

## **Government of Odisha**

# ANNUAL REPORT ON NATURAL CALAMITIES 2015-16

Revenue & Disaster Management Department (Disaster Management)

# **CONTENTS**

CHAPTER – I	Introduction	01-06
CHAPTER – II	Rainfall	07-12
CHAPTER – III	Heavy Rain & Floods	13-15
CHAPTER – IV	Drought	16-32
CHAPTER – V	Fire Accidents	33-34
CHAPTER – VI	Hailstorm	35-35
CHAPTER – VII	State Specific Disasters (Localised)	36-41
CHAPTER – VIII	State Disaster Response Fund (SDRF)	42-51
CHAPTER – IX	Disaster Management Activities by OSDMA	52-57

# **CHAPTER-I**

# Introduction

## (A) Profile of the State

SI. No.	Name of the District	Total Land area (Sq.Km.)	Land of ation Rate (in Cropped area Villages (in '000) per area		Cropped	Rivers	Normal Annual rainfall (mm)	
1	2	3	4	5	6	7	8	9
1	Angul	6375	1871	1272	78.96	285.14	Brahmani, Mahanadi	1401.9
2	Balasore	3806	2932	2317	80.66	326.65	Subarnarekha, Budhabalang, Jalaka, Swarna	1592.0
3	Baragarh	5837	1206	1479	63.99	443.09	Mahanadi, Zira, Anga	1367.3
4	Bhadrak	2505	1312	1507	83.25	229.39	Baitarani, Salandi	1427.9
5	Bolangir	6575	1783	1648	65.50	434.08	Hati, Suktel, Rahul	1289.8
6	Boudh	3098	1187	440	72.37	130.17	Mahanadi, Tel, Salanki, Bagh, Mehurni	1623.1
7	Cuttack	3932	1952	2619	84.20	309.73	Mahanadi, Devi, Kathajodi, Birupa, Kuakhai, Sidua, Luna,	1424.3
8	Deogarh	2940	878	312	73.07	94.74	Bramani	1582.5
9	Dhenkanal	4452	1208	1193	79.41	235.13	Bramani, Ramiyal	1428.8
10	Gajapati	4325	1612	576	54.29	131.66	Bansadhara	1403.3
11	Ganjam	8206	3195	3520	71.88	617.94	Rusikulya, Badanadi, Baghua, Dhanei, Loharakhandi, Ghodahada, Kokalaba, Bahuda	1276.2
12	Jagatsinghpur	1668	1292	1137	87.13	70.97	Biluakhai, Paika, Mahanadi, Devi, Hansua.	1514.6

13	Jajpur	2899	1783	1826	80.44	258.60	Baitarani, Brahmani, Budha, Kharasrota, Birupa	1559.9
14	Jharsuguda	2081	351	579	78.36	81.87	lb, Veden	1362.8
15	Kalahandi	7920	2253	1573	60.22	542.74	Hati, Indravati, Tel, Reta, Vamsadhara, Chandola, Utei.	1330.5
16	Kandhamal	8021	2587	732	65.12	163.34	Rahul, Salunki,	1427.9
17	Kendrapara	2644	1547	1440	85.93	254.26	Brahmani, Hansua, Kharasrota, Luna, Chitrotpala, Paika, Karandia	1556.0
18	Keonjhar	8303	2123	1803	69.00	371.67	Baitarani	1487.7
19	Khurda	2813	1534	2246	87.51	162.42	Kusabhadra, Bhargavi, Daya	1408.4
20	Koraput	8807	2042	1377	49.87	355.38	Kolab, Ultajharan, Champabati, Jhanjabati	1567.2
21	Malkanagiri	5791	1055	613	49.49	186.99	Saberi, Sileru, Guru, Priya Kalam, Taptadhara	1667.6
22	Mayurbhanj	10418	3950	2514	63.98	449.50	Kala, Budhabalang	1600.6
23	Nawaranghpur	5291	891	1219	48.20	261.60	Indravati, Tel, Vaskel	1569.5
24	Nayagarh	3890	1692	962	79.17	190.29	Mahanadi, Brutanga, Kaligiri, Kusumi, Malaguni, Budha Budhari, Kuairia	1354.3
25	Nuapada	3852	668	606	58.20	269.72	Udanti, Jalka	1286.4
26	Puri	3479	1707	1698	85.37	259.04	Kadua, Dhanua, Bhadua, Ratnachira, Malaguni, Devi, Daya, Kusabhadra,	1408.8

							Bhargavi, Prachi, Luna	
27	Rayagada	7073	2665	962	50.88	234.77	Bansadhara, Nagabali	1285.9
28	Sambalpur	6657	1313	1044	76.91	249.11	Mahanadi	1495.7
29	Subarnapur	2337	962	652	74.42	217.75	Mahanadi, Tel	1418.5
30	Sundargarh	9712	1762	2081	74.13	349.86	Brahmani, Ib,	1422.4
Total (State)		155707	51313	41947	73.45	8167.60		1451.2

# (B) River Systems



# (C) Details of Catchments Areas

SI.No.	Name of the River Basin	Basin Catchment Area (SqKm)										
		Total Area	Within Orissa	% to Geo. Area of State								
1	Mahanadi	141134	65628	42.15								
2	Brahmani	39116	22516	14.46								
3	Baitarani	14218	13482	8.66								

4	Kolab	20427	10300	6.61
5	Rushikulya	8963	8963	5.76
6	Vansadhara	11377	8960	5.75
7	Indravati	41700	7400	4.75
8	Burhabalanga & Jambhira	6691	6354	4.08
9	Nagavali	9275	4500	2.89
10	Subernarekha	19277	2983	1.92
11	Bahuda	1118	890	0.57
	Draining into Sea	_	3731	2.40
	Total			100.00

## (D) Major Natural Calamities in the state

The history of natural calamities for the state reveals that different types of calamities have their impact upon the state during a year, the major disasters being flood, cyclone and drought.

The table below indicates how the State has been seriously affected by such natural calamities in last 20 years.

Year	Calamity	Districts Affected
1996	Drought	28
1997	Drought	16
1998	Drought, Heat wave	26
1999	Super Cyclone	14
2000	Drought	29
2001	Floods	24
2002	Drought	29
2003	Floods	23
2004	Floods	05
2005	Floods	15
2006	Floods	27
2007	Floods (July)	12
	(Aug & Sept)	15
2008	Floods(June & September )	21

2009	Flood & Heavy rain	17
	Drought / Pest Attack	18
2010	Flood & Heavy rain	06
	Drought	17
	Unseasonal Cyclonic Rain	24
2011	Drought	21
	Flood	21
2012	Drought	4
	Flood	5
2013	Very severe cyclonic storm `Phailin' / Flood	19
2014	Flood	27
	Very severe cyclonic storm 'Hudhud'	15
2015	Drought	27
	Flood & Heavy Rain	14

#### (E) Disasters approved by Government of India

- 1. Flood
- 2. Drought
- 3. Fire
- 4. Hailstorm
- 5. Cyclone
- 6. Earthquake
- 7. Tsunami
- 8. Landslide
- 9. Avalanche
- 10. Cloud Burst
- 11. Pest Attack
- 12. Cold Wave/ Frost

#### (F) State Specific Disasters

In pursuance of item-13 of the Items & Norms of Assistance from State Disaster Response Fund and National Disaster Response Fund for the period 2015-2020 communicated vide Ministry of Home Affairs, Government of India Letter No.32-7/2014-NDM-I dated 8<sup>th</sup> April, 2015, the State Government has declared (Vide Notification No.1936/R&DM(DM) dared 1<sup>st</sup> June 2015) the following disasters as State Specific Disasters within local context in the State of Odisha for which expenditure on relief measures and immediate repair/restoration of damaged public infrastructure are being met from State Disaster

Response Fund (SDRF) within the limit of ten percent (10%) of the annual allocation of the SDRF.

- 1. Lightning
- 2. Heat wave
- 3. Whirl wind
- 4. Tornado
- 5. Heavy rain
- 6. Boat accident(other than during flood)
- 7. Drowning(other than during flood)
- 8. Snakebite(other than during flood)

All relief measures on account of the above local disasters are undertaken as per the scale and norms of various items of relief under the Items & Norms of assistance from State Disaster Response Fund and National Disaster Responds Fund laid down by the Ministry of Home Affairs, Government of India except that the ex-gratia for death due to heat wave (sun-stroke) is @ Rs.50,000/- (Rupee Fifty Thousand) only per deceased.

#### **CHAPTER-II**

## Rainfall

## Normal rainfall (Long Term Average):

The long term average rainfall in respect of different Blocks, Districts and the State for different months of year is fixed by IMD, Pune taking into account the rainfall data for preceding 30 years. Such long term average rainfall popularly called 'Normal Rainfall' has been last fixed during 2006 for different districts and the State as follows:

SI.	District	Annual Normal
No.	District	Rainfall (in mm)
1	Angul	1401.9
2	Balasore	1592.0
3	Bargarh	1367.3
4	Bhadrak	1427.9
5	Bolangir	1289.8
6	Boudh	1623.1
7	Cuttack	1424.3
8	Deogarh	1582.5
9	Dhenkanal	1428.8
10	Gajapati	1403.3
11	Ganjam	1276.2
12	Jagatsinghpur	1514.6
13	Jajpur	1559.9
14	Jharsuguda	1362.8
15	Kalahandi	1330.5
16	Kandhamal	1427.9

SI.	District	Annual Normal
No.	District	Rainfall (in mm)
17	Kendrapara	1556.0
18	Keonjhar	1487.7
19	Khordha	1408.4
20	Koraput	1567.2
21	Malkanagiri	1667.6
22	Mayurbhanj	1600.6
23	Nawarangpur	1569.5
24	Nayagarh	1354.3
25	Nuapara	1286.4
26	Puri	1408.8
27	Rayagada	1285.9
28	Sambalpur	1495.7
29	Subarnapur	1418.5
30	Sundargarh	1422.4
St	ate Average	1451.2

#### District-wise rainfall for the year 2015

The district-wise monthly rainfall statistics from January to December, 2015 including percentage of deviation is indicated in the table below.

		JA	ANUAF	RY	FE	BRUA	RY	ı	MARC	Н	-	APRIL			MAY			JUNE			JULY	
SI. No.	DISTRICT	Actual	Normal	% of Dev.																		
1	Angul	9.9	12.6	-21.4	4.3	27.1	-84.1	4.4	24.3	-81.8	37.0	27.2	36.2	39.9	52.9	-24.5	218.9	225.1	-2.8	343.3	347.7	-1.3
2	Balasore	24.0	14.7	62.9	8.8	31.8	-72.5	24.5	34.4	-28.7	98.2	62.2	57.9	25.9	108.5	-76.1	243.8	221.5	10.0	460.7	308.6	49.3
3	Bargarh	0.4	12.5	-96.7	5.1	19.1	-73.4	6.8	22.0	-68.9	74.4	20.0	272.1	6.8	25.6	-73.6	255.7	205.6	24.4	259.6	397.2	-34.6
4	Bhadrak	20.8	11.8	76.0	2.4	29.6	-91.7	12.6	36.1	-65.2	95.1	51.2	85.7	91.3	91.4	-0.1	140.6	198.2	-29.1	459.4	293.6	56.5
5	Bolangir	11.8	8.6	36.9	0.9	13.2	-93.0	2.9	14.6	-79.9	58.3	13.4	335.2	25.0	27.8	-10.2	219.6	202.8	8.3	249.4	360.5	-30.8
6	Boudh	0.3	17.0	-98.0	0.0	26.8	-100.0	0.7	22.4	-96.9	74.0	16.5	348.5	22.8	38.4	-40.5	287.8	233.8	23.1	267.3	418.5	-36.1
7	Cuttack	21.4	9.9	116.0	0.0	28.6	-100.0	0.0	24.7	-100.0	54.6	28.3	93.0	15.8	71.5	-77.8	195.8	210.0	-6.8	329.3	308.3	6.8
8	Deogarh	0.0	14.1	-100.0	6.1	27.0	-77.4	6.7	20.6	-67.6	53.8	21.3	152.6	55.1	41.9	31.4	281.9	242.4	16.3	503.9	447.7	12.6
9	Dhenkanal	14.6	10.5	38.6	0.0	21.9	-100.0	12.4	33.7	-63.3	74.0	41.3	79.2	46.6	69.6	-33.1	157.4	225.7	-30.3	327.0	317.9	2.9
10	Gajapati	9.3	8.1	14.2	14.4	23.0	-37.5	7.4	41.3	-82.1	95.0	65.2	45.7	46.6	107.8	-56.8	277.6	199.7	39.0	137.9	230.6	-40.2
11	Ganjam	53.2	9.4	466.2	3.4	24.1	-85.9	14.6	32.6	-55.3	59.4	36.6	62.2	15.4	65.4	-76.4	253.6	168.3	50.7	182.0	220.8	-17.6
12	Jagatsinghpur	24.0	14.5	65.5	9.5	21.7	-56.2	12.3	35.5	-65.5	40.3	25.4	58.5	30.4	78.0	-61.1	78.9	202.3	-61.0	373.1	277.3	34.6
13	Jajpur	21.5	12.9	66.7	10.0	25.1	-60.2	4.7	28.4	-83.5	96.4	46.1	109.1	74.6	93.7	-20.4	186.6	238.5	-21.8	495.5	350.9	41.2
14	Jharsuguda	13.8	14.1	-2.0	3.4	22.9	-85.0	4.3	17.6	-75.6	40.9	15.1	170.6	7.4	27.9	-73.5	199.1	218.8	-9.0	480.9	385.8	24.7
15	Kalahandi	8.3	10.3	-19.3	0.0	14.4	-100.0	3.3	23.7	-86.0	84.6	25.7	229.2	43.3	41.8	3.6	300.0	240.4	24.8	264.8	327.7	-19.2
16	Kandhamal	32.1	10.6	202.7	14.7	29.7	-50.6	24.8	28.0	-11.6	99.8	35.7	179.4	74.6	67.8	10.0	207.4	207.9	-0.3	176.0	325.1	-45.9
17	Kendrapara	51.6	10.6	386.4	3.6	30.2	-88.2	14.6	35.0	-58.4	78.4	33.9	131.4	26.0	94.2	-72.4	121.0	208.3	-41.9	431.3	317.1	36.0
18	Keonjhar	20.7	14.6	41.9	14.6	33.8	-56.9	8.5	33.1	-74.3	64.4	42.1	53.0	52.9	94.8	-44.2	197.6	241.4	-18.2	319.2	318.0	0.4
19	Khordha	22.8	12.4	83.9	5.4	24.3	-77.8	22.5	22.1	1.8	72.2	28.0	157.9	14.7	60.7	-75.8	135.2	196.2	-31.1	225.1	304.9	-26.2
20	Koraput	1.1	5.7	-80.5	2.8	8.6	-67.1	23.4	18.3	27.8	85.6	55.2	55.1	61.3	81.9	-25.2	336.1	206.8	62.5	122.9	375.6	-67.3
21	Malkanagiri	0.4	2.7	-84.1	2.5	4.1	-39.0	11.1	8.9	25.2	74.7	34.8	114.7	40.1	49.1	-18.2	591.6	212.2	178.8	196.6	465.7	-57.8
22	Mayurbhanj	18.4	10.3	78.4	2.2	28.0	-92.2	31.8	40.2	-20.8	121.1	52.5	130.7	72.2	101.2	-28.6	208.0	265.8	-21.8	457.9	337.3	35.7
23	Nawarangpur	0.0	6.7	-100.0	0.6	14.1	-95.7	2.9	15.1	-80.8	124.0	34.1	263.6	82.3	66.1	24.5	403.3	251.8	60.2	186.4	356.6	-47.7
24	Nayagarh	36.7	11.7	213.6	5.3	28.6	-81.6	15.7	30.0	-47.6	78.4	39.9	96.5	42.9	58.8	-27.1	156.1	203.5	-23.3	199.4	288.5	-30.9
25	Nuapara	0.2	12.0	-98.3	0.0	14.6	-100.0	2.0	19.7	-89.8	92.6	21.8	325.0	32.0	31.2	2.7	297.0	210.3	41.2	278.2	347.1	-19.9
26	Puri	55.3	10.9	407.1	3.4	25.4	-86.8	0.2	15.5	-98.8	68.5	18.5	270.2	15.2	62.1	-75.6	109.7	188.0	-41.7	230.1	292.0	-21.2
27	Rayagada	1.0	9.6	-89.5	0.0	22.9	-100.0	26.4	38.0	-30.6	114.2	52.7	116.7	63.2	87.8	-28.0	257.1	195.3	31.7	152.4	259.5	-41.3
28	Sambalpur	7.5	14.8	-49.4	3.8	24.5	-84.7	7.4	18.2	-59.6	59.3	16.5	259.7	3.2	32.3	-90.0	253.5	221.0	14.7	437.2	429.5	1.8
29	Subarnapur	1.8	12.5	-85.3	0.3	17.2	-98.1	0.3	15.7	-97.9	65.3	15.4	324.2	23.3	29.3	-20.4	308.2	217.4	41.8	228.3	399.6	-42.9
30	Sundargarh	13.4	15.1	-11.3	0.0	24.9	-100.0	7.2	16.0	-55.1	32.0	16.0	100.0	30.2	40.6	-25.5	167.4	237.4	-29.5	476.0	386.4	23.2
	Total	496.1			127.4			316.3			2266.6			1181.0			7046.3			9251.0		
Sta	ate Average	16.5	11.4	45.1	4.2	22.9	-81.5	10.5	25.5	-58.7	75.6	33.1	128.3	39.4	63.3	-37.8	234.9	216.5	8.5	308.4	339.9	-9.3

Contd..

		AUGUST		SE	PTEMBE	R	С	СТОВЕ	R	N	OVEME	BER	DE	СЕМЕ	BER		Annual		
SI. No.	DISTRICT	Actual	Normal	% of Dev	Actual	Normal	% of Dev												
1	Angul	224.6	357.5	-37.2	142.2	217.5	-34.6	16.4	86.3	-81.0	0.2	20.4	-98.9	31.9	3.3	865.2	1073.0	1401.9	-23.5
2	Balasore	204.0	332.1	-38.6	153.2	267.6	-42.8	28.8	170.5	-83.1	0.5	34.6	-98.6	18.1	5.5	228.8	1290.3	1592.0	-18.9
3	Bargarh	274.4	374.4	-26.7	119.5	222.6	-46.3	8.0	52.8	-98.4	0.0	10.4	-100.0	7.1	5.1	38.9	1010.5	1367.3	-26.1
4	Bhadrak	186.9	311.7	-40.0	97.1	216.8	-55.2	37.6	145.3	-74.1	1.8	37.3	-95.1	12.4	4.9	153.1	1158.0	1427.9	-18.9
5	Bolangir	237.6	333.6	-28.8	204.7	237.4	-13.8	4.5	68.4	-93.4	0.0	7.2	-100.0	9.6	2.3	318.6	1024.4	1289.8	-20.6
6	Boudh	274.5	488.8	-43.8	152.6	244.8	-37.7	1.1	90.5	-98.8	0.0	21.1	-100.0	17.4	4.4	294.7	1098.6	1623.0	-32.3
7	Cuttack	290.3	339.1	-14.4	207.8	229.2	-9.3	41.5	125.6	-66.9	5.2	45.0	-88.5	14.1	4.1	243.3	1175.8	1424.3	-17.4
8	Deogarh	283.8	443.4	-36.0	188.9	228.2	-17.2	12.7	84.4	-85.0	0.0	8.0	-100.0	28.9	3.5	726.7	1421.8	1582.5	-10.2
9	Dhenkanal	209.3	344.8	-39.3	124.8	220.6	-43.4	32.2	104.4	-69.2	0.0	36.2	-100.0	23.1	2.2	951.1	1021.2	1428.8	-28.5
10	Gajapati	202.8	253.6	-20.0	233.9	237.9	-1.7	57.2	168.6	-66.1	21.1	61.8	-65.9	23.1	5.7	305.7	1126.2	1403.3	-19.7
11	Ganjam	188.0	246.8	-23.8	300.4	216.3	38.9	37.2	177.7	-79.0	32.3	71.1	-54.5	30.2	7.1	324.8	1169.8	1276.2	-8.3
12	Jagatsinghpur	306.8	379.1	-19.1	167.0	241.4	-30.8	77.6	151.1	-48.6	1.8	80.4	-97.8	1.8	7.9	-77.8	1123.3	1514.6	-25.8
13	Jajpur	182.4	341.2	-46.5	146.6	238.0	-38.4	30.1	140.2	-78.5	0.2	41.0	-99.5	10.9	3.9	179.5	1259.5	1559.9	-19.3
14	Jharsuguda	441.9	382.9	15.4	271.8	210.7	29.0	7.0	54.9	-87.2	0.0	7.7	-100.0	26.3	4.4	498.2	1496.9	1362.8	9.8
15	Kalahandi	286.2	355.4	-19.5	364.5	204.6	78.1	3.0	74.0	-95.9	1.1	10.9	-90.1	8.2	1.6	412.0	1367.2	1330.5	2.8
16	Kandhamal	233.2	330.8	-29.5	245.5	239.1	2.7	2.0	117.7	-98.3	2.0	31.0	-93.5	26.4	4.5	486.9	1138.2	1427.9	-20.3
17	Kendrapara	247.9	333.3	-25.6	123.3	237.3	-48.0	87.7	183.7	-52.3	19.2	67.2	-71.4	0.3	5.2	-93.6	1204.9	1556.0	-22.6
18	Keonjhar	167.3	343.6	-51.3	114.3	241.1	-52.6	27.1	101.3	-73.2	0.2	20.5	-99.2	22.7	3.4	567.9	1009.5	1487.7	-32.1
19	Khordha	252.2	320.6	-21.3	198.9	234.5	-15.2	43.3	149.3	-71.0	4.8	50.4	-90.5	3.6	5.0	-28.0	1000.7	1408.4	-28.9
20	Koraput	335.0	393.6	-14.9	530.1	256.3	106.8	27.7	126.1	-78.0	12.3	32.6	-62.1	2.6	6.5	-59.5	1541.0	1567.2	-1.7
21	Malkanagiri	405.0	472.8	-14.3	384.8	281.2	36.9	38.8	109.5	-64.5	24.7	23.6	4.5	0.6	3.0	-81.0	1771.0	1667.6	6.2
22	Mayurbhanj	181.2	359.9	-49.7	113.6	262.0	-56.6	15.1	114.1	-86.7	0.0	21.6	-100.0	30.5	7.3	317.2	1252.0	1600.2	-21.8
23	Nawarangpur	307.0	407.5	-24.7	561.9	225.6	149.1	13.2	168.6	-92.2	0.0	18.7	-100.0	7.5	4.6	63.0	1689.1	1569.5	7.6
24	Nayagarh	267.6	288.2	-7.1	253.6	226.8	11.8	37.3	134.5	-72.2	5.4	39.0	-86.1	32.7	4.8	581.8	1131.2	1354.3	-16.5
25	Nuapara	212.9	327.8	-35.1	306.5	214.5	42.9	2.0	68.9	-97.1	0.0	15.3	-100.0	4.3	3.2	35.0	1227.7	1286.4	-4.6
26	Puri	319.7	297.9	7.3	236.5	243.2	-2.7	31.7	181.6	-82.6	36.5	67.3	-45.8	26.9	6.4	320.7	1133.5	1408.8	-19.5
27	Rayagada	244.9	273.7	-10.5	266.2	199.1	33.7	25.4	109.7	-76.9	13.6	32.9	-58.7	8.5	4.7	81.0	1172.8	1285.9	-8.8
28	Sambalpur	397.6	442.4	-10.1	151.9	224.7	-32.4	10.4	54.7	-81.0	0.0	12.7	-100.0	20.0	4.4	355.6	1351.8	1495.7	-9.6
29	Subarnapur	255.7	408.9	-37.5	137.7	228.0	-39.6	0.8	59.8	-98.6	0.0	11.4	-100.0	14.0	3.3	324.2	1035.8	1418.5	-27.0
30	Sundargarh	369.7	393.9	-6.2	146.5	211.5	-30.7	12.5	67.7	-81.6	0.0	8.7	-100.0	12.4	4.2	196.4	1267.2	1422.4	-10.9
	Total	7990.2			6646.2			762.9			182.8			476.2			36742.9		
	State Average	266.3	356.0	-25.2	221.5	231.9	-4.5	25.4	114.7	-77.8	6.1	31.5	-80.7	15.9	4.5	252.7	1224.8	1451.2	-15.6

# Rainfall during Monsoon 2015 (1st June to 30th September)

The State experienced average surplus rainfall of 8.5 percent in June, deficit rainfall of 9.3 percent in July, 25.2 percent in August and 4.5 percent in September, 2015 compared to the long term average rainfall. The cumulative average of rainfall statistics of the State from June to September, 2015 accounts for a deficit of 9.9 percent.

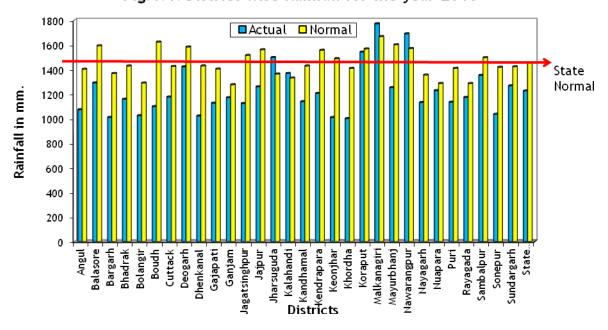
Month	Normal	Rainfall in MM		
		Actual	Deviation in %	
June	216.5	234.9	8.5	
July	339.9	308.4	-9.3	
August	356.0	266.3	-25.2	
September	231.9	221.5	-4.5	

Block-wise analysis of the cumulative rainfall from 1<sup>st</sup> June to 30<sup>th</sup> September 2015 indicates that out of 314 Blocks in the State, 34 Blocks received surplus rainfall to the extent of above 19%, 173 Blocks received rainfall of between surplus 19% to less than 19% which is considered as normal, 78 Blocks received rainfall of above less than 19% to less than 39%, 26 Blocks received rainfall above less than 39% to less than 59% and 3 Blocks received rainfall above less than 59% of the long-term average rainfall. Table below indicates district-wise position.

SI. No.	DISTRICT	No. of Blocks having deviation (above 19%) : EXCESS	No. of Blocks having deviation (19% to -19%) : NORMAL	No. of Blocks having deviation (above -19% to -39%) : DEFICIT	No. of Blocks having deviation (above -39% to -59%) : SEVERE DEFICIT	No. of Blocks having deviation (above -59%): SCANTY
1	Angul		3	4	1	
2	Balasore		10	2		
3	Bargarh	1	2	6	3	
4	Bhadrak		5	2		
5	Bolangir		8	3	2	1
6	Boudh			3		
7	Cuttack	2	8	2	1	
8	Deogarh		3			
9	Dhenkanal		4	2	2	
10	Gajapati		7	1		

11	Ganjam	9	11	2		
12	Jagatsinghpur		5	2	1	
13	Jajpur		7	2	1	
14	Jharsuguda	2	3			
15	Kalahandi	4	5	4		
16	Kandhamal	1	6	4	1	
17	Kendrapara		5	4		
18	Keonjhar		4	6	2	1
19	Khordha		3	5	2	
20	Koraput	3	9	1	1	
21	Malkanagiri	3	3	1		
22	Mayurbhanj		11	10	5	
23	Nawarangpur	4	6			
24	Nayagarh	1	4	2	1	
25	Nuapara	2	2	1		
26	Puri	1	6	1	3	
27	Rayagada		11			
28	Sambalpur		7	2		
29	Subarnapur		4	1		1
30	Sundargarh	1	11	5		
N	o. of Blocks	34	173	78	26	3
No	o. of Districts	13	29	26	14	3

Fig. 1.1. District-wise Rainfall for the year 2015



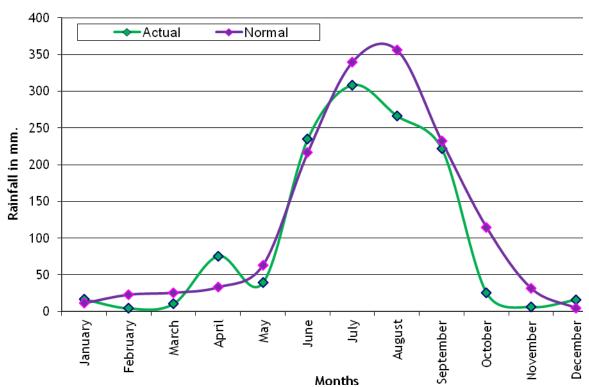
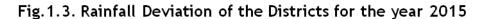
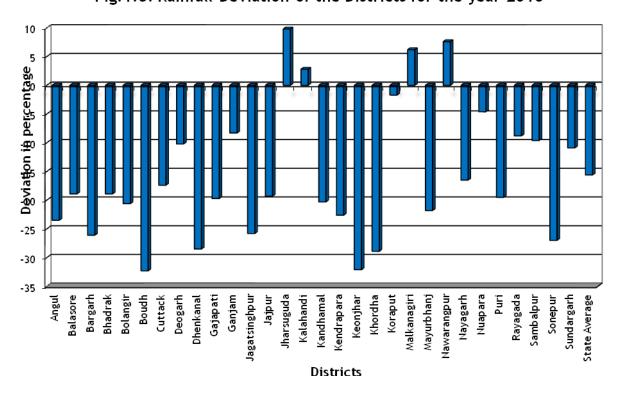


Fig. 1.2. Month-wise Rainfall for the year 2015





## **CHAPTER - III**

# **Heavy Rain & Floods**

Heavy rain was experienced due to the effect of depressions over Bay of Bengal in coastal districts and some parts of interior districts of the State during June, July & September 2015. As a result the state faced floods/ flash flood in four phases. The occurrence of floods and the districts affected are mentioned in the table mentioned below.

#### Occurrence of floods/Flash Floods/Heavy Rain

Phases	Duration	River	Districts Affected by	Districts Affected
of			Heavy Rain	By floods
Floods				
1 <sup>st</sup>	19th and 20th of	Saveri,	Malkangiri	Malkangiri
	June, 2015.	Poteru, Sileru		
2 <sup>nd</sup>	10 <sup>th</sup> of July, 2015	lb	Sundargarh, Jharsuguda	Sundargarh,
				Jharsuguda
3 <sup>rd</sup>	27 <sup>th</sup> and 28 <sup>th</sup> of	Baitarani,	Mayurbhanj, Keonjhar,	Mayurbhanj,
	July, 2015	Subarnarekha	Jajpur, Bhardak, Balasore,	Keonjhar, Jajpur,
			Jharsuguda and Deogarh	Bhardak, Balasore,
				Jharsuguda and
4 <sup>th</sup>	14 <sup>th</sup> Sept.2015 to		Kalahandi, Nabarangpur,	Kalahandi,
	17 <sup>th</sup> Sept.2015		Koraput, Kandhamal,	Nabarangpur,
			Malkangiri, Bolangir	Koraput,

#### **Extent of Damages:**

SI.	District	Villages Affected	Population Affected	Human life lost	Crop Area Affected in hect.	Houses Damaged
1	Malkangiri	1	1602			423
2	Sundargarh	07	387			17
3	Jharsuguda	07	1000		161	
4	Jajpur	219	107317	1	17918	664

5	Mayurbhanj	02	1052	1		
6	Keonjhar	18	2112	1		13
7	Bhadrak	140	176671		16786	
8	Balasore	214	191877	2	11264	
9	Deogarh	44	370		6	108
10	Koraput	262	4500	2		462
11	Nabarangpur	30	6500	1		52
12	Kalahandi	08	700			
13	Kandhamal	01				
14	Bolangir			1		
	Total	953	494088	9	46135	1739

## **Evacuation**

SI.	District	No. of Relief Camps Opened	People Evacuated & Accommodated in Relief Camps
1	Malkangiri	6	600
2	Sundargarh	4	370
3	Jharsuguda	3	255
4	Mayurbhanj	5	1052
5	Balasore	2	522
6	Koraput	10	2877
7	Nabarangpur	4	5057
8	Kalahandi	3	1224
9	Kandhamal	1	35
	Total	38	11992

#### **Human Casualties:**

As many as nine persons lost their lives due to floods. The district-wise number of casualties is given below:

SI.	Name of the District	No. of persons died
1.	Balasore	2
2.	Bolangir	1
3.	Keonjhar	1
4.	Jajpur	1
5.	Mayurbhanj	1
6.	Koraput	2
7	Nawaranghpur	1
	Total	9

#### **Flood Management**

- ▶ Rescue & Evacuation: ODRAF units, NDRF and Fire Service Units with emergency equipments were deployed to Malkangiri, Jajpur, Keonjhar, Bhadrak, Balasore and Mayurbhanj for search, rescue, road clearance and other relief operation. Fire service personnel rescued 9 persons during floods at Motangapal under Korei Block.
- ➤ Emergent Relief: Emergent relief in shape of rice, chuda, gur and free kitchen were provided to the affected people. Chuda-168.0 Qtl. and Gur- 17.1 Qtl were provided to the affected families. Polethene sheets were given to the flood victims whose houses were destroyed by floods. Drinking water pouches, halogen tablets & medicines were also provided to the flood victims.

#### **Damage to Public Properties**

Due to very heavy rainfall, communication to most part of the district was disrupted as the rain/ flood water overtopped the roads/ bridges at many places. Four breaches had occurred on the embankment of River Baitarani i.e. one near Ganeswarpur in Jajpur district (Baitarani right) and the other near Khaljori in Chandabali Block of Bhadrak district (Baitarani Left). One small breach occurred on the Left embankment of River Kani near Panchupada of Dasarathpur Block of Jajpur district. There was one breach on Subarnarekha Left near Dahamunda of Bhogarai Block of Balasore district. Right approach road of Baliapita Bridge in Deogarh district was also damaged due to heavy rain.

## **CHAPTER - IV**

## **Drought**

The erratic and deficient rainfall during the South West Monsoon -2015 was the main reason for the drought situation in the current year. The arrival of SW Monsoon which usually sets in around  $10^{th}$  of June was delayed for more than a week.

On average, though the State experienced surplus rainfall of 8.4 percent in the month of June, rainfall remained deficient by 9.3 percent in July, 25.1 percent in August, 4.5 percent in September and 77.9 percent in October, 2015 from the long term average rainfall. The cumulative average rainfall of the State from June to October 2015 accounts for deficit of 16.1 percent.

Month	Normal	Rainfall in MM		
		Actual	Deficiency in %	
June	216.5	234.6	8.4	
July	339.9	308.4	-9.3	
August	356.0	266.5	-25.1	
September	231.9	221.5	-4.5	
October	114.7	25.3	-77.9	

The State experienced prolonged dry spells during these months. The details are as follows:

Month	Phase	Period of dry spell	Duration (No. of days)	Total rainfall during the spell (in mm)
June,2015	1 <sup>st</sup> Dry spell	1 <sup>st</sup> June to 11 <sup>th</sup> June	11	30.2
	2 <sup>nd</sup> Dry spell	13 <sup>th</sup> June	01	1.2

3 <sup>rd</sup> dry spell	16 <sup>th</sup> June to 19 <sup>th</sup> June	04	25.6	
4 <sup>th</sup> dry spell	24 <sup>th</sup> June to 30 <sup>th</sup> June	07	32.2	
	Sub-Total	23	89.2	
1 <sup>st</sup> dry spell	1 <sup>st</sup> July to 8 <sup>th</sup> July	08	46.4	
2 <sup>nd</sup> dry spell	12 <sup>th</sup> July to 15th July	04	16.1	
3 <sup>rd</sup> dry spell	17 <sup>th</sup> July	01	7.0	
4 <sup>th</sup> dry spell	19 <sup>th</sup> July to 22 <sup>nd</sup> July	04	26.7	
5 <sup>th</sup> dry spell	24 <sup>th</sup> July & 25 <sup>th</sup> July	02	13.2	
6 <sup>th</sup> dry spell	29 <sup>th</sup> July to 31 <sup>st</sup> July	03	8.4	
	Sub-Total	22	117.8	
1 <sup>st</sup> dry spell	1 <sup>st</sup> August	01	7.3	
2 <sup>nd</sup> dry spell	4 <sup>th</sup> August to 11 <sup>th</sup> August	08	20.7	
3 <sup>rd</sup> dry spell	14 <sup>th</sup> August to 16 <sup>th</sup> August	03	17.9	
4 <sup>th</sup> dry spell	18 <sup>th</sup> August & 19 <sup>th</sup> August	02	14.5	
5 <sup>th</sup> dry spell	21 <sup>st</sup> August to 25 <sup>th</sup> August	05	25.8	
6 <sup>th</sup> dry spell	29 <sup>th</sup> August	01	9.6	
	Sub-Total	20	95.8	
1 <sup>st</sup> dry spell	2 <sup>nd</sup> Sept. to 13 <sup>th</sup> Sept.	12	48.4	
2 <sup>nd</sup> dry spell	18 <sup>th</sup> Sept. & 19 <sup>th</sup> Sept.	02	6.2	
3 <sup>rd</sup> dry spell	22 <sup>nd</sup> Sept. to 30 <sup>th</sup> Sept.	09	4.2	
	Sub-Total	23	58.8	
1 <sup>st</sup> dry spell	1 <sup>st</sup> Oct. to 31 <sup>st</sup> October	31	25.4	
	Sub-Total	31	25.4	
Total				
	4 <sup>th</sup> dry spell  1 <sup>st</sup> dry spell  2 <sup>nd</sup> dry spell  3 <sup>rd</sup> dry spell  4 <sup>th</sup> dry spell  5 <sup>th</sup> dry spell  1 <sup>st</sup> dry spell  2 <sup>nd</sup> dry spell  2 <sup>nd</sup> dry spell  3 <sup>rd</sup> dry spell  5 <sup>th</sup> dry spell  4 <sup>th</sup> dry spell  4 <sup>th</sup> dry spell  5 <sup>th</sup> dry spell  4 <sup>th</sup> dry spell  5 <sup>th</sup> dry spell  5 <sup>th</sup> dry spell  1 <sup>st</sup> dry spell  1 <sup>st</sup> dry spell  2 <sup>nd</sup> dry spell  2 <sup>nd</sup> dry spell  1 <sup>st</sup> dry spell  1 <sup>st</sup> dry spell  1 <sup>st</sup> dry spell	Sub-Total  1st dry spell 1st July to 8th July  2nd dry spell 12th July to 15th July  3rd dry spell 19th July to 22nd July  5th dry spell 29th July to 31st July  Sub-Total  1st dry spell 1st August  2nd dry spell 4th August to 11th August  3rd dry spell 1sth August to 16th August  4th dry spell 1sth August to 16th August  4th dry spell 21sth August to 25th August  5th dry spell 21sth August to 25th August  6th dry spell 29th August  5th dry spell 29th August  5th dry spell 29th August  Sub-Total  1st dry spell 1sth Sept. & 19th Sept.  2nd dry spell 22nd Sept. to 30th Sept.  Sub-Total  1st dry spell 1sth Oct. to 31sth October  Sub-Total	4th dry spell       24th June to 30th June       07         Sub-Total       23         1st dry spell       1st July to 8th July       08         2nd dry spell       12th July to 15th July       04         3rd dry spell       17th July       01         4th dry spell       19th July to 22nd July       04         5th dry spell       24th July & 25th July       02         6th dry spell       29th July to 31st July       03         Sub-Total       22         1st dry spell       1st August       01         2nd dry spell       4th August to 11th August       08         3rd dry spell       1sth August to 16th August       03         4th dry spell       1sth August & 19th August       02         5th dry spell       21st August to 25th August       05         August       01       05         Sub-Total       20         1st dry spell       2nd Sept. to 13th Sept.       02         3rd dry spell       2nd Sept. to 30th Sept.       09         Sub-Total       23         1st dry spell       1st Oct. to 31st October       31         Sub-Total       31	

## **Impact on Kharif Crops**

As there was good rain in some parts of the State in June, the farmers broadcasted the paddy seeds in medium and low lands. Paddy seeds were also sown in nursery bed to take up transplanting operation. But the rainfall in the month of July and August was mostly not adequate to take up the agricultural operations in a smooth manner. As a result the crop coverage is less than the achievement during the corresponding period of last year. Due to deficient rainfall in the month of August and September, operations like *beushaning* of broadcasted paddy and weeding could not be taken up in most of the cases.

The situation was more aggravated during the month of September and October i.e. at the time of flowering and graining of the paddy. Due to severe shortage of water, proper gaining of the flowers has not occurred which lead to a severe drought situation.

### Coverage of different crops during Kharif 2015

(Area in '000 Hect)

Crop	Variety	Normal Area (State)	Program Area (State)	Area covered Last Year	Area covered This Year
Cereals	Paddy (HYV)	3254.680	3274.000	3362.421	3332.522
	Paddy (Hybrid)	28.630	76.000	75.862	84.444
	Paddy (Local)	599.260	150.000	217.404	203.765
	TOTAL Paddy	3882.57	3500	3655.687	3620.731
	Maize (HYV)	214.870	370.000	229.969	199.513
	Maize (Local)	30.180	25.000	23.822	22.231
	TOTAL Maize	245.050	395.000	253.791	221.744
	Ragi	168.150	180.000	154.503	142.803
	Jowar (HYV)	1.610	2.000	0.982	0.919
	Jowar (Local)	6.480	6.000	5.713	5.257
	TOTAL Jowar	8.090	8.000	6.695	6.176
	Bajra (HYV)	0.190	1.500	0.058	0.104
	Bajra (Local)	2.720	1.500	2.284	1.987

	TOTAL Bajra	2.910	3.000	2.342	2.091
	S.Millets	18.030	20.000	21.270	25.312
	TOTAL	4324.800	4106.000	4094.288	4018.857
Pulses	Mung	228.790	300.000	220.671	209.425
	Biri	270.590	350.000	261.202	269.043
	Cowpea	28.540	40.000	30.563	31.422
	Other Pulses	54.290	70.000	54.177	56.265
	TOTAL	720.220	965.000	705.503	705.059
Oilseeds	Groundnut	85.010	120.000	91.773	92.865
	Til	178.640	250.000	159.113	155.963
	Castor	7.960	9.000	7.001	7.206
	Niger	75.120	90.000	63.015	56.111
	Sunflower	0.410	4.000	0.319	0.271
	Soyabean	1.050	0.000	1.000	0.000
	TOTAL	348.190	473.000	322.221	312.416
Fibres	Jute	9.260	11.000	7.551	5.625
	Mesta	14.300	15.000	11.792	8.796
	Sunhemp	6.780	9.000	5.316	5.161
	Cotton	99.990	136.000	125.104	125.194
	TOTAL	130.330	171.000	149.763	144.776
Vegetables	Sweet Potato	33.960	40.000	26.809	25.128
	Other Vegetables	253.550	310.740	646.011	650.707
	TOTAL	287.510	350.740	672.820	675.835
Spices	Chillies	34.260	50.000	54.582	54.444
	Turmeric	27.250	30.000	28.331	29.210
	Ginger	17.010	20.000	20.693	21.255
	TOTAL	78.520	100.000	103.606	104.909
	Gross Total	5889.570	6165.740	6048.201	5961.852

#### **Drought Monitoring**

## **Crop Weather Watch Group (CWWG)**

A committee of Crop Weather Watch Group constituted under the Chairmanship of Principal Secretary, Agriculture Department with the following members monitored the progress of Kharif 2015 crops on weekly basis.

- i) Principal Secretary to Govt., Water Resources Department
- ii) Principal Secretary to Govt. Co-operation Department
- iii) Special Relief Commissioner, Odisha
- iv) Commissioner- cum- Director of Agriculture & Food Production
- v) Director of Horticulture
- vi) Addl. Secretary to Govt. Agriculture Department (Nodal Officer)
- vii) Director of Economics & Statistics
- viii) Director, India Meteorological Centre, Bhubaneswar
- ix) Professor, Agro Meteorology, Odisha University of Agriculture and Technology
- x) Managing Director, OSSC Ltd.
- xi) Managing Director, OAIC Ltd.
- xii) Agriculturist, Agriculture Department

Regular review was also taken up at different levels including that of Chief Secretary and Hon'ble Chief Minister. The Revenue Divisional Commissioners and the Collectors monitored the situation within their respective Revenue Divisions and Districts respectively.

## Mitigation measures taken by the State Government

In response to the severe drought situation, the State Government announced a comprehensive package for mitigation of the drought situation as follows:

Provision of agriculture input subsidy to the small and marginal farmers
who have sustained crop loss of 33% and above @ Rs.6,800/- per hectare
of land in rain-fed (non-irrigated) areas and Rs.13,500/- per hectare of land
in areas under assured irrigation. In case of farmers other than small and
marginal farmers the quantum of assistance is same subject to a ceiling of
two hectare per farmer.

- Provision of fresh finance to the tune of 4500 crores for next Rabi cultivation to the Farmers affected by drought.
- Short term Kharif loans converted to medium term loans in drought affected areas in cases of 50% and above crop damage. The rate of interest of short term loans was applicable for converted medium term loans.
- 50% remission in respect of cess on land revenue where the crop loss is 33% or more. Collection of the remaining amount to be deferred to the next financial year without levying any interest.
- Tuition fees and examination fees waived in Government and aided
   Schools and Colleges in drought affected areas.
- 40,000 pump sets to be provided through Odisha Agro-Industries
  Corporation with 50% subsidy limited to Rs.15,000/- to the framers with
  priority to the rain-fed areas. Besides, availability of pump sets in different
  Agro Service Centers were published to enable the farmers to hire the
  same to save their standing crops.
- Odisha Lift Irrigation Corporation to take immediate steps to repair the
  defunct LI Points. Energy Department to energize the LI Points
  immediately. Necessary arrangement was made for providing diesel
  generator sets with submersible pump sets to the newly installed deep
  bore wells where supply of electricity was not possible. The district level
  committees were constituted to revive defunct LI Points.
- Steps were taken to energize deep bore wells of 13,000 farmers.
- 4 Lakh pulse mini kits, 1 lakh oilseed mini kits and 5 lakh vegetable mini kits were supplied to the farmers for the Rabi Programme
- Projects to establish water harvesting structures/de-silting of field channels, diversion weirs etc. were included under MGNREGA works.
- State Government provided 50 days of additional work over and above the 150 days announced by the Government of India in drought affected areas. Further, as a pro-poor and pro-labour measure, an additional 30% of wages was paid to the labourers engaged in MGNREGS in drought affected districts as Drought Allowance.

- Further, development of private lands of the affected farmers was taken up as a component under MGNREGS as an additional relief measures.
- Food assistance in shape of rice @ 1 kg per adult and 500 gram per child to people in dire need of immediate sustenance, as assessed by the Collectors
- Recovery of all crop loans extended by Cooperative Societies in the affected Blocks as per the eye estimation survey report was deferred with immediate effect. The Commercial Banks were requested to take similar steps in respect of crop loans of farmers of the affected areas.

The concerned Departments of the Government and the Collectors of the affected Districts were instructed to implement the package announced by the Government to assist the affected farmers.

## **Drought Declaration**

In pursuance of the provision contained in Paragraph 29(b) of the Odisha Relief Code, all the District of the State were asked to submit the crop loss assessment report basing on the crop cutting experiment. Based on the reports received from different Collectors, the State Government have declared 29175 villages of 3807 Gram Panchayats under 233 Blocks and 404 wards of 55 ULBs of 27 Districts as drought affected where the farmers have sustained crop loss of 33% and above for Autumn/Kharif Paddy during Kharif 2015. The list of the affected Blocks is as follows.

LIST OF DISTRICTS, BLOCKS & ULBs DECLARED AS DROUGHT AFFECTED DURING KHARIF 2015

SI. No.	Name of the District	SI. No.	Name of affected Blocks	No. of GPs	No. of Villages	SI. No.	Name of ULBs	No. of Wards
1	Angul	1	Angul	31	214			
		2	Banarpal	20	119			
		3	Chhendipada	34	175			
		4	Talcher	20	142	1	Talcher	4
		5	Kaniha	26	177			
		6	Athamalik	24	301	2	Athamalik	11
		7	Kishorenagar	21	237			

		8	Pallahara	26	289			
2	Balasore	9	Jaleswar	24	139	3	Jaleswar	4
		10	Bhograi	11	24			
		11	Baliapal	8	42			
		12	Oupada	2	11	4	Oupada	8
		13	Nilgiri	17	44			
3	Baragarh	14	Bargarh	10	27			
		15	Barpali	16	46			
		16	Bhatli	16	81			
		17	Ambabhona	11	80			
		18	Attabira	2	7			
		19	Paikmal	22	128			
		20	Rajborasambar (Padampur)	21	150	5	Padampur	11
		21	Jharbandh	14	83			
		22	Sohela	26	128			
		23	Bijepur	24	110			
		24	Gaisilet	19	103			
4	Bhadrak	25	Dhamnagar	2	2			
5	Bolangir	26	Bolangir	23	113	6	Bolangir	10
		27	Puintala	24	136			
		28	Loisingha	17	105			
		29	Agalpur	18	107			
		30	Deogaon	23	129			
		31	Gudvella	11	83	7	Tusura	11
		32	Khaprakhol	18	133			
		33	Belpara	22	120			
		34	Patnagarh	26	164	8	Patnagarh	13
		35	Titilagarh	22	132	9	Titilagarh	14
		36	Turekela	19	101	10	Kantabanji	12
		37	Saintala	20	137			
		38	Bangomunda	22	133			
		39	Muribahal	18	159			
6	Boudh	40	Boudh	oudh 20 283 11 Boudhga		Boudhgarh	1	
		41	Kantamal	24	408			

		42	Harabhanga	15	282			
7	Cuttack	43	Athagarh	29	193	12	Athgarh	5
		44	Tigiria	10	50			
		45	Baramba	36	138			
		46	Narasinghpur	33	233			
		47	Banki	18	87			
		48	Dompada	10	23	13	Banki	6
		49	Tangi-Choudwar	13	75	14	Choudwar	1
8	Deogarh	50	Barkote	22	209			
		51	Reamal	22	245			
		52	Tileibani	16	219	15	Deogarh	10
9	Dhenkanal	53	Bhuban	10	58	16	Bhuban	9
		54	Dhenkanal	22	80			
		55	Gondia	4	34			
		56	Hindol	35	156	17	Hindol	14
		57	Kamakhyanagar	17	46			
		58	Kankadahad	20	54			
		59	Odapada	25	117			
		60	Parjang	26	79			
10	Gajapati	61	R. Udayagiri	13	159			
		62	Rayagada	18	169			
		63	Nuagada	14	173			
		64	Mohana	32	464			
		65	Gosani(PKD)	21	130	18	PKD (Gosani)	13
		66	Gumma	19	207			
		67	Kashinagar	12	97	19	Kashinagar	11
11	Ganjam	68	Chatrapur	4	10			
		69	Ganjam	11	47	20	Ganjam	2
		70	Khallikote	1	2			
		71	Beguniapada	5	8			
		72	Purushottampur	6	21			
		73	Polasara	2	27			
		74	Jagannathprasad	19	61			
		75	Bellaguntha	10	26			

		76	Bhanjanagar	3	9			
		77	Aska	15	30			
		78	Buguda	9	37	21	Buguda	2
		79	Chikiti	8	29			
		80	Kukudakhandi	4	9			
		81	Patrapur	20	213			
		82	Sanakhemundi	7	55			
		83	Digapahandi	20	80	22	Digapahandi	1
12	Jajpur	84	Jajpur	15	105	23	Vyasanagar Municipality	10
		85	Dasarathapur	15	49			
		86	Binjharpur	10	34			
		87	Dharmasala	17	36			
		88	Rasulpur	3	9			
		89	Bari	29	101			
		90	Sukinda	15	53			
		91	Danagadi	22	113			
		92	Korei	22	230			
13	Jharsuguda	93	Jharsuguda	17	66	24	Jharsuguda	4
		94	Kirmira	8	42	25	Brajarajnagar	3
		95	Kolabira	9	47	26	Belpahar	3
		96	Laikera	11	45			
		97	Lakhanpur	33	124			
14	Kalahandi	98	Koksara	19	67	27	Kesinga	3
		99	Kesinga	26	102	28	Bhawanipatna	3
		100	Lanjigarh	21	410	29	Junagarh	1
		101	M.Rampur	15	244	30	Dharamgarh	1
		102	Bhawanipatna	33	272			
		103	Narla	26	167			
		104	Karlamunda	12	60			
		105	Jaipatna	16	44			
		106	Kalampur	2	6			
		107	Junagarh	21	101			
		108	Golamunda	19	101			
		109	Dharamgarh	17	62			

15	Kandhamal	110	Phulbani	10	209	31	Phulbani	8
		111	Khajuripada	13	230	32	G.Udayagiri	7
		112	Phiringia	20	360	33	Balliguda	3
		113	Tikabali	11	109			
		114	Chakapad	11	156			
		115	G.Udayagiri	8	65			
		116	Raikia	10	144			
		117	K.Nuagaon	11	128			
		118	Balliguda	13	235			
		119	Tumudibandh	9	157			
		120	Kotagarh	11	91			
16	Keonjhar	121	Anandapur	16	111			
		122	Ghasipura	19	129	34	Anandpur Municipality	5
		123	Hatadihