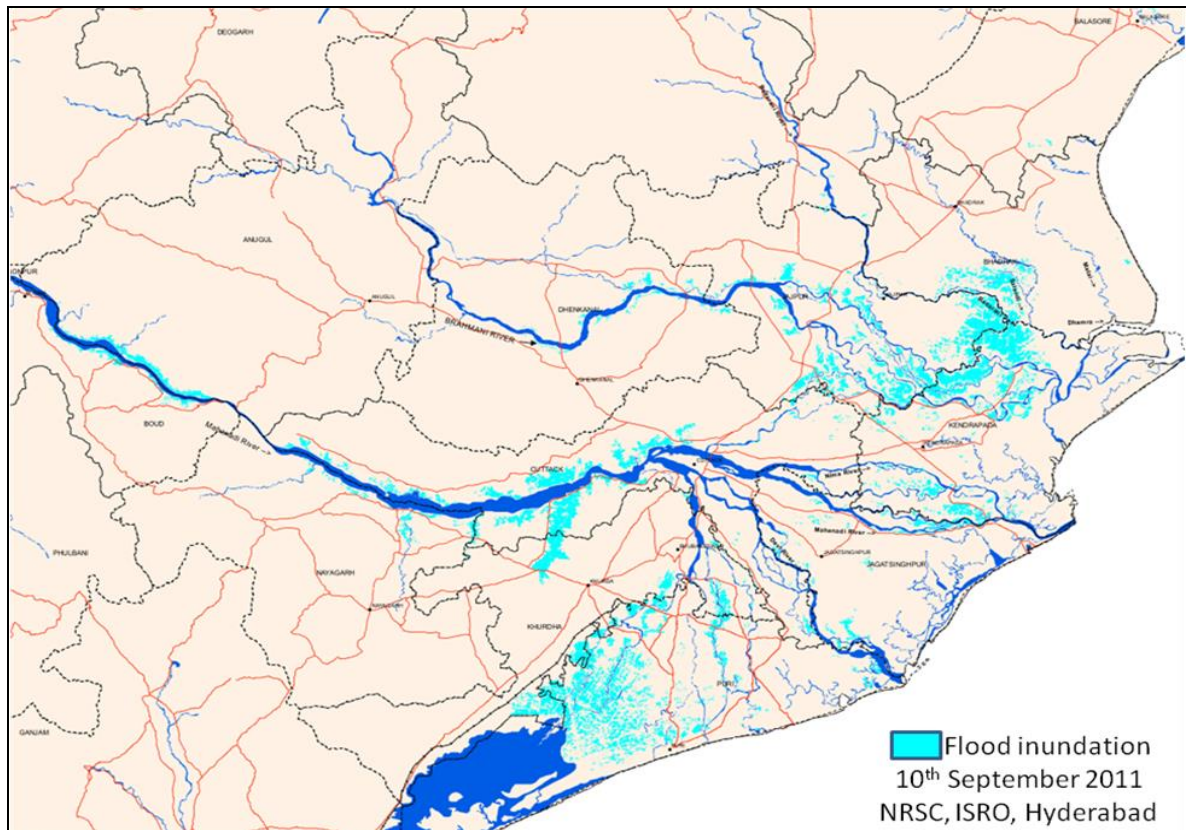
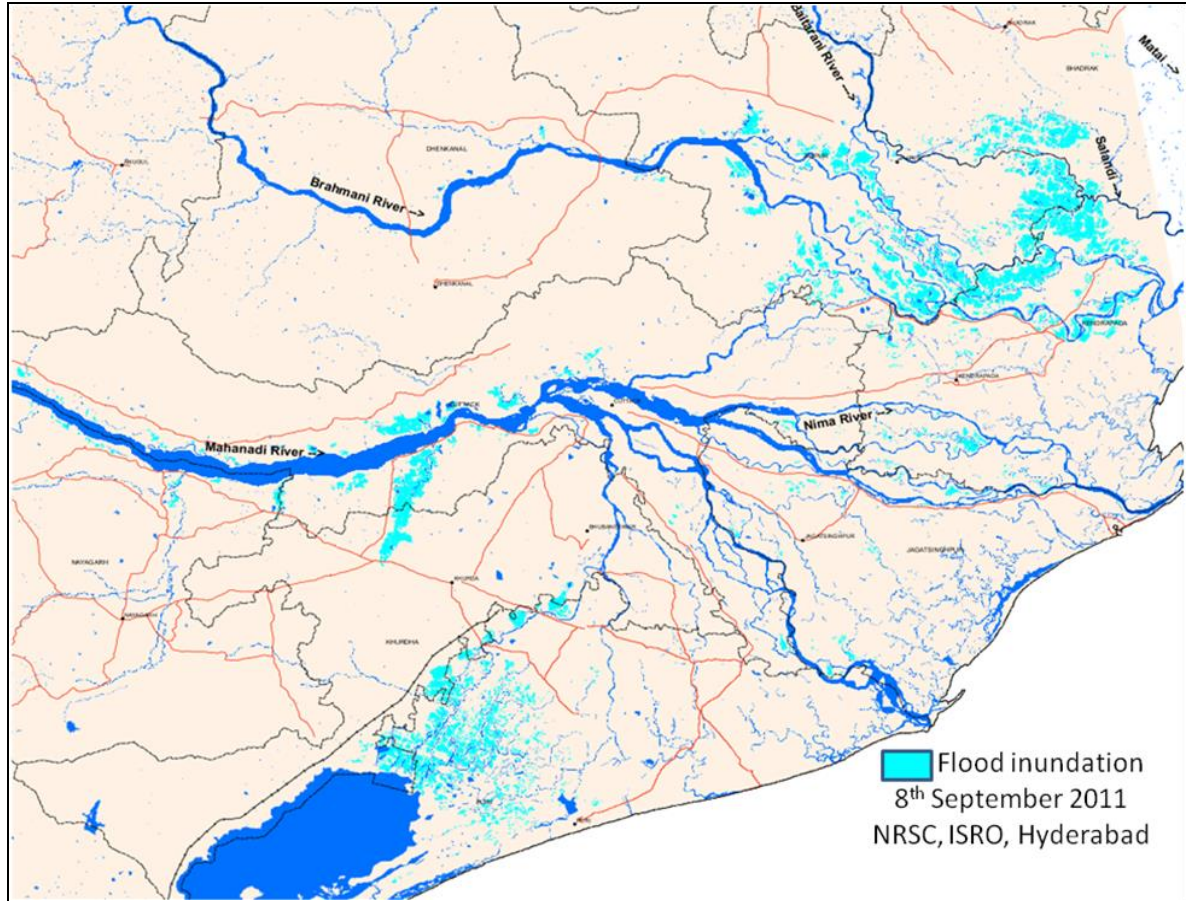


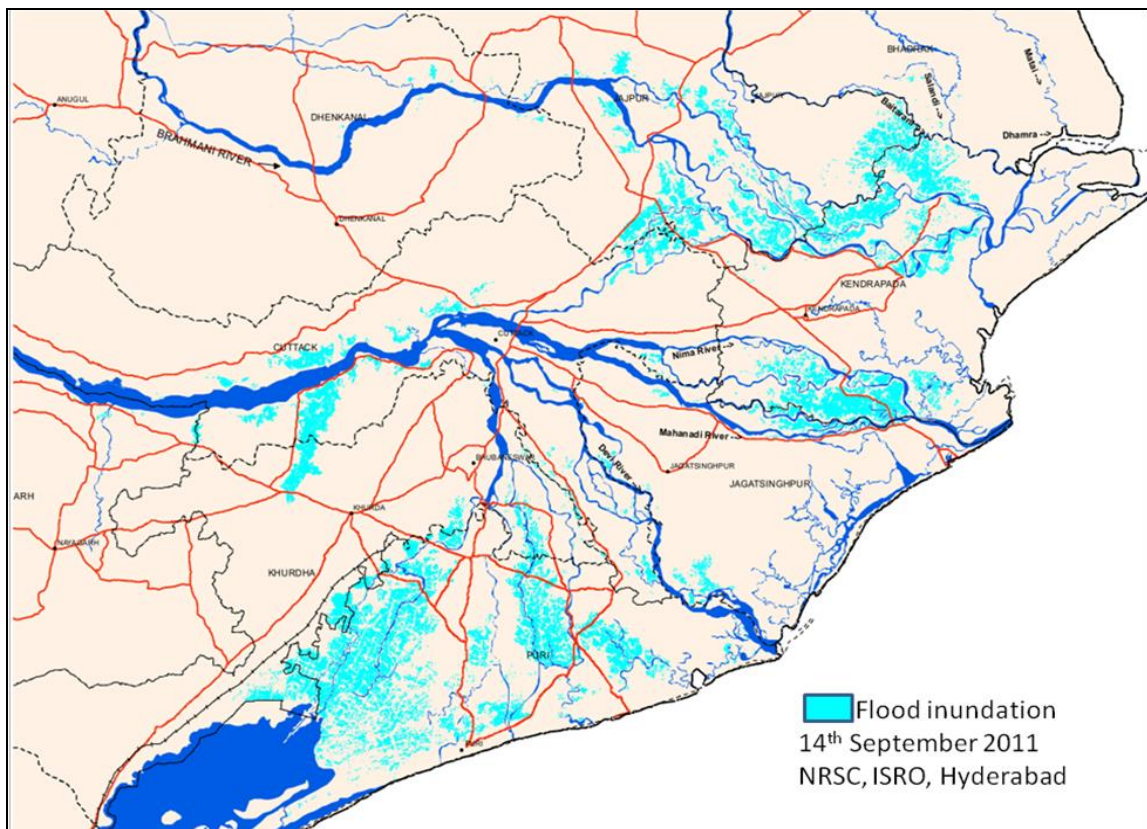
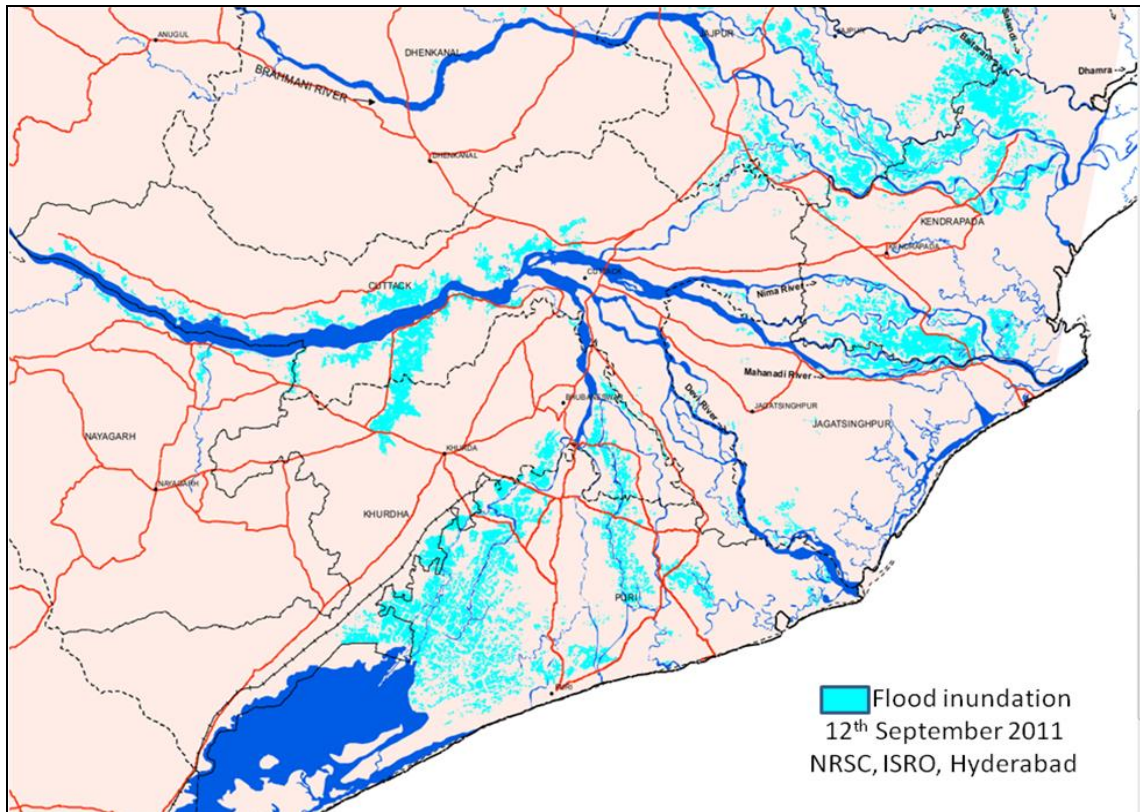
River	Forecast station	Danger Level	Warning Level	Water Level in Mtrs			
				9 th Sept.	10 th Sept	11 th Sept	12 th Sept
Mahanadi	Naraj	26.41	25.41	26.52	27.49	27.55	27.26
Devi	Alipingal	11.76	10.85	11.42	12.85	13.11	12.80
Kushabadra	Nimapada	10.76	9.85	10.22	11.18	11.20	11.14
Brahmani	Jenapur	23.00	22.00	20.38	22.76	22.64	21.66
Baitarani	Anandapur	38.36	37.45	36.60	36.84	35.95	35.50
	Akhuapada	17.83	16.83	17.47	17.80	17.56	17.28
Burhabalanga	N.H-5 (Govindpur)	8.13	7.21	5.86	5.94	4.92	4.80
Subarnarekha	Rajghat	10.36	9.45	3.23	10.20	10.80	10.27
	Jamsholaghat	49.15	48.10	48.08	50.38	49.28	48.20
Vamsadhara	Gunupur	84.00	83.00	81.59	81.53	81.61	81.44
	Kashinagar	54.60	53.60	52.47	53.38	53.59	53.34
Rushikulya	Purushottampur	16.83	15.83	13.66	13.56	13.46	13.54

About one third area of Mahanadi delta remained inundated for more than a fortnight causing severe inconvenience to public.

Satellite Observation on Flood Inundation

National Remote Sensing Center (NRSC), ISRO, Hyderabad has prepared flood inundation maps for Orissa during 8th -14th September 2011 based on the RADARSAT imageries. The maps show that vast areas were under submergence. The maps provided by NRSC are shown below sequentially.







June & August Floods

Northern Orissa experienced heavy rainfall due to effect of low pressure area Bay of Bengal during the period from 15.06.11 to 19.06.11. The river Subarnarekha, Jalaka, were flooded.

Again there was a heavy rainfall over north Orissa on 14.08.11 as a result the river Subarnarekha crossed the danger level on 14.08.11. Further, heavy discharge from Chandli Dam of Jharkhand had multiplied the floods in Subarnarekha. The water level of these rivers during these days are mentioned below.

River	Forecast station	Danger Level	Warning Level	Water Level in Mtrs	
				20 th June'11	14 th August'11
Subarnarekha	Rajghat	10.36	9.45	10.64	11.58
	Jamsholaghat	49.15	48.10	49.20	
Jalaka	Basta	5.50		6.72 (on 18.06.11)	

Impact of Full Moon:

Due to full moon on 12.09.11 (Monday) and extremely turbulent sea, there was no discharge of flood water into sea resulting in submergence of delta area for three days. Further, in these areas, heavy rainfall was experienced due to the effect of active monsoon & depression over Bay. This rainfall multiplied the miseries to the affected people.

Breaches

Due to floods, heavy damages occurred to river and canal embankments, service roads on embankments, drainage channels, M.I. Projects, Lift Irrigation Points and field channels. All necessary preventive measures were taken at identified vulnerable points along river embankments prior to floods. Vast area of Mahanadi delta remained inundated for more than a week. The breaches that occurred in river / canal embankments submerged human habitation and vast area of the agricultural land.



Chapter-III

Impact

The current floods of river Mahanadi, Subarnarekha, Baitarani, Brahmani & Budhabalanga affected about 34.44 lakh people in 102 blocks, 21 Urban Local Bodies, 1067 GPs and 4897 villages in 19 Districts. 45 Human lives were lost. The standing crops in 3.23 lakh hectares was damaged. The fishing community was severely affected due to huge loss of their boats and nets. The poor artisans lost their looms, equipment, accessories and raw materials. The farmers lost their livestock and sericulture firms. As such, the individual economy of almost all sections of the community became deplorable. It washed away rural roads, damaged bridges, destroyed Government & private buildings and created many breaches in river embankments. Essential services like supply of drinking water, energy distribution and health facilities were disrupted severely. The damage to tangible assets includes damage to houses and settlements, damage to public properties like power supply, irrigation, agriculture, plantations, roads, educational and medical institutions, telecommunication installations, tourist spots and crops. Communication to many areas was cut off. Even, water transport to some parts could not be used due to heavy current of flood water.

The effect of floods became very much penetrating & intense in view of further heavy rainfall due to low pressure area over Bay of Bengal in the delta areas which are of high population density.

Extent of Damages

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

Damages	September	June / August
No. of Districts affected	19	4
Blocks affected	102	5
GPs affected	1067	33
Villages affected	4897	119
ULBs affected	21	1
Population affected (In lakh)	34.44	1.21
Human lives lost	40	5
Houses damaged	116706	31



September Floods, 2011

SI	District	Blocks Affected	GPs Affected	Villages Affected	ULBs Affected	Population Affected	Human Casualty	House Damage
1	Angul	2	12	49	1	15249		275
2	Balasore	6	49	252	1	239253		34
3	Baragarh	6	165	507		75000		2022
4	Bhadrak	4	39	173		28000	2	30
5	Boudh	3	22	122	1	57000		1779
6	Cuttack	14	169	508	3	526923	1	14880
7	Deogarh	3	44	123	1	25000		1350
8	Dhenkanal	1	4	8		5018	2	16
9	Jajpur	9	142	499		491114	13	8221
10	Jagatsinghpur	7	16	126		87661		5585
11	Jharsuguda	1	4	9	1	11679		357
12	Kendrapada	9	116	473	2	507145	13	27000
13	Khurda	6	48	236	1	161559	1	525
14	Mayurbhanj	1	6	24	1	6887	3	148
15	Nayagarh	3	15	110		73117		446
16	Nuapada	2	28	322	1	17300		3464
17	Puri	10	121	701	2	625897	2	38345
18	Sambalpur	9	27	515	3	440000	3	6491
19	Subarnapur	6	40	140	3	50187		5738
Total		102	1067	4897	21	3443989	40	116706

June & August Floods, 2011

Due to floods in June & August, 1.23 lakh people of four districts namely Balasore, Sambalpur, Keonjhar, and Mayurbhanj were affected. The detailed figures of the damages are given below.

SI	District	Blocks Affected	GPs Affected	Villages Affected	ULBs Affected	Population Affected	Human Casualty	House Damage
1	Balasore	4	31	114	-	121338	----	31
2	Mayurbhanj	1	2	5	-	1400		
3	Keonjhar (flash flood)	1	1	1	-	300	3	-
4	Sambalpur (flash flood)	-	-	-	1	700	2	-
Total		5	33	119	1	123738	5	31



House Damage

Sl.	District	Fully Damaged		Severely Damaged		Partially damage	Huts damaged	Total
		Pucca	Kutcha	Pucca	Kutcha			
1	Angul	00	62	00	00	213	00	275
2	Balasore	00	2	00	5	24	3	34
3	Baragarh	00	266	00	565	1191	00	2022
4	Bhadrak	00	00	00	00	30	00	30
5	Boudh	00	188	00	832	759	00	1779
6	Cuttack	00	148	00	444	11777	2511	14880
7	Deogarh	00	44	00	00	1306	00	1350
8	Dhenkanal	00	00	00	00	16	00	16
9	Jajpur	00	177	00	1113	5186	1745	8221
10	Jagatsinghpur	00	171	20	968	2728	1698	5585
11	Jharsuguda	00	131	00	68	142	16	357
12	Kendrapada	35	1745	15	1985	18020	5200	27000
13	Khurda	0	24	0	81	420	0	525
14	Mayurbhanj	00	1	00	5	112	30	148
15	Nayagarh	00	4	00	27	415	00	446
16	Nuapada	00	32	00	276	3156	00	3464
17	Puri	5	2893	87	5192	14937	15231	38345
18	Sambalpur	2	446	00	914	4976	153	6491
19	Subarnapur	00	1150	00	1400	2960	228	5738
Total		42	7484	122	13875	68368	26815	116706

Crop Damage

About **179387.38** hectares of Kharif crop have sustained crop-loss more than 50% due to floods.

Sl.	Districts	Crop Area where crop loss is > 50% [in Hect.]	Total agricultural area where crop loss is > 50% (SMF)	Total agricultural area where crop loss is > 50%(other than SMF)
1	Angul	4331	4331	0
2	Balasore	0		0
3	Baragarh	0		0
4	Bhadrak	4215	4215	0
5	Boudh	7830	6809	1021
6	Cuttack	36169	35518	651
7	Deogarh	0	0	0



8	Dhenkanal	0	0	0
9	Jajpur	27615	27615	0
10	Jagatsinghpur	5815	5716	99
11	Jharsuguda	2106	1053	1053
12	Kendrapada	33165	32420	745
13	Khurda	0		0
14	Nayagarh	0	0	0
15	Nuapada	5680	5167	513
16	Puri	0	0	0
17	Sambalpur	47354.15	45408	1946.15
18	Subarnapur	1107.23	1002.23	105
Total		179387.38	173254.23	6133.15

Sand Cast

Agricultural land of **803.4 hectares** has been sand cast. The district-wise sand cast position is given below.

Sl.	District	Total Area under sand cast (in Hect.)
1	Angul	5.5
3	Baragarh	70.00
5	Boudh	50
6	Cuttack	84.2
7	Deogarh	21.4
10	Jagatsinghpur	30.00
11	Jharsuguda	0.8
12	Kendrapada	150.00
13	Khurda	12.0
16	Nuapada	8.5
17	Puri	200.00
18	Sambalpur	55.00
19	Subarnapur	116
Total		803.4



Livestock Affected

14.67 Lakh livestock were affected due to high floods in September. The district-wise figures of affected livestock are given in following table.

Sl.	District	Livestock Affected			Total
		Large	Small	Poultry	
1	Angul	15388	11799	3046	30233
2	Baragarh	2704	1739	1825	6268
3	Bhadrak	6699	24918	1267	32884
4	Boudh	37961	18472		56433
5	Cuttack	184244	106044		290288
6	Dhenkanal	2919	1440		4359
7	Jajpur	172793	57955	30792	261540
8	Jagatsinghpur	38501	17481		55982
9	Jharsuguda	3618	1490		5108
10	Kendrapada	158269	45445	16279	219993
11	Khurda	41459	18726	4636	64821
12	Nayagarh	14747	7683		22430
13	Puri	195150	72517	117642	385309
14	Sambalpur	5048	3874		8922
15	Subarnapur	11616	6501	4563	22680
Total		891116	396084	180050	1467250



Chapter-IV

Response

Rescue and Evacuation

280320 people were evacuated to safer places and kept in temporary shelters during the floods.

SI	District	People evacuated
1	Angul	12900
2	Balasore	691
3	Baragarh	9250
5	Boudh	49000
6	Cuttack	32839
9	Jajpur	21350
10	Jagatsinghpur	7774
11	Jharsuguda	2999
12	Kendrapada	43315
13	Khurda	1367
14	Mayurbhanj	918
15	Nayagarh	11204
17	Puri	31388
18	Sambalpur	21138
19	Subarnapur	34187
Total		280320

Free kitchen

Evacuated people were provided with adequate quantities of dry food and cooked food through free kitchen centres. **542** free kitchen centres were opened covering **280320** beneficiaries. District--wise details are given below:



Sl.	District	Free kitchen centres opened	Beneficiaries covered
1	Angul	17	12900
2	Balasore	3	691
3	Baragarh	15	9250
4	Boudh	31	49000
5	Cuttack	57	32839
6	Jajpur	26	21350
7	Jagatsinghpur	17	7774
8	Jharsuguda	11	2999
9	Kendrapada	144	43315
10	Khurda	4	1367
11	Mayurbhanj	2	918
12	Nayagarh	22	11204
13	Puri	27	31388
14	Sambalpur	98	21138
15	Subarnapur	68	34187
Total		542	280320

Deployment of Boats

1265 boats were pressed into action for rescue and relief operations.

Rescue Operation

The flood situation became grim on 9th to 12th September. A large chunk of area became marooned. All ten units of ODRAF (Orissa Disaster Rapid Action Force) were deployed in Cuttack, Puri, Kendrapara, Jajpur & Jagatsinghpur districts for rescue and relief operation.

Emergent Relief

In view of the intensity of the high floods and devastation, emergent relief was sanctioned for a period of 7 to 15 days for the marooned people of the flood affected Districts. Emergent relief in shape of rice, chuda and guda was distributed in the flood affected villages. In addition to dry food, candles, matchboxes, kerosene and other essential materials were distributed. The districtwise distribution of emergent relief is mentioned below.



[Quantity in quintal]

SI	District	Rice	Chuda	Gur
1	Angul	660.7	30.0	1.5
2	Balasore	2.0	19.5	0.1
3	Baragarh	99.0	8.5	0.8
4	Bhadrak	30.0	30.0	3.0
5	Boudh	3186.9	133.0	6.7
6	Cuttack	24591.7	1709.3	334.4
7	Dhenkanal	44.7	-	-
8	Jajpur	27740.5	157.7	14.3
9	Jagatsinghpur	2379.7	679.9	218.1
10	Jharsuguda	82.5	39.5	8.7
11	Kendrapada	24382.0	4237.4	423.7
12	Khurda	4254.7	384.5	36.9
13	Mayurbhanj	5.0	29.2	3.3
14	Nayagarh	2578.2	514.5	44.9
15	Puri	23812.1	6995.7	519.0
16	Sambalpur	440.0	500.0	107.0
17	Subarnapur	847.9	328.6	47.4
Total		115137.5	15797.4	1769.8

Ready To Eat (RTE) food for Affected Children

Children and infants in the marooned areas were provided with nutritious baby food for a period of 15 days as per CRF/SDRF Norms.

Air-dropping

The helicopters of Indian Air Force, Indian Navy were requisitioned in order to facilitate the air-dropping of food packets in the marooned areas for flood victims. **23272** food packets have been air-dropped through four Helicopters in Kendrapara, Cuttack, Jagatsinghpur, Puri, Nayagarh and Boudh Districts.

Temporary Shelter Materials

121256 families were provided with polythene sheets for temporary shelter since houses were damaged either fully or severely.



Sl.	District	No. of families provided with polythene sheets
1	Angul	1566
2	Balasore	294
3	Baragarh	564
4	Bhadrak	240
5	Boudh	1500
6	Cuttack	14840
7	Deogarh	141
8	Jajpur	5956
9	Jagatsinghpur	6832
10	Jharsuguda	547
11	Kendrapada	58440
12	Khurda	1045
13	Mayurbhanj	348
14	Nayagarh	1260
15	Nuapada	450
16	Puri	17373
17	Sambalpur	2440
18	Subarnapur	7420
Total		121256

Health & Sanitation

In order to prevent outbreak of epidemics, **135** medical teams were deployed in the flood affected Districts and **482** Medical Relief Centres were opened. **173374** ORS packets, **5274613** Halogen tablets were distributed. District -wise details are given below.

SI	District	Medical Mobile Teams Deployed	Medical Centers opened.	ORS	Halogen Tablets
1.	Angul	2	13	2852	32490
2.	Balasore	5	14	200	14900
3.	Baragarh	6	21	2000	50000
4.	Bhadrak	2	7	1292	26000



5.	Boudh	5	6	858	72650
6.	Cuttack	18	93	14309	730916
7.	Deogarh	0	0	50	100
8	Dhenkanal	2	8	100	5000
9	Jajpur	12	73	28904	865671
10	Jagatsinghpur	10	9	12699	465920
11	Jharsuguda	1	6	200	15730
12	Kendrapada	12	51	30685	1144845
13	Khurda	2	13	28465	544310
14	Mayurbhanj	4	12	858	33920
15	Nayagarh	2	19	4627	103524
16	Nuapada	2	13	100	48000
17	Puri	38	115	36196	1571437
18	Sambalpur	8		6660	44500
19	Subarnapur	4	9	2319	4700
Total		135	482	173374	5274613

Drinking Water

Adequate arrangements were made for supply of safe drinking water in the flood affected areas. **600** water tankers and **3600** mobile vans were deployed. **4674300** water pouches were distributed. District-wise details are mentioned below.

Sl	District	Tankers Deployed	Water Pouches Distributed	Mobile Vans Deployed
1	Angul	0	4000	60
2	Balasore	0	0	60
3	Baragarh	30	22000	120
4	Bhadrak	0	21000	30
5	Boudh	60	9000	120
6	Cuttack	45	883000	750
7	Deogarh	0	0	30
8	Jajpur	75	315000	300
9	Jagatsinghpur	45	532300	300
10	Jharsuguda	0	3000	30
11	Kendrapada	135	1485000	600



12	Khurda	30	75000	150
13	Mayurbhanj	0		60
14	Nayagarh	0	130000	60
15	Puri	180	1156000	600
16	Sambalpur	0	2000	30
17	Subarnapur	0	37000	300
Total		600	4674300	3600

Disinfection of Drinking Water Sources

Sl	District	Tube Wells Disinfected	PWS System restored	Bleaching Power Distributed(inBags of 25 kg.)
1	Angul	58	5	12
2	Balasore	370	0	15
3	Baragarh	56	9	43
4	Bhadrak	526	0	115
5	Boudh	284	5	80
6	Cuttack	2372	63	174
7	Deogarh	4	0	4
8	Jajpur	932	0	144
9	Jagatsinghpur	441	11	179
10	Jharsuguda	43	0	12
11	Kendrapada	2018	21	193
12	Khurda	522	9	172
13	Mayurbhanj	68	0	6
14	Nayagarh	398	19	50
15	Puri	2748	19	162
16	Sambalpur	200	4	43
17	Subarnapur	325	20	64
18	Keonjhar	52	0	60
Total		11417	185	1518



Animal Care

Affected animals were shifted to safer places. **349** veterinary teams were deployed in the flood affected areas. **5.39 lakh** livestock have been treated and vaccinated. 19220.41 MT of cattle feed of high quality was distributed among 12,87,200 livestock in 4499 cattle camps. The district-wise position is mentioned below.

(Rs. in lakh)

Sl. No	Name of the District	No. of cattle camps	No. of large animals provided with cattle feed	No. of small animals provided to cattle feed
1	Angul	49	15388	11799
2	Baragarh	207	2704	1739
3	Bhadrak	122	6699	24918
4	Boudh	203	37961	18472
5	Cuttack	867	184244	106044
6	Dhenkanal	57	2919	1440
7	Jajpur	815	172793	57955
8	Jagatsinghpur	136	38501	17481
9	Jharsuguda	42	3618	1490
10	Kendrapada	749	158269	45445
11	Khurda	213	41459	18726
12	Nayagarh	124	14747	7683
13	Puri	787	195150	72517
14	Sambalpur	45	5048	3874
15	Subarnapur	83	11616	6501
Total		4499	891116	396084



Chapter-V

Assistance sought for

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

45 persons died due to floods in the State in 2011. The District-wise human casualty and amount disbursed as per revised CRF Norms for payment of ex-gratia assistance to the families of deceased persons. The requirement of funds for the purpose comes to Rs 45.00 lakh.

Clothing and utensils for families: *[Para-1 (e) of CRF Norms]*

About **21418** families whose houses have been fully damaged or severely inundated for a period more than 7 days have been provided with clothing and utensils. The district-wise expenditure for this purpose is given below:

(Rs. in lakh)

Sl.	District	Clothing		Utensils		Total Amount spent
		No. of family	Amount spent @ Rs.1000/- per family	No. of family	Amount spent @ Rs. 1000/- per family	
1	Angul	62	0.62	62	0.62	1.24
2	Balasore	7	0.07	7	0.07	0.14
3	Baragarh	831	8.31	831	8.31	16.62
4	Boudh	1020	10.20	1020	10.20	20.40
5	Cuttack	592	5.92	592	5.92	11.84
6	Deogarh	44	0.44	44	0.44	0.88
7	Jajpur	1290	12.90	1290	12.90	25.80
8	Jagatsinghpur	1159	11.59	1159	11.59	23.18
9	Jharsuguda	199	1.99	199	1.99	3.98
10	Kendrapada	3780	37.80	3780	37.80	75.60
11	Khurda	105	1.05	105	1.05	2.10
12	Mayurbhanj	6	0.06	6	0.06	0.12
13	Nayagarh	31	0.31	31	0.31	0.62
14	Nuapada	308	3.08	308	3.08	6.16
15	Puri	8177	81.77	8177	81.77	163.54
16	Sambalpur	1362	13.62	1362	13.62	27.24
17	Subarnapur	2550	25.50	2550	25.50	51.00
Total		21523	215.23	21523	215.23	430.46



Gratuitous Relief for families in dire need of immediate sustenance after a calamity: [Para-1 (f) of CRF 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.20/- per adult per day and @Rs.15/- per child per day. The total expenditure incurred towards providing gratuitous relief comes to **Rs 3500.00 lakh**.

Supplementary Nutrition: [As per Para-2 of CRF Norms]

1681566 children and pregnant & lactating mothers were provided with adequate nutritious food to supplement their health. The total expenditure for this purpose is **Rs.504.48 lakh** @ Rs.2.00 per children per day. The calculation is mentioned below:

Sl.	District	No. of children and P&L Mother Affected	No. of Days	Amount spent @ Rs.2.00 per person per day (Rs. in lakh)
1	Angul	41652	15	12.50
2	Balasore	64787	15	19.44
3	Baragarh	70036	15	21.01
4	Bhadrak	108439	15	32.53
5	Boudh	59118	15	17.74
6	Cuttack	228490	15	68.55
7	Deogarh	41144	15	12.34
8	Dhenkanal	12449	15	3.73
9	Jajpur	211086	15	63.32
10	Jagatsinghpur	100901	15	30.27
11	Jharsuguda	26035	15	7.81
12	Kendrapada	215522	15	64.66
13	Khurda	139674	15	41.90
14	Mayurbhanj	35257	15	10.58
15	Nayagarh	27373	15	8.21
16	Nuapada	46856	15	14.06



17	Puri	134665	15	40.40
18	Sambalpur	40721	15	12.22
19	Subarnapur	77361	15	23.21
Total		1681566		504.48

Assistance to Small and Marginal farmers

Cost of desilting of agricultural land: Subsidy for sand cast [Para-3(a) of CRF Norms]

803.4 hectares of agriculture land have been sand cast due to this floods. An amount of **Rs.48.20 lakh** is required for removal of sand to make the land fit for agriculture purpose.

Agriculture input subsidy to SMF farmers where crop loss is 50% and above: [Para-3(e) of CRF Norms]

Out of 323705 hectares of affected arable land, 173254.2 hectares of cropped area have sustained crop loss of more than 50%. An amount of Rs.3076.35 lakh is required for providing input subsidy to the affected farmers.

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

Input subsidy to farmers other than small & marginal farmers: [Para-4 of Revised CRF Norms]

Crops in 1803.75 hectares of irrigated land and 4329.4 hectares of non-irrigated lands of farmers other than small and marginal farmers have sustained crop loss of more than 50% due to the floods. An amount of Rs.158.736 lakh is required for providing input subsidy to affected farmers.

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

Assistance to Small & Marginal Sericulture farmers: [Para-5 of Revised CRF Norms]

28 hectares of Muga crop and 186.5 hectares of Eri crop have sustained crop loss more than 50%. An amount of **Rs.4.43 lakh** is required for providing input subsidy to the affected beneficiaries.



Replacement of draught animals: [Para-7(1) of Revised CRF Norms]

206 large animals and **449** small animals have lost lives due to floods. The total expenditure for replacement of these animals comes to **Rs.25.30 lakh**. The detailed calculation is given in **Appendix-V** :

Provisions of fodder / feed concentrate in the cattle camps: [Para-7 (ii) of Revised CRF Norms]

8,91,116 large animals and 3,96,084 small animals were shifted to cattle camps. 19,221 MT of cattle feed was distributed. For this an amount of Rs.3267.47 lakh has been spent .The district-wise position is mentioned below.

(Rs. in lakh)

Sl. No	Name of the District	No. of cattle camps	No. of large animals affected	Amount spent for providing cattle feed for 15 days @ Rs.20/- per day	No. of small animals affected	Amount spent for providing cattle feed for 15 days @ Rs.10/- per day	Total amount spent for providing cattle feed
1	Angul	49	15388	46.16	11799	17.70	63.86
2	Baragarh	207	2704	8.11	1739	2.61	10.72
3	Bhadrak	122	6699	20.10	24918	37.38	57.48
4	Boudh	203	37961	113.88	18472	27.71	141.59
5	Cuttack	867	184244	552.73	106044	159.07	711.8
6	Dhenkanal	57	2919	8.76	1440	2.16	10.92
7	Jajpur	815	172793	518.38	57955	86.93	605.31
8	Jagatsinghpur	136	38501	115.50	17481	26.22	141.72
9	Jharsuguda	42	3618	10.85	1490	2.24	13.09
10	Kendrapada	749	158269	474.81	45445	68.17	542.98
11	Khurda	213	41459	124.38	18726	28.09	152.47
12	Nayagarh	124	14747	44.24	7683	11.52	55.76
13	Puri	787	195150	585.45	72517	108.78	694.23
14	Sambalpur	45	5048	15.14	3874	5.81	20.95
15	Subarnapur	83	11616	34.85	6501	9.74	44.59
Total		4499	891116	2673.34	396084	594.13	3267.47



Assistance to fishermen: [Para-8 (a) of Revised CRF Norms]

1190 boats and nets have been fully damaged and **460** boats and nets have been partially damaged due to floods. An amount of **Rs.122.10** lakh is required for providing assistance to the affected fishermen. The district-wise details are given below:

(Rs. in lakh)

Sl. No	Name of the District	Boat & Net Units fully damaged		Boat & Net Units partially damaged		Total
		No. of Units damaged	Expenditure @Rs.7500	No. of Units damaged	Expenditure @Rs.2500	
1	Balasore	2	0.15	2	0.05	0.20
2	Boudh	22	1.65	4	0.1	1.75
3	Cuttack	167	12.525	0	0	12.525
4	Jajpur	0	0	202	5.05	5.05
5	Jagatsinghpur	20	1.5	56	1.4	2.90
6	Khurda	0	0	25	0.625	0.625
7	Nayagarh	0	0	763	19.075	19.075
8	Puri	37	2.775	200	5.00	7.775
9	Sambalpur	0	0	62	1.55	1.55
10	Subarnapur	942	70.65	0	0	70.65
	Total	1190	89.25	460	32.85	122.10

Input subsidy for fish farms: [Para-8(b) of CRF Norms]

1154.78 hectares of fish seed farms of 12 districts have been damaged due to this flood. The requirement for providing input subsidy @Rs.4000/- per hectare comes to Rs.45.831 lakh.

Assistance to Artisans in handicrafts sector by way of subsidy for repair / replacement of damaged equipments: [Para-9(a) of CRF Norms]

a) Traditional Crafts

2213 Artisans belonging to 19 Districts have been affected due to floods. Extensive damages have been caused to their equipment. 4205 Artisans have also lost their raw materials. An amount of **Rs.128.39 lakh** is required for providing



subsidy to them as per the revised CRF Norms. The district-wise detail is given below.

Sl.	Name of the District	No. of equipments fully damaged	No. of beneficiaries	Amount required @Rs.2000/-	Set of raw material/ goods in process/ finished goods fully damaged	No. of beneficiaries	Amount required @Rs.2000/-	Total
1	Angul	22	22	0.44	22	42	0.84	1.28
2	Balasore	103	103	2.06	103	196	3.91	5.97
3	Baragarh	212	212	4.24	212	403	8.06	12.30
4	Bhadrak	11	11	0.22	11	21	0.42	0.64
5	Boudh	27	27	0.54	27	51	1.03	1.57
6	Cuttack	187	187	3.74	187	355	7.11	10.85
7	Deogarh	7	7	0.14	7	13	0.27	0.41
8	Dhenkanal	11	11	0.22	11	21	0.42	0.64
9	Jajpur	37	37	0.74	37	70	1.41	2.15
10	Jagatsinghpur	24	24	0.48	24	46	0.91	1.39
11	Jharsuguda	17	17	0.34	17	32	0.65	0.99
12	Kendrapada	334	334	6.68	334	635	12.69	19.37
13	Khurda	77	77	1.54	77	146	2.93	4.47
14	Mayurbhanj	17	17	0.34	17	32	0.65	0.99
15	Nayagarh	36	36	0.72	36	68	1.37	2.09
16	Nuapada	42	42	0.84	42	80	1.60	2.44
17	Puri	514	514	10.28	514	977	19.53	29.81
18	Sambalpur	323	323	6.46	323	614	12.27	18.73
19	Subarnapur	212	212	4.24	212	403	8.06	12.30
Total		2213	2213	44.26	2213	4205	84.13	128.39



b) Handloom Weavers [Para-9(b) of CRF Norm]

1513 Loom equipment and accessories of **1513** beneficiaries have been damaged due to this floods and need replacement. An amount of **Rs.30.26 lakh** is required for providing assistance to the beneficiaries. Yarn and other materials like dyes and chemicals of 1513 looms have been washed away by the floods. An amount of **Rs.30.26 lakh** is required for providing assistance to the beneficiaries.

Sl.	Name of the District	No. of beneficiaries	No. of looms & accessories fully damaged	Amount required @Rs.2000/-	Set of raw material fully damaged	Amount required @Rs.2000/-	Total
1	Baragarh	697	697	13.94	697	13.94	27.88
2	Cuttack	134	134	2.68	134	2.68	5.36
3	Kendrapada	16	16	0.32	16	0.32	0.64
4	Jajpur	3	3	0.06	3	0.06	0.12
5	Subarnapur	521	521	10.42	521	10.42	20.84
6	Sambalpur	112	112	2.24	112	2.24	4.48
7	Jharsuguda	30	30	0.60	30	0.60	1.20
Total		1513	1513	30.26	1513	30.26	60.52

Assistance for repair / restoration of damaged houses: [Para-10 of revised CRF Norms]

116706 houses have been damaged due to floods out of which **7526** houses have been fully damaged and **13997** houses have been severely damaged. **68368** Houses have been partially damaged. This apart, **26815** Huts have also been damaged. An amount of **Rs.2671.60 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- VI.**

Emergency supply of drinking water in rural areas and urban areas [Para-11 of CRF Norms]

For immediate provision of drinking water to the flood victims 4059300 water pouches have been distributed. Tube wells are being disinfected immediately after receding the flood by the deploying 111 Mobile Vans. 40 Water tankers have been engaged to provide safe drinking water to the shelter places. 303 teams are engaged for repair and restoration of drinking water supply system



SI No.	Name of the District	Water tanker deployed for 15 days	Amount spent	Water pouch procured	Amount spent	Mobile vans deployed for 15 days	Amount spent	Bleaching powder procured in 25 kg bags	Amount Spent	Total cost
1	Angul	0	0	4000	0.04	60	0.9	26	0.078	1.018
2	Balasore	0	0	0	0	60	0.9	54	0.162	1.062
3	Baragarh	30	0.6	22000	0.22	120	1.8	60	0.18	2.8
4	Bhadrak	0	0	21000	0.21	30	0.45	200	0.6	1.26
5	Boudh	60	1.2	9000	0.09	120	1.8	82	0.246	3.336
6	Cuttack	45	0.9	883000	8.83	750	11.25	205	0.615	21.595
7	Deogarh	0	0	0	0	30	0.45	15	0.045	0.495
8	Dhenkanal	0	0	0	0	0	0	0	0	0
9	Jagatsinghpur	45	0.9	532300	5.323	300	4.5	314	0.942	11.665
10	Jajpur	75	1.5	315000	3.15	300	4.5	344	1.032	10.182
11	Jharsuguda	0	0	3000	0.03	30	0.45	80	0.24	0.72
12	Kendrapada	135	2.7	1485000	14.85	600	9	220	0.66	27.21
13	Khurda	30	0.6	75000	0.75	150	2.25	260	0.78	4.38
14	Mayurbhanj	0	0	0	0	60	0.9	126	0.378	1.278
15	Nayagarh	0	0	130000	1.3	60	0.9	60	0.18	2.38
16	Nuapada	0	0	0	0	0	0	0	0	0
17	Puri	180	3.6	1156000	11.56	600	9	187	0.561	24.721
18	Sambalpur	0	0	2000	0.02	30	0.45	148	0.444	0.914
19	Subarnapur	0	0	37000	0.37	300	4.5	160	0.48	5.35
	Total	600	12	4674300	46.74	3600	54	2541	7.623	120.37

Provision of medicines, disinfectants, insecticides for prevention of outbreak of epidemics: [Para-12 of revised CRF Norms]

An amount of **Rs.777.82 lakh** has been spent towards cost of medicines, disinfectants and insecticides for providing health care measures to affected people and prevention of outbreak of epidemics

(Rs. in lakh)

Sl.	Name of the District	Amount spent towards cost of medicine
1	Angul	30.84
2	Balasore	53.53
3	Baragarh	41.85
4	Bhadrak	33.36



5	Boudh	14.10
6	Cuttack	58.16
7	Deogarh	8.99
8	Dhenkanal	30.70
9	Jajpur	49.07
10	Jagatsinghpur	32.62
11	Jharsuguda	16.15
12	Kendrapada	54.86
13	Khurda	75.28
14	Mayurbhanj	70.64
15	Nayagarh	56.34
16	Nuapada	24.08
17	Puri	64.05
18	Sambalpur	38.63
19	Subarnapur	24.57
Total		777.82

Medical Care for cattle & poultry against epidemics: *[Para-13 of revised CRF Norms]*

Vaccination of Livestock in the affected districts have been made to reduce the morbidity and mortality of the livestock. Health and Deworming camps were also conducted to check different contagious and infectious diseases. An amount of Rs 125.00 lakh is spent for the purpose.

Evacuation of affected people: *[Para-14 of revised CRF Norms]*

280320 persons were evacuated by means of hired vehicle to safer places. An amount of **Rs.146.79 lakh** has been spent towards cost of POL and hire charges of vehicle.

Hiring of boats for carrying immediate relief and saving life: *[Para-15 of revised CRF Norms]*

1265 nos of power boats were engaged in relief and rescue operation in the flood-affected Districts. The relief materials were also transported by boats. The



affected persons were also evacuated by boats. A sum of **Rs.160.00 lakh** has been spent towards hiring charges and cost of POL etc. for boats.

Provision for temporary accommodation, food, clothing and medical care
[Para-16 of revised CRF Norms]

a) **396** relief camps were also opened to accommodate 220965 people who were evacuated by different means. An amount of Rs.314.02 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- VII**.

b) **121256** 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.1000/- per family is **Rs.1212.56 lakh**. The district-wise detail is given below.

(Rs. in Lakh)

Sl.	District	No. of families provided with polythene sheets	Amount spent
1.	Angul	1566	15.66
2.	Balasore	294	2.94
3.	Baragarh	564	5.64
4.	Bhadrak	240	2.40
5.	Boudh	1500	15.00
6.	Cuttack	14840	148.40
7.	Deogarh	141	1.41
8.	Dhenkanal	0	0
9.	Jajpur	5956	59.56
10.	Jagatsinghpur	6832	68.32
11.	Jharsuguda	547	5.47
12.	Kendrapada	58440	584.40
13.	Khurda	1045	10.45
14.	Mayurbhanj	348	3.48
15.	Nayagarh	1260	12.60
16.	Nuapada	450	4.50
17.	Puri	17373	173.73
18.	Sambalpur	2440	24.40
19.	Subarnapur	7420	74.20
Total		121256	1212.56



Air-dropping of essential supplies: - [Para-17 of revised CRF Norms]

Four Helicopters were engaged for ail-dropping of essential commodities for relief operation. **23272** food packets were airdropped in the marooned areas. Approximately **Rs.180.00** lakh is required for payment of bills of helicopters of IAF & Indian Navy.

Repair / restoration of immediate nature of the damaged infrastructure in eligible sectors : - [Para-18 of revised CRF Norms]

A sum of **Rs.193757.71 lakh** is required for repair / restoration of immediate nature of the damaged infrastructure in eligible sectors

i) Roads and bridges

PWD Roads:

An amount of **Rs.22607.35 lakh** is required for immediate repair and restoration of 55 breaches and 398 culverts in 1982.064 Kms of PWD roads damaged due to such floods. These roads used as important relief life lines during natural calamities. The district wise details are given below:

(Rs. in lakh)

Sl No.	Name of the District	No. of breaches	Cost for repair / restoration	Length of road damaged in Km	Cost for immediate repair	No. of culverts damaged	No of culverts washed away	Approx cost for immediate repair of culverts	Total cost
1	Angul	0	0	7.05	255	0	0	0	255.00
2	Balasore	1	6	165.253	700	17	0	30	736.00
3	Baragarh	0	0	81.79	501.75	6	0	35	536.75
4	Bhadrak	0	0	118.6	217	42	0	183	400.00
5	Boudh	2	6	28.5	149	13	0	45	200.00
6	Cuttack	12	69	358	3336	22	0	114	3519.00
7	Deogarh	2	30	0.625	70	0	0	0	100.00
8	Dhenkanal	0	0	38.69	490	12	0	63	553.00
9	Jajpur	10	210	245.77	4699	9	0	26	4935.00
10	Jagatsinghpur	0	0	0.07	37	0	0	0	37.00
11	Kalahandi	0	0	212.9	500	80	0	72	572.00
12	Kendrapada	6	70	119.9	1062	13	0	39	1171.00
13	Khurda	0	0	66.39	1510	15	0	63	1573.00
14	Mayurbhanj	3	3	122.276	100	59	1	107	210.00
15	Nayagarh	0	0	15.12	1184	8	0	36	1220.00



16	Nuapada	0	0	81.63	269	7	0	31	300.00
17	Puri	9	280	108.8	3616	6	0	51	3947.00
18	Sambalpur	3	150	8.93	757	1	1	50	957.00
19	Subarnapur	3	20	66	603	56	0	118	741.00
20	Keonjhar	4	96.9	135.77	442.2	29	1	105.5	644.60
Total		55	940.9	1982.064	20497.95	395	3	1168.5	22607.35

Rural Roads

Total **568** nos. of breaches occurred in Rural roads in the following Districts affected by floods. An amount of **Rs.36365.47 lakh** is required for immediate restoration of these roads. These roads are important for rescue and relief management. The detailed requirement is given below:

Sl No.	Name of the District	No. of Roads damaged	Lenth of Road damaged (In Kms)	No of Breaches	Length of Breaches (In mtr)	No of CD/ Bridge damaged	No of CD/ Bridge washed away	Amount Required for immediate restoration
1	Angul	32	77.14	0	0	2	0	464.00
2	Balasore	14	9.65	28	310	0	0	943.00
3	Baragarh	33	23.59	39	272	8	0	767.50
4	Bhadrak	93	165.85	0	0	4	0	3242.00
5	Boudh	29	115.50	0	0	31	0	1052.30
6	Cuttack	198	255.15	94	643	53	0	5309.00
7	Deogarh	10	20.00	0	0	2	0	362.00
8	Dhenkanal	3	3.30	0	0	0	0	221.00
9	Jajpur	64	382.62	28	206	54	0	5966.20
10	Jagatsinghpur	107	242.09	50	793	78	0	2645.00
11	Jharsuguda	11	43.00	15	60	24	0	313.00
12	Kendrapada	177	363.00	47	564	74	0	3050.00
13	Khurda	127	286.90	17	105	54	0	3047.00
14	Mayurbhanj	10	23.80	1	20	14	0	192.10
15	Nayagarh	33	60.65	0	0	17	0	719.00
16	Nuapada	13	28.00	0	0	0	0	380.00
17	Puri	210	390.29	249	2246	131	0	7042.37
18	Sambalpur	9	22.04	0	0	25	0	141.00
19	Subarnapur	51	29.80	0	0	9	0	509.00
Total		1224	2542.37	568	5219	580	0	36365.47



Urban Roads

Road length of 415 km and 65.20 Kms of drains has been damaged in urban areas. 31 culverts on these roads have also been extensively damaged. Those roads are used to ferry relief materials from the towns to rural areas. Street light stand posts have also been damaged in these areas. The total requirement of funds for immediate repair of these roads, drains and culverts comes to **Rs.4300.00 lakh**.

Panchayat Roads

3690.759 km of 13852 nos. of Panchayat roads have been damaged due to the floods. These roads are extensively used in rural areas for carrying relief materials during disaster. The total requirement of funds for immediate repair of these roads comes to **Rs.42500.35 lakh**. The details are given below:

Roads & Bridges

Sl	District	Number of Projects	No. of Culverts Damaged	No. of Road Damaged	Road Damaged in Kilometre	Amount required immediately	Estimated cost
1	Angul	111	0	0	39.5	292.40	292.40
2	Balasore	280	0	0	274.06	360.93	714.00
3	Baragarh	536	0	0	489.73	473.79	674.28
4	Bhadrak	1148	85	1182	344.91	0.00	5246.04
5	Boudh	127	0	0	87.389	104.00	250.10
6	Cuttack	2155	23	0	669.47	3201.43	6865.02
7	Deogarh	185	0	0	0	123.10	312.80
8	Dhenkanal	10	0	0	5.6	13.00	29.00
9	Jagatsinghpur	904	0	0	91.49	758.86	2503.63
10	Jajpur	2337	0	0	440.00	1577.36	8783.91
11	Jharsuguda	22	0	0	4.3	21.30	67.30
12	Kendrapada	1654	557	1654	588.82	2598.03	5657.89
13	Khurda	414	21	414	188.32	89.42	433.30
14	Mayurbhanj	2	3	0	2.50	4.00	0.00



15	Nayagarh	0	0	0	52.53	829.50	979.00
16	Nuapada	200	0	0	0.00	254.95	317.70
17	Puri	3275	0	0	0.00	5312.48	7993.38
18	Sambalpur	142	0	0	183.00	91.60	340.70
19	Subarnapur	350	7	0	229.14	472.65	1039.90
Total		13852	696	3250	3690.759	16578.8	42500.35

ii (A). Rural Water Supply: (Repair/restoration of drinking water sources)

12171 tube wells have been submerged, 1906 platforms and 301 rural piped water supply systems have been damaged due to the floods. Provision of safe and potable drinking water for the flood victims was crucial to prevent water borne diseases. An amount of **Rs.778.75 lakh** has already been spent for immediate repair and restoration of tube wells and rural piped water supply systems. District-wise expenditure position is indicated below:

(Rs. in lakh)

SI No.	Name of the District	No. of Tube wells affected	Amount required for repair	No of Platforms damaged	Amount required for repair	No of Rural Pipe water supply system damaged	Amount required for repair	Total cost
1	Angul	58	0	0	0.00	6	0.50	0.50
2	Balasore	370	0	100	10.00	0	0.00	10.00
3	Baragarh	56	0	30	3.00	13	26.00	29.00
4	Bhadrak	526	0	150	15.00	0	0.00	15.00
5	Boudh	284	0	70	7.00	19	50.00	57.00
6	Cuttack	2372	0	168	16.80	69	140.00	156.80
7	Deogarh	4	0	0	0.00	0	0.00	0.00
8	Dhenkanal	0	0	0	0.00	0	0.00	0.00
9	Jagatsinghpur	441	0	50	5.00	16	8.00	13.00
10	Jajpur	1062	0	0	0.00	12	5.00	5.00
11	Jharsuguda	43	0	0	0.00	0	0.00	0.00
12	Kendrapada	2270	0	700	70.00	37	60.00	130.00
13	Khurda	522	0	80	8.00	15	30.00	38.00
14	Mayurbhanj	68	0	0	0.00	0	0.00	0.00



15	Nayagarh	398	0	46	4.60	26	48.00	52.60
16	Nuapada	0	0	0	0.00	0	0.00	0.00
17	Puri	3181	0	200	20.00	54	120.00	140.00
18	Sambalpur	184	1.20	0	0.00	6	15.45	16.65
19	Subarnapur	332	0	312	31.20	28	84.00	115.20
Total		12171	1.2	1906	190.6	301	586.95	778.75

B. Urban Water Supply

Rs.950.00 lakh is required for immediate repair of water supply system in the affected urban areas.

iii) Irrigation

River and Canal Embankments:

87 breaches occurred in river embankments of different rivers. Besides breaches, partial damage has been caused to 2562 nos. of sites in river embankments. Similarly, 472 breaches occurred in different canal embankments. River and canal embankments are also used as roads by the public and administration for transport of relief materials. An amount of **Rs.61717.00 lakh** is required for immediate closure of breaches and repair of partial damaged sites as detailed below.

(A) RIVER EMBANKMENTS

Sl. No.	Name of the Division	Restoration to River/Saline Embankment					
		Breaches			Partial damages		
		No.	Length in Km'	amount required	No.	Length in Km'	amount required
1	Puri Irrigation Divn.	16	0.62	295.10	198	177.32	4331.39
2	Prachi Division	0	0.00	0.00	104	43.46	2799.90
3	Nimapara Irr. Divn.	2	0.12	157.00	153	69.52	2170.29
4	Khurda Irr. Division	2	0.11	28.70	98	29.01	2951.40



5	Mahanadi North Divn.	6	0.45	334.55	287	229.67	4484.87
6	Mahanadi South Divn.	19	1.01	533.00	66	33.35	3810.00
7	Kendrapara Irr. Divn.	15	1.18	1656.00	70	200.81	2960.00
8	Jagatsinghpur Irr. Divn	0	0.00	0.00	167	112.47	2821.98
9	Aul Embkt. Division	0	0.00	0.00	395	190.48	3799.23
10	Jajpur Irrigation Divn.	6	0.19	110.00	409	57815.68	5406.09
11	Jaraka Irrigation Divn.	11	0.70	285.50	98	13.04	1506.87
12	Angul Irr. Division	0	0.00	0.00	99	37.06	500.00
13	Balasore Irr. Division	0	0.00	0.00	135	62.06	3678.70
14	Baitarani Division	0	0.00	0.00	31	10.74	493.95
15	Salandi Canal Divn.	3	0.04	20.00	52	31.83	234.00
16	Berhampur Irr. Division	0	0.00	0.00	18	3.26	182.60
17	Bhanjanagar Irr. Divn.	0	0.00	0.00	53	14.35	728.50
18	Chikiti Irr. Division	0	0.00	0.00	23	5.91	283.00
19	Boudh Irr. Division	0	0.00	0.00	20	0.92	400.00
20	Sambalpur Irr. Divn.	0	0.00	0.00	18	6.34	510.00
21	Baragarh Canal Divn.	0	0.00	0.00	0	0.00	0.00
22	Sundergarh Irr. Divn.	3	0.38	55.00	5	0.83	11.00
23	Bolangir Irr. Division	0	0.00	0.00	32	3.42	85.00
24	Titilagarh Irr. Division	0	0.00	0.00	8	5.66	59.00
25	Nuapara Irr. Division	0	0.00	0.00	0	0.00	0.00
26	Mahanadi Barrage Division	0	0.00	0.00	2	10.33	500.00
27	Mayurbhanj Irr. Division	4	0.14	32.00	21	1.41	258.50
	Total	87	4.92	3506.85	2562	59108.90	44966.27

Cntd...



Sl. No.	Name of the Division	Restoration to Canals						Total Amount in lakhs
		Breaches			Partial damages			
		No.	Length in Km'	amount required	No.	Length in Km'	amount required	
1	Puri Irrigation Divn.	122	4.95	714.15	77	82.86	1158.07	6446.24
2	Prachi Division	0	0.00	0.00	64	49.79	569.00	3368.90
3	Nimapara Irr. Divn.	186	26.93	735.95	267	230.24	1192.30	4255.54
4	Khurda Irr. Division	0	0.00	0.00	0	0.00	0.00	2980.10
5	Mahanadi North Divn.	8	8.03	185.47	150	129.69	1104.70	6109.59
6	Mahanadi South Divn.	0	0.00	0.00	46	47.48	1224.00	5567.00
7	Kendrapara Irr. Divn.	0	0.00	0.00	92	278.36	1451.00	6067.00
8	Jagatsinghpur Irr. Divn	0	0.00	0.00	134	141.12	528.10	3350.08
9	Aul Embkt. Division	0	0.00	0.00	0	0.00	0.00	3799.23
10	Jajpur Irrigation Divn.	0	0.00	0.00	102	80.05	581.95	6098.04
11	Jaraka Irrigation Divn.	3	0.45	57.00	21	11.25	274.00	2123.37
12	Angul Irr. Division	0	0.00	0.00	0	0.00	0.00	500.00
13	Balasore Irr. Division	0	0.00	0.00	0	0.00	0.00	3678.70
14	Baitarani Division	63	5.16	99.60	99	61.72	329.90	923.45
15	Salandi Canal Divn.	73	2.90	30.00	76	74.03	146.00	430.00
16	Berhampur Irr. Division	2	0.02	3.90	36	5.35	311.50	498.00
17	Bhanjanagar Irr. Divn.	0	0.00	0.00	32	11.14	271.50	1000.00
18	Chikiti Irr. Division	0	0.00	0.00	34	14.42	331.00	614.00
19	Boudh Irr. Division	0	0.00	0.00	18	2.82	100.00	500.00
20	Sambalpur Irr. Divn.	0	0.00	0.00	309	280.57	1380.00	1890.00
21	Baragarh Canal Divn.	0	0.00	0.00	84	71.32	200.00	200.00
22	Sundergarh Irr. Divn.	3	0.69	15.50	62	3.46	30.31	111.81
23	Bolangir Irr. Division	0	0.00	0.00	41	39.96	128.15	213.15
24	Titilagarh Irr. Division	0	0.00	0.00	2	0.00	4.00	63.00



25	Nuapara Irr. Division	0	0.00	0.00	56	8.64	100.00	100.00
26	Mahanadi Barrage Division	0	0.00	0.00	0	0.00	0.00	500.00
27	Mayurbhanj Irr. Division	12	0.05	7.20	14	0.68	32.10	329.80
	Total	472	49.17	1849.53	1816	1624.92	11448.11	61717.00

(B) CADA Canals

565 CADA canals have been damaged by this flood. An amount of **Rs.3053.84 lakh** is required for restoration of the CADA canals. Detailed position is given below.

SI	Command	District	No. of projects	CCA in hectares(Field channel & field drains)	Amount required for restoration (Rs. in lakh)
1	Mahanadi Delta Stage-II	Puri	296	17456.00	1745.00
2		Khurda	35	1388.00	140.00
3		Cuttack	11	480.00	50.00
4	Hirakud	Sambalpur	12	180.00	18.00
5		Baragarh	11	300.00	30.00
6		Subarnapur	12	300.00	30.00
7	Salki	Boudh	12	320.00	32.00
8	Baitarani	Jajpur	29	1710.00	171.00
9		Bhadrak	49	3460.00	346.00
10	Mahanadi Delta Stage-I	Cuttack	49	2300.00	230.00
11		Kendrapada	27	1418.00	141.84
12		Jagatsinghpur	22	1203.00	120.00
Total			565	30515	3053.84



(C) Minor Irrigation (Flow)

Rs.701.55 lakh is required for immediate repair of damaged Minor Irrigation Projects as detailed below.

(Rs. in Lakh)

SI No.	Name of the District	No. of projects affected	Estimated value of the damage	Amount required for temporary restoration
1	Angul	17	97.00	28.00
2	Balasore	4	16.00	2.25
3	Bargarh	16	94.00	27.30
4	Bhadrak	4	19.00	7.00
5	Boudh	25	267.00	150.50
6	Cuttack	28	105.00	51.50
7	Deogarh	13	71.00	14.00
8	Jajpur	10	31.00	15.00
9	Jharsuguda	3	57.30	5.70
10	Kendrapada	1	4.00	2.00
11	Khurda	38	328.00	113.00
12	Mayurbhanj	9	245.00	110.00
13	Nuapada	10	71.00	30.00
14	Puri	4	57.00	27.50
15	Sambalpur	57	329.00	101.90
16	Subarnapur	8	69.00	15.90
Total		247	1,860.30	701.55

(D) Minor Irrigation (Lift)

3525 nos. of Minor Irrigation (Lift) Projects have been damaged during the current flood. An amount of **Rs.3954.86 lakh** is required for restoration of the projects to cover an area of 82509 hectares. The detailed is given below.



Sl	District	No. of L.I. projects damaged	Designated Ayacut (in Hectare)	Amount required for restoration (Rs. in lakh)
1	Angul	22	728	46.58
2	Balasore	43	1016	34.00
3	Baragarh	76	1768	33.74
4	Bhadrak	199	4337	270.50
5	Boudh	368	9540	702.60
6	Cuttack	769	18842	660.84
7	Deogarh	49	1052	23.55
8	Jajpur	241	5230	112.96
9	Jagatsinghpur	286	5026	258.26
10	Jharsuguda	15	348	1.90
11	Kendrapada	507	11382	964.70
12	Khurda	122	2885	83.10
13	Mayurbhanj	20	320	43.70
14	Nayagarh	64	1856	91.53
15	Puri	342	8166	338.67
16	Sambalpur	47	1240	22.60
17	Subarnapur	355	8773	265.63
Total		3525	82509	3954.86

(E) Drainage Systems

Rs.3429.80 lakh is required for immediate removal of debris & vegetative materials etc. from drainage system as detailed below.

(Rs. in lakh)

Sl. No.	Name of Division	No. of work	Amount required (Rs. In lakh)
1	Drainage Division, Bhubaneswar.	248	1189.50
2	Drainage Division, Bhadrak	148	1275.30
3	Drainage Division, Cuttack	161	543.40
4	Mahanadi barrage Division, Cuttack	11	188.30
5	Drainage Division, Chandikhol	47	110.30
6	Drainage Division, Balasore	8	123.00
Total		623	3429.80



Primary Education

(iv) Community Assets owned by Panchayat

(A) Panchayat Ghars

741 Panchayat ghars have been damaged due to this flood. Besides above 30 nos. of other PRI buildings have been damaged. An amount of **Rs.1120.90 lakh** is required for repair of the above buildings. The district wise details are as follows.

PRI Buildings

Sl	District	Number of PRIs Buildings	Amount Required (Rs. in Lakh)
1	Angul	6	3.00
2	Balasore	0	0.00
3	Baragarh	22	21.75
4	Bhadrak	6	0.00
5	Boudh	20	37.20
6	Cuttack	46	212.85
7	Deogarh	8	7.70
8	Dhenkanal	1	10.00
9	Jagatsinghpur	45	171.00
10	Jajpur	24	33.10
11	Jharsuguda	1	1.00
12	Kendrapada	137	189.50
13	Khurda	6	7.00
14	Mayurbhanj	0	0.00
15	Nayagarh	283	28.00
16	Nuapada	21	34.20
17	Puri	68	224.50
18	Sambalpur	3	5.30
19	Subarnapur	44	63.50
Total		741	1049.6



Other PRI Buildings

SI	District	Number of Projects	Amount Required (Rs. in Lakh)
1	Angul	0	0.00
2	Balasore	0	0.00
3	Baragarh	0	0.00
4	Bhadrak	0	0.00
5	Boudh	0	0.00
6	Cuttack	5	5.00
7	Deogarh	2	3.25
8	Dhenkanal	0	0.00
9	Jagatsinghpur	11	45.05
10	Jajpur	0	0.00
11	Jharsuguda	0	0.00
12	Kendrapada	9	1.00
13	Khurda	0	0.00
14	Mayurbhanj	0	0.00
15	Nayagarh	0	0.00
16	Nuapada	7	2.00
17	Puri	0	0.00
18	Sambalpur	0	0.00
19	Subarnapur	1	15.00
Total		30	71.3

(B) PHC / CHC

111 PHC/CHC have been damaged due to the current floods. **Rs.316.48 lakh** is required for immediate repair and restoration of the PHC/CHC buildings.



(Rs. in Lakh)

Sl No.	Name of the District	Amount Required for repair / restoration
1	Cuttack	23.00
2	Jagatsinghpur	3.00
3	Jajpur	18.00
4	Kendrapara	83.00
5	Puri	189.48
Total		316.48

(C) Primary School Buildings

Rs.8600.50 lakh is required for immediate repair of 1868 Primary School buildings damaged due to flood as detailed below

(Rs. in lakh)

Sl. No.	Name of District	No. of the Damaged school	Approx. cost (Rs. in lakhs)
1	Angul	60	135.50
2	Balasore	92	388.00
3	Baragarh	30	152.00
4	Bhadrak	31	147.00
5	Boudh	31	165.00
6	Cuttack	116	580.00
7	Deogarh	02	14.00
8	Dhenkanal	03	18.00
9	Jagatsinghpur	121	565.00
10	Jajpur	415	1975.00
11	Jharsuguda	03	20.00



12	Kendrapada	290	1280.00
13	Khurda	42	200.00
14	Mayurbhanj	05	25.00
15	Nayagarh	78	375.00
16	Nuapada	03	21.00
17	Puri	410	1875.00
18	Sambalpur	40	187.00
19	Subarnapur	96	478.00
Total		1868	8600.50

(D) Community Tanks

359 Community Tanks have been damaged due to the floods. Hence an amount of **Rs.605.33 lakh** is required for immediate repair of the Community Tanks damaged as detailed below.

Community Tanks

SI	District	Number of Projects	Amount Required (Rs. in Lakh)
1	Angul	0	0.00
2	Balasore	0	0.00
3	Baragarh	45	33.90
4	Bhadrak	0	0.00
5	Boudh	0	0.00
6	Cuttack	81	123.73
7	Deogarh	22	37.60
8	Dhenkanal	0	0.00
9	Jagatsinghpur	0	0.00
10	Jajpur	19	13.80



11	Jharsuguda	13	42.00
12	Kendrapada	100	153.80
13	Khurda	6	8.00
14	Mayurbhanj	0	0.00
15	Nayagarh	12	20.00
16	Nuapada	2	1.00
17	Puri	44	115.00
18	Sambalpur	15	31.00
19	Subarnapur	12	25.50
Total		359	605.33

(E) Community Assets owned by ULBs

Due to flood the Community Halls, School Buildings and Medical infrastructures have been seriously affected. As the infrastructures are very often used for the purpose of shelter and health services, during Natural Calamities their instant repair is necessary. An amount of **Rs.1200.00 lakh** is required for this purpose.

(V) Repair and restoration of power supply

Due to heavy flow of water in a flood situation, the HT & EHT lines are damaged, polls are uprooted, stay wires get disconnected and stay sets are damaged. Distribution Transformers & Power Transformers get submerged in water and do not stand due to insulation failure and contamination of oil with water. In 22/11KV S/S with its protection equipment like VCB, relay contracts become inoperative being submerged in water. The cable trays are buried in mud; control cable & power cable get damaged. The earth pits also get damaged. The general contour of the switch – yard become damaged due to flow of water. The sand layer & gravel layers are washed. Compound walls of 33/11KV structure fall down & get damaged due to flow of water.



Extensive damage has occurred to energy distribution infrastructure like power transformers, distribution transformers, 33/11KV conductors, electric polls and other associated equipment during the recent floods of September, 2011. The distribution companies are striving hard to restore the damaged infrastructure within the stipulated period of 45 days by pooling in resources from different sources on borrowing terms. This is being done to restore power supply to the people within the shortest possible time. Assistance from CRF/SDRF is required to support the restoration works taken up by the DISCOMs.

A district wise abstract of damaged infrastructure and requirement of funds for taking up the restoration work of immediate nature is prepared and attached herewith for consideration of financial assistance.

District-wise equipment damage - needs replacement to restore power supply

SL NO.	Name of District	33/11KV S/S			33KV VCB	11K VCB	Dist. Trf. in KVA					
		5 MVA	3.15 MVA	1.6 MVA			500	250	100	63	25	16
1	Kendrapara		1						28	13		1
2	Jagatsinghpur								19	24		
3	Cuttack			1	1	1	2	16	75	34	60	19
4	Khurda		1		1	2	1	2	19	9	9	
5	Nayagarh								2	4	10	4
6	Puri							2	11	26	16	10
7	Dhenkanal								1	1	3	
8	Jajpur								4	6	2	2
9	Angul			1	1	2			9	16	12	20
10	Keonjhar											
11	Jajapur									1	1	2



12	Bhadrak											
13	Balasore											
14	Mayurbhanja								1	1		
15	Sambalpur								6	3	5	
16	Bargarh								12	24	14	
17	Jarsuguda								1	2	5	
18	Sonepur								22	30	5	
19	Boudh								6	14	23	
Total			2	2	3	5	3	20	216	208	165	58

Contd..

SL No.	Name of District	Cond. In mm2 (KM)			Pole		AB Switch	V Cross Arm	Stay /HG/LA	Cost in Rs Lakhs
		100	55	34	8 Mtr	9 Mtr				
1	Kendrapara		15.5	56.5	174	66	14			120.98
2	Jagatsinghpur		30	68	126	20				115.00
3	Cuttack		280.4	354	1406	374	146			455.82
4	Khurda		2.8	17.6	19	48	3			99.00
5	Nayagarh		13.6		98	18	18			15.64
6	Puri		31.5	34.86	135	90	10			126.65
7	Dhenkanal		1.2		4	12	9			8.87
8	Jajpur		46	38	68	40	20			47.33
9	Angul		21	10	20	37	49			74.45
10	Keonjhar				12	16			10/0/0	1.83
11	Jajapur		56	16	139	104	6		0/03/10	42.21
12	Bhadrak				4					0.133
13	Balasore					2			12/0/0	0.337



14	Mayurbhanj		2		10	2				3.624
15	Sambalpur	45	45		220	173	1	79	0/01/03	110.62
16	Bargarh	77	66		320	293	2	195	0/02/6	153.366
17	Jarsuguda	4	7		32	15	8	10	0/8/24	18.33
18	Sonepur	27	17		80	102	6	68	0/6/18	103.16
19	Boudh			4	4	21	43		0/43/129	58.177
TOTAL			635	599	2871	1433	335	352	22/63/190	1555.53

Replacement of damage medical equipment and lost medicines: -
(Para 19 of Revised CRF Norm)

Medical equipments and medicines amounting to **Rs.7.37 lakh** of Govt. Hospital in Gop block of Puri district have been damaged and lost due to this floods. Hence Rs.7.37lakh is required for replacement of these damaged medical equipment and lost medicines.

Operational cost for Ambulance Service, Mobile Medical Team and Temporary Dispensaries: - (Para 20 of Revised CRF Norm)

Rs.101.43 lakh has been spent towards POL, hiring charges of vehicles used by Mobile Medical Teams, Ambulances and Paramedical Staff deployed in flood-affected areas to provide essential medical facilities.

Sl.	District	No. of Medical Relief Centres opened	No. of mobile team deployed	Operational cost(of POL) for Ambulance service, Mobile Medical Teams, and Temporary dispensaries (Rs. In lakh)
1.	Angul	13	02	0.8925
2.	Balasore	14	05	2.52
3.	Baragarh	21	06	1.7325
4.	Bhadrak	07	02	1.155
5	Boudh	06	05	1.155
6	Cuttack	93	18	20.3175
7	Deogarh	00	00	0
8	Dhenkanal	08	02	0.63
9	Jagatsinghpur	09	10	4.5675



10	Jajpur	73	12	15.2775
11	Jharsuguda	06	01	0.42
12	Kendrapada	51	12	11.8125
13	Khurda	13	02	2.6775
14	Mayurbhanj	12	04	1.05
15	Nayagarh	19	02	3.6225
16	Nuapada	13	02	0.8925
17	Puri	115	38	30.0825
18	Sambalpur	00	08	0.84
19	Subarnapur	09	04	1.785
Total		482	135	101.43

Draining of flood water in affected areas: (Item 22 of CRF norm)

Due to submergence of vast area under 20 ULBs in flood water for a longer period, it was necessary to prioritise the work of dewatering, sludge removal and sanitation measures towards Hygienic condition. **Rs.1050.00 lakh** has been spent for the above purpose.

Cost of Search and Rescue measures: - (Para 23 of revised CRF norms)

Ten ODRAF units were engaged for search and rescue operation in the flood affected areas. An amount of **Rs.50.00 lakh** has been spent for the purpose.



ABSTRACT OF ASSISTANCE SOUGHT FOR
(Rs. in lakh)

SI	Item	Amount required/spent
1	Ex-gratia for loss of life	45.00
2	Clothing & Utensils	430.46
3	GR kind for dire need of sustenance	3500.00
4	Supplementary Nutrition	504.48
5	Sand cast subsidy	48.20
6	Agriculture input subsidy-SMF	3076.35
7	Agriculture input subsidy-other than SMF	158.736
8	Input subsidy-Sericulture farmers	4.43
9	Replacement of draught animals	25.30
10	Provision of fodder	3267.47
11	Assistance to fisherman	122.10
12	Input subsidy-Fish farm	45.831
13	Assistance for Artisan-Traditional crafts	128.39
14	Assistance for Handloom weavers	60.52
15	HB assistance	2671.60
16	Emergence supply of drinking water	120.37
17	Human Health care	777.82
18	Cattle Health Care	125.00
19	Cost of evacuation	146.79
20	Hiring of boat	160.00
21	Temporary accommodation	314.02
22	Temporary shelter	1212.56
23	Air dropping	180.00
24	Repair of PWD Roads	22607.35
25	Repair of Rural Roads	36365.47
26	Repair of Urban Roads	4300.00
27	Repair of Panchayat Roads	42500.35
29	Repair of Rural Water Supply System	778.75
30	Repair of Urban Water Supply System	950.00
31	Repair of River/canal embankments	61717.00



32	Repair of CADA Canals	3053.84
33	Repair of Minor Irrigation (Flow)	701.55
34	Repair of Minor Irrigation (Lift)	3954.86
35	Clearance of Drainage channels	3429.80
36	Repair of Panchayat Ghars	1120.90
37	Repair of PHC/CHC	316.48
38	Repair of Primary School Buildings	8600.50
39	Repair of community tanks	605.33
40	Repair of community assets of ULBs	1200.00
41	Restoration of Power supply	1555.53
42	Replacement of damaged Medical equipments	7.37
43	Operational cost of Ambulance service	101.43
44	Draining of Flood water	1050.00
45	Cost of search & Rescue measure	50.00
	Grand Total	212091.937

or say Rs.2120.92 crore



Chapter-VI

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 Orissa for the year 2011-12 has been fixed at Rs.411.16 Crore.

Center's share	-	308.37 Crore
State's share	-	102.79 Crore
Total	-	411.16 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 instant floods of September 2011, a total sum of Rs.144.53 crore has already been spent for providing immediate relief and rescue to the affected people.

(Rs. in crore)

Item	Expenditure incurred
Gratuitous Relief	35.00
Supplementary nutrition	5.045
Emergent Relief (Free kitchen / Temporary accommodation)	3.140
Drinking water supply	1.204
Ex-gratia	0.45
House Building Assistance	26.717
Temporary shelter material	12.126
Clothing and utensils	4.305
Human Health Care	7.778
Cattle care	1.250
Cattle feed	32.675
Cost for evacuation	1.47



Boat hire charges	1.600
Cost of search and rescue measures	0.500
Draining of flood water	10.000
Cost of Ambulance service	1.020
Assistance for replacement of draught / milch animals	0.250
Total	144.530

The details of SDRF / NDRF account in the prescribed format is as follows.

SDRF Account -2011 – Orissa [As on 20.09.2011]

[Rs. in crore]

1	Opening balance in CRF account (both CRF and NCCF) as on 01.04.2011	22.49
2	CRF releases during the year 2011-2012 (Central & State share)	
	# 1st Installment of current year [State + Central]	205.580
	# 2nd Installment of current year, if any[State + Central]	Nil
	# Advance Contribution for 2012-13 (Centre+State)	Nil
3	Interest accrued on investment made out of SDRF	Nil
4	NDRF releases during the year 2011-12 if any	Nil
5	Total funds available in SDRF Account (1+2+3)	228.07
6	Expenditure incurred on calamities other than floods during 2011-12	
	# Avalanches	0.00
	# Cyclone	0.38
	# Cloud Burst	0.00
	# Drought	88.62
	# Earthquake / Tsunami	0.00
	# Fire	1.78
	# Hailstorm	0.38
	# Landslides	0.00
	# Pest Attacks	0.00
	Sub-total	91.16
7	Expenditure incurred on training during 2011-2012	0.00
8	Expenditure incurred upto 10% on procurement of search and rescue equipments etc. during 2011-2012	35.37
9	Expenditure incurred on instant heavy rains/ floods of September -2011.	144.53
10	Total expenditure incurred on all calamities (6+7+8 +9)	271.06
11	Balance available in SDRF account (5-10)	Nil



Chapter-VII

Conclusion

Ministry of Home Affairs, Government of India vide its Fax Message No.11011 /15/2011-NDM-I Dt.11.09.2011 has termed the current flood situation in Mahanadi River System as UNPRECEDENTED FLOOD SITUATION since the River Mahanadi continued to flow close to HFL at most of the points. Although the peak discharge in the river remained confined to 13.67 lakh cusec (on 11.9.2011 from 6AM) compared to 15.80 lakh cusec in 2008 & 1982, the flood discharge above 12.5 lakh cusec continued for a period of 3 days (10.9.2011 to 12.9.2011) causing serious damage to lives and property of the people. Such sustained high flow in the river system coupled with incessant rain also caused serious urban flooding as the rain water could not be drained to the river.

State Government by this Memorandum seek the following assistance from the Government of India;

- A total financial assistance of Rs.2120.92 crore out of NDRF is required to complete the process of relief and restoration measures caused due to floods 2011.
- Special allocation of one lakh Indira Awas Yojana (IAY) houses for flood victims of BPL category, whose houses have been damaged due to floods, may be made.
- An Inter Ministerial Central Team may be deputed immediately to the State for assessment of damage.

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APPENDIX- I
District-wise Rainfall Data
Month : JUNE

[Rainfall in mm]

Sl.	Name of the affected districts	Rainfall during the calamity			Rainfall during the corresponding period in the last three years								
		2011			2010			2009			2008		
		Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation
1.	Angul	208.4	225.1	-7.4	87.4	225.1	-61.2	53.8	225.1	-76.1	371.4	225.1	65.0
2.	Balasore	347.4	221.5	56.8	93.3	221.5	-57.9	90.3	221.5	-59.3	630.8	221.5	184.8
3.	Bargarh	87.1	205.6	-57.6	161.9	205.6	-21.2	13.7	205.6	-93.4	271.3	205.6	31.9
4.	Bhadrak	382.0	198.2	92.7	153.7	198.2	-22.5	90.2	198.2	-54.5	444.5	198.2	124.3
5.	Boudh	116.8	233.8	-50.0	153.7	233.8	-34.3	51.2	233.8	-78.1	366.2	233.8	56.6
6.	Cuttack	274.5	210.0	30.7	221.9	210.0	5.7	100.3	210.0	-52.2	413.9	210.0	97.1
7.	Deogarh	132.3	242.4	-45.4	147.4	242.4	-39.2	63.0	242.4	-74.0	372.0	242.4	53.5
8.	Dhenkanal	274.3	225.7	21.5	187.3	225.7	-17.0	90.1	225.7	-60.1	301.7	225.7	33.7
9.	Jagatsinghpur	275.6	202.3	36.2	144.3	202.3	-28.7	52.0	202.3	-74.3	347.4	202.3	71.7
10.	Jajpur	383.5	238.5	60.8	195.9	238.5	-17.9	65.9	238.5	-72.4	423.0	238.5	77.4
11.	Jharsuguda	160.3	218.8	-26.7	214.6	218.8	-1.9	119.0	218.8	-45.6	281.4	218.8	28.6
12.	Kendrapara	421.4	208.3	102.3	96.5	208.3	-53.7	39.6	208.3	-81.0	431.0	208.3	106.9

13.	Keonjhar	358.8	241.4	48.6	164.6	241.4	-31.8	86.3	241.4	-64.3	545.4	241.4	125.9
14.	Khurda	176.2	196.2	-10.2	239.7	196.2	22.2	74.0	196.2	-62.3	317.8	196.2	62.0
15.	Mayurbhanj	417.7	265.8	57.1	134.3	265.8	-49.5	69.7	265.8	-73.8	666.8	265.8	150.9
16.	Nayagarh	167.1	203.5	-17.9	268.4	203.5	31.9	109.7	203.5	-46.1	293.8	203.5	44.4
17.	Nuapara	79.6	210.3	-62.2	85.3	210.3	-59.4	87.6	210.3	-58.4	168.8	210.3	-19.7
18.	Puri	166.0	188.0	-11.7	124.8	188.0	-33.6	77.6	188.0	-58.7	298.6	188.0	58.8
19.	Sambalpur	185.7	221.0	-16.0	193.9	221.0	-12.2	73.9	221.0	-66.6	410.6	221.0	85.8
20.	Sonepur	147.2	217.4	-32.3	137.0	217.4	-37.0	85.7	217.4	-60.6	353.2	217.4	62.5

APPENDIX - I
District-wise Rainfall Data
Month : JULY

[Rainfall in mm]

Sl.	Name of the affected districts	Rainfall during the calamity			Rainfall during the corresponding period in the last three years								
		2011			2010			2009			2008		
		Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation
1.	Angul	140.9	347.7	-59.5	222.9	347.7	-35.9	636.7	347.7	83.1	269.9	347.7	-22.4
2.	Balasore	112.4	308.6	-63.6	253.5	308.6	-17.9	430.0	308.6	39.4	263.5	308.6	-14.6
3.	Bargarh	233.3	397.2	-41.3	419.3	397.2	5.6	736.8	397.2	85.5	303.9	397.2	-23.5
4.	Bhadrak	133.7	293.6	-54.5	224.7	293.6	-23.5	600.4	293.6	104.5	145.4	293.6	-50.5
5.	Boudh	139.1	418.5	-66.8	261.6	418.5	-37.5	641.1	418.5	53.2	306.9	418.5	-26.7
6.	Cuttack	227.0	308.3	-26.4	278.5	308.3	-9.7	740.9	308.3	140.3	280.2	308.3	-9.1
7.	Deogarh	249.4	447.7	-44.3	254.5	447.7	-43.2	456.1	447.7	1.9	342.3	447.7	-23.5
8.	Dhenkanal	167.2	317.9	-47.4	212.1	317.9	-33.3	661.4	317.9	108.1	275.0	317.9	-13.5
9.	Jagatsinghpur	245.1	277.3	-11.6	139.3	277.3	-49.8	615.9	277.3	122.1	253.5	277.3	-8.6
10.	Jajpur	136.3	350.9	-61.2	161.1	350.9	-54.1	608.4	350.9	73.4	150.8	350.9	-57.0
11.	Jharsuguda	217.8	385.8	-43.6	269.2	385.8	-30.2	503.8	385.8	30.6	440.6	385.8	14.2
12.	Kendrapara	228.6	317.1	-27.9	225.6	317.1	-28.9	589.0	317.1	85.7	176.0	317.1	-44.5

13.	Keonjhar	264.5	318.0	-16.8	271.3	318.0	-14.7	442.7	318.0	39.2	332.4	318.0	4.5
14.	Khurda	241.3	304.9	-20.9	193.1	304.9	-36.7	567.8	304.9	86.2	293.1	304.9	-3.9
15.	Mayurbhanj	130.4	337.3	-61.3	189.0	337.3	-44.0	284.3	337.3	-15.7	295.1	337.3	-12.5
16.	Nayagarh	169.6	288.5	-41.2	222.7	288.5	-22.8	758.9	288.5	163.1	329.0	288.5	14.0
17.	Nuapara	178.7	347.1	-48.5	345.8	347.1	-0.4	697.1	347.1	100.8	193.7	347.1	-44.2
18.	Puri	237.5	292.0	-18.6	162.0	292.0	-44.5	609.2	292.0	108.6	334.3	292.0	14.5
19.	Sambalpur	344.7	429.5	-19.8	293.9	429.5	-31.6	638.6	429.5	48.7	494.5	429.5	15.1
20.	Sonepur	242.3	399.6	-39.4	328.5	399.6	-17.8	917.2	399.6	129.5	361.8	399.6	-9.5

APPENDIX - I
District-wise Rainfall Data
Month : AUGUST

[Rainfall in mm]

Sl.	Name of the affected districts	Rainfall during the calamity			Rainfall during the corresponding period in the last three years								
		2011			2010			2009			2008		
		Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation
1.	Angul	314.3	357.5	-12.1	233.4	357.5	-34.7	271.9	357.5	-23.9	283.5	357.5	-20.7
2.	Balasore	373.8	332.1	12.6	176.7	332.1	-46.8	303.0	332.1	-8.8	286.7	332.1	-13.7
3.	Bargarh	294.8	374.4	-21.3	219.4	374.4	-41.4	210.0	374.4	-43.9	410.8	374.4	9.7
4.	Bhadrak	350.1	311.7	12.3	194.5	311.7	-37.6	302.5	311.7	-3.0	213.8	311.7	-31.4
5.	Boudh	473.9	488.8	-3.0	249.2	488.8	-49.0	352.0	488.8	-28.0	407.3	488.8	-16.7
6.	Cuttack	436.5	339.1	28.7	300.5	339.1	-11.4	389.9	339.1	15.0	428.4	339.1	26.3
7.	Deogarh	312.8	443.4	-29.5	288.2	443.4	-35.0	245.8	443.4	-44.6	322.1	443.4	-27.3
8.	Dhenkanal	399.0	344.8	15.7	226.6	344.8	-34.3	226.1	344.8	-34.4	346.9	344.8	0.6
9.	Jagatsinghpur	265.1	379.1	-30.1	270.3	379.1	-28.7	211.0	379.1	-44.3	417.3	379.1	10.1
10.	Jajpur	448.6	341.2	31.5	231.7	341.2	-32.1	290.7	341.2	-14.8	245.8	341.2	-28.0
11.	Jharsuguda	296.5	382.9	-22.6	336.4	382.9	-12.1	272.8	382.9	-28.8	489.8	382.9	27.9
12.	Kendrapara	293.8	333.3	-11.9	182.1	333.3	-45.4	175.7	333.3	-47.3	253.1	333.3	-24.1

13.	Keonjhar	385.1	343.6	12.1	235.5	343.6	-31.5	264.1	343.6	-23.1	268.0	343.6	-22.0
14.	Khurda	287.5	320.6	-10.3	344.1	320.6	7.3	291.2	320.6	-9.2	302.7	320.6	-5.6
15.	Mayurbhanj	369.7	359.9	2.7	158.2	359.9	-56.1	259.6	359.9	-27.9	278.8	359.9	-22.5
16.	Nayagarh	367.7	288.2	27.6	314.2	288.2	9.0	213.3	288.2	-26.0	334.7	288.2	16.1
17.	Nuapara	393.9	327.8	20.2	277.3	327.8	-15.4	319.2	327.8	-2.6	349.2	327.8	6.5
18.	Puri	272.9	297.9	-8.4	358.4	297.9	20.3	244.8	297.9	-17.8	311.8	297.9	4.7
19.	Sambalpur	346.5	442.4	-21.7	229.5	442.4	-48.1	331.5	442.4	-25.1	505.0	442.4	14.2
20.	Sonepur	215.4	408.9	-47.3	222.0	408.9	-45.7	309.5	408.9	-24.3	377.3	408.9	-7.7

APPENDIX - I
District-wise Rainfall Data
Month : SEPTEMBER [Upto 21st]

[Rainfall in mm]

Sl.	Name of the affected districts	Rainfall during the calamity (1 st Sept. to 21 st Sept., 2011)			Rainfall during the corresponding period in the last three years								
		2011			2010			2009			2008		
		Actual	Normal (Antc.)	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation	Actual	Normal	Deviation
1.	Angul	385.8	152.3	153.4	154.5	152.3	1.4	86.1	152.3	-43.5	296.9	152.3	95.0
2.	Balasore	343.0	187.3	83.1	257.8	187.3	37.6	283.1	187.3	51.1	259.1	187.3	38.3
3.	Bargarh	510.7	155.8	227.7	165.4	155.8	6.2	80.9	155.8	-48.1	302.6	155.8	94.2
4.	Bhadrak	278.1	151.8	83.2	211.1	151.8	39.1	210.1	151.8	38.4	253.7	151.8	67.2
5.	Boudh	354.5	171.4	106.9	226.2	171.4	32.0	113.3	171.4	-33.9	324.8	171.4	89.5
6.	Cuttack	304.6	160.4	89.9	155.5	160.4	-3.1	162.2	160.4	1.1	413.0	160.4	157.5
7.	Deogarh	406.1	159.7	154.2	108.7	159.7	-31.9	53.9	159.7	-66.2	197.9	159.7	23.9
8.	Dhenkanal	337.4	154.4	118.5	181.8	154.4	17.7	90.1	154.4	-41.6	272.3	154.4	76.4
9.	Jagatsinghpur	271.3	169.0	60.5	139.9	169.0	-17.2	141.4	169.0	-16.3	303.1	169.0	79.4
10.	Jajpur	315.3	166.6	89.2	181.5	166.6	8.9	215.8	166.6	29.5	420.6	166.6	152.5
11.	Jharsuguda	585.1	147.5	296.7	101.7	147.5	-31.1	52.0	147.5	-64.7	329.6	147.5	123.5
12.	Kendrapara	318.3	166.1	91.6	184.4	166.1	11.0	243.3	166.1	46.5	421.4	166.1	153.7

13.	Keonjhar	329.8	168.8	95.4	221.8	168.8	31.4	129.9	168.8	-23.1	272.6	168.8	61.5
14.	Khurda	221.9	164.2	35.2	215.4	164.2	31.2	130.4	164.2	-20.6	253.1	164.2	54.2
15.	Mayurbhanj	306.5	183.4	67.1	213.3	183.4	16.3	199.9	183.4	9.0	211.9	183.4	15.5
16.	Nayagarh	204.0	158.8	28.5	228.7	158.8	44.0	85.1	158.8	-46.4	351.6	158.8	121.4
17.	Nuapara	152.3	150.2	1.4	224.9	150.2	49.7	38.9	150.2	-74.1	540.5	150.2	259.9
18.	Puri	238.4	170.2	40.0	237.1	170.2	39.3	138.7	170.2	-18.5	200.6	170.2	17.9
19.	Sambalpur	559.4	157.3	255.7	144.4	157.3	-8.2	96.9	157.3	-38.4	363.7	157.3	131.2
20.	Sonepur	280.9	159.6	76.0	219.5	159.6	37.5	115.8	159.6	-27.4	337.8	159.6	111.7

Appendix - II

Extent of damage due to natural calamities

State : *ODISHA*

Nature and period of natural calamity : *Floods 2011*

Sl.	Item	Details
1.	Total number of districts in the State	30
2.	Number and names of districts affected	19
3.	Number of villages affected	4897
4.	Population affected (in lakh)	34.44
5.	Total land area affected (in lakh ha.)	
6.	Cropped area affected (in lakh ha)	3.23
	i) Total cropped area affected	
	ii) Estimated loss to crops (Rs. in lakh)	
	iii) Area where cropped damage was more than 50%	1.79
7.	Percentage of area held by SMF	
	i) In the State as a whole	53.10%
	ii) In the affected districts	
8.	House damaged	116706
	a) No. of houses damaged	
	i) Fully damaged pucca houses	42
	ii) Fully damaged kutch houses	7484
	iii) Severely damaged pucca houses	122
	iv) Severely damaged kutch houses	13875
	v) Partly damaged houses (pucca + kutch)	68368
	vi) No. of huts damaged	26815
	b) Estimated value of damage to houses (Rs. in lakh)	
9.	No. of human lives lost	45
	No. of persons with grievous injuries	
	No. of persons with minor injuries	
10.	Animal lost	
	a) No. of big animals lost	206
	b) No. of small animals lost	449
	c) No. of poultry (birds) lost	
11.	Damage to public properties	
	a) In physical terms (sector wise details should be given – e.g. length of State roads damaged, length of districts roads damaged, length of village roads damaged, No. of bridges damaged, No. of culverts damaged, No. of school buildings damaged etc.)	193757.71
	b) Estimated value of the damage to public properties	
	Estimated total damage to houses, crops and public properties	

Appendix-III
Calculation of assistance for agricultural input subsidy-SMF

(Rs. in lakh)

Sl.	Districts	Total Agricultural area Affected [in Hect.]	Total agricultural area where croploss is > 50%	Crop loss 50% & above			Assistance sought for			Total
				Irrigated [in hect.]	Rainfed [in hect.]	Perennial	Irrigated @Rs.4000/- per hectare	Rainfed @Rs.2000/- per hectare	Perennial @ Rs.6000/ per Hect.	
1	Angul	31250	4331	0	4331	0	0	8662000	0	86.62
2	Balasore	14833								0.00
3	Baragarh	10276								0.00
4	Bhadrak	11247	4215		4215			8430000	0	84.30
5	Boudh	6809	6809	2014	3774	0	8056000	7548000	0	156.04
6	Cuttack	43633	35518	6735	27067	0	26940000	54134000	0	810.74
7	Deogarh	130	0	0	0	0	00	0	0	0.00
8	Dhenkanal	1030	0	0	0	0	0	0	0	0.00
9	Jajpur	40299	27615	4227	23388	0	16908000	46776000	0	636.84
10	Jagatsinghpur	8402	5716	870	4846	0	3480000	9692000	0	131.72
11	Jharsuguda	1788	1053	0	1053	0	0	2106000	0	21.06
12	Kendrapada	36636	32420	963	29053	0	3852000	58106000	0	619.58
13	Khurda	22064								0.00
14	Mayurbhanj	0	0	0	0	0	0	0	0	0.00
15	Nayagarh	7746	5167	58	4596	0	232000	7023000	0	72.55
16	Nuapada	9	0	0	0	0	0	0	0	0.00
17	Puri	76994	45408	26318	17090	0	11327200	3418000	0	147.45
18	Sambalpur	3392	1002.23	989.55	12.68	0	3948000	25000	0	39.83
19	Subarnapur	7167	4000	853	6314	00	1706000	25256000	00	269.62
Total		323705	173254.2	43027.55	125739.7	0	76449200	231176000	0	3076.35

Appendix-IV

Calculation of assistance for agricultural input subsidy- Other than SMF

(Rs. in lakh)

Sl.	Districts	Total Agricultural area Affected [in Hect.]	Total agricultural area where croploss is > 50%	Crop loss 50% & above			Assistance sought for			Total
				Irrigated [in hect.]	Rainfed [in hect.]	Perennial	Irrigated @Rs.4000/- per hectare	Rainfed @Rs.2000/- per hectare	Perennial @ Rs.6000/ per Hect.	
1	Angul	31250	0	0	0	0	0	0	0	0
2	Balasore	14833								0
3	Baragarh	10276								0
4	Bhadrak	11247	0	0	0	0	0	0	0	0
5	Boudh	6809	1021	355	666	0	1420000	1332000	0	27.52
6	Cuttack	43633	651	84	567	0	336000	1134000	0	14.7
7	Deogarh	130	0	0	0	0	0	0	0	0
8	Dhenkanal	1030	0	0	0	0	0	0	0	0
9	Jajpur	40299	0	0	0	0	0	0	0	0
10	Jagatsinghpur	8402	99	25	74	0	100000	148000	0	2.48
11	Jharsuguda	1788	1053	0	1053	0		2106000		21.06
12	Kendrapada	36636	745	21	724	0	84000	1448000	0	15.32
13	Khurda	22064	0	0	0					0
14	Mayurbhanj	0	0	0	0	0	0	0	0	0
15	Nayagarh	7746	513	0	513	0	0	1026000	0	10.26
16	Nuapada	9	0	0	0	0	0	0	0	0
17	Puri	76994	1946.15	1213.75	732.4	0	4855000	1464800	0	63.196
18	Sambalpur	3392	105	105	0	0	420000	0	0	4.2
19	Subarnapur	7167	0	0	0	0	0	0	0	0
Total		323705	6133.15	1803.75	4329.4	0	7215000	8658800	0	158.736

Appendix-V

Animal Husbandry (Replacement of Animals)

Name of the District	No of Livestock / Birds 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			
	Milch Animal		Draught Animal		Poultry Birds	Milch Animal		Draught Animal	
	Buffalo/ Cow	Sheep/ Goat	Camel/ Horse/ Bullock	Calf/ Donkey/ Pony		Buffalo/ Cow	Sheep/ Goat	Camel/ Horse/ Bullock	Calf/ Donkey/ Pony
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Angul	2	0	3	1		2	0	3	1
Bhadrak	0	0	0	0	0	0	0	0	0
Boudh	1	6	4	0		1	5	4	0
Cuttack	12	84	16	0	0	12	84	16	0
Deogarh	0	0	0	0	0	0	0	0	0
Dhenkanal	0	12	0	0		0	12	0	0
Jajpur	1	1	5	0	0	1	1	5	0
Jagatsinghpur	4	0	0	0		4	0	0	0
Jharsuguda	0	0	0	0	0	0	0	0	0
Kendrapada	7	1	2	9		7	1	1	2
Khurda									
Mayurbhanj	0	0	0	0	0	0	0	0	0
Nayagarh	1	0	0	3		1	0	0	3
Nuapada	0	0	0	0	0	0	0	0	0
Puri	141	199	0	0	0	141	199	0	0
Sambalpur	4	126	2	7	0	4	40	2	5
Subarnapur	1	0	0	0	0	1	0	0	0
TOTAL									

Contd..

Name of the District	Expenditure incurred (Milch animals @ Rs.10000 for large animal , Rs.1000 for small animals & Draught animals @ Rs 10,000 for large animal, Rs. 5000 for small animals)				Poultry @ 30/- per bird subject to a ceiling of assistance of Rs.300/- per beneficiary household.	Total expenditure (11+12+13+14+15)
	Milch Animal		Draught Animal		Poultry Bird	
	Buffalo/ Cow	Sheep/ Goat	Camel/ Horse/ Bullock	Calf/ Donkey/ Pony		
(1)	(11)	(12)	(13)	(14)	(15)	(16)
Angul	20000	0	30000	5000		55000
Bhadrak	0	0	0	0	0	0
Boudh	10000	5000	40000	0	0	55000
Cuttack	120000	84000	160000	0	0	364000
Deogarh	0	0	0	0	0	
Dhenkanal	0	60000	00	0	0	60000
Jajpur	10000	1000	50000	0	0	61000
Jagatsinghpur	40000	0	0	00	0	40000
Jharsuguda	0	00	0	0	0	0
Kendrapada	70000	1000	10000	45000	0	126000
Khurda						
Mayurbhanj	0	0	0	0	0	0
Nayagarh	10000	0	0	15000		25000
Nuapada	0	0	0	0	0	0
Puri	1410000	199000	0	0	0	1609000
Sambalpur	40000	40000	20000	25000	0	125000
Subarnapur	10000	0	0	0	0	10000
TOTAL						2530000

Appendix -VI

Assistance sought for repair /restoration of damaged houses

(Rs. in Lakh)

Sl.	District	Fully Damaged				Severely Damaged				Partially		Huts		TOTAL
		Pucca Nos	Amount @ Rs.35000/-	Kutcha Nos.	Amount @ Rs.10000/-	Pucca Nos.	Amount @ Rs.5000/-	Kutcha Nos.	Amount @ Rs.2500/-	Nos.	Amount @ Rs.1500/-	Nos.	Amount @ Rs.2000/-	
1	Angul	00	0.00	62	6.20	00	0.00	00	0.00	213	3.20	00	0.00	9.40
2	Balasore	00	0.00	2	0.20	00	0.00	5	0.13	24	0.36	3	0.06	0.75
3	Baragarh	00	0.00	266	26.60	00	0.00	565	14.13	1191	17.87	00	0.00	58.59
4	Bhadrak	00	0.00	00	0.00	00	0.00	00	0.00	30	0.45	00	0.00	0.45
5	Boudh	00	0.00	188	18.80	00	0.00	832	20.80	759	11.39	00	0.00	50.99
6	Cuttack	00	0.00	148	14.80	00	0.00	444	11.10	11777	176.66	2511	50.22	252.78
7	Deogarh	00	0.00	44	4.40	00	0.00	00	0.00	1306	19.59	00	0.00	23.99
8	Dhenkanal	00	0.00	00	0.00	00	0.00	00	0.00	16	0.24	00	0.00	0.24
9	Jajpur	00	0.00	177	17.70	00	0.00	1113	27.83	5186	77.79	1745	34.90	158.22
10	Jagatsinghpur	00	0.00	171	17.10	20	1.00	968	24.20	2728	40.92	1698	33.96	117.18
11	Jharsuguda	00	0.00	131	13.10	00	0.00	68	1.70	142	2.13	16	0.32	17.25
12	Kendrapada	35	12.25	1745	174.50	15	0.75	1985	49.63	18020	270.30	5200	104.00	611.43
13	Khurda		0.00	24	2.40		0.00	81	2.03		0.00		0.00	4.43
14	Mayurbhanj	00	0.00	1	0.10	00	0.00	5	0.13	112	1.68	30	0.60	2.51
15	Nayagarh	00	0.00	4	0.40	00	0.00	27	0.68	415	6.23	00	0.00	7.30
16	Nuapada	00	0.00	32	3.20	00	0.00	276	6.90	3156	47.34	00	0.00	57.44
17	Puri	5	1.75	2893	289.30	87	4.35	5192	129.80	14937	224.06	15231	304.62	953.88
18	Sambalpur	2	0.70	446	44.60	00	0.00	914	22.85	4976	74.64	153	3.06	145.85
19	Subarnapur	00	0.00	1150	115.00	00	0.00	1400	35.00	2960	44.40	228	4.56	198.96
TOTAL		42	14.70	7484	748.40	122	6.10	13875	346.88	67948	1019.22	26815	536.30	2671.595

Appendix-VII

Assistance for provision for temporary accommodation, food, clothing and medical care

Sl. No.	Name of the district	Average No. (in a day) of relief camps	Average duration of operation of relief camps [Days]	Average No. of people accommodated per day in the relief camps	Expenditure incurred on (Rs. in lakh)				
					Tempo- rary accom- modation	Food	clothing	Medica l care	Total expen- diture
1	Angul								
2	Balasore								
3	Baragarh								
4	Bhadrak								
5	Boudh	29	7	54797	0.06	62.23	0	0	62.29
6	Cuttack	79	5	23298		30.29			30.29
7	Deogarh								
8	Dhenkanal								
9	Jajpur	13	7	6813	0.10	4.67	0	0	4.77
10	Jagatsinghpur	17	2	7970	0	3.18	0	0	3.18
11	Jharsuguda	6	12	1612	0	4.05	0	0	4.05
12	Kendrapada	81	9	21831	0	36.00	0	0	36.00
13	Khurda								
14	Mayurbhanj	2	2	918	0	0.15			0.15
15	Nayagarh	30	2	9617	0	6.43	0	0	6.43
16	Nuapada	0	0	0	0	0	0	0	0
17	Puri	38	7	36860	46.44	70.00	0	0	116.44
18	Sambalpur	33	9	23062		46.12	2.50	1.80	50.42
19	Subarnapur	68	7	34187					
20	Keonjhar								
Total		396	69	220965	46.6	263.12	2.5	1.8	314.02

Appendix-IX

Status of expenditure from SDRF /NDRF Account

Year- 2011

State:- Orissa

SDRF Account -2011 – Orissa [As on 20.09.2011]

[Rs. in crore]

1	Opening balance in CRF account (both CRF and NCCF) as on 01.04.2011	22.49
2	CRF releases during the year 2011-2012 (Central & State share)	
	# 1st Installment of current year [State + Central]	205.580
	# 2nd Installment of current year, if any[State + Central]	Nil
	# Advance Contribution for 2012-13 (Centre+State)	Nil
3	Interest accrued on investment made out of SDRF	Nil
4	NDRF releases during the year 2011-12 if any	Nil
5	Total funds available in SDRF Account (1+2+3)	228.07
6	Expenditure incurred on calamities other than floods during 2011-12	
	# Avalanches	0.00
	# Cyclone	0.38
	# Cloud Burst	0.00
	# Drought	88.62
	# Earthquake / Tsunami	0.00
	# Fire	1.78
	# Hailstorm	0.38
	# Landslides	0.00
	# Pest Attacks	0.00
	Sub-total	91.16
7	Expenditure incurred on training during 2011-2012	0.00
8	Expenditure incurred upto 10% on procurement of search and rescue equipments etc. during 2011-2012	35.37
9	Expenditure incurred on instant heavy rains/ floods of September -2011.	144.53
10	Total expenditure incurred on all calamities (6+7+8 +9)	271.06
11	Balance available in SDRF account (5-10)	Nil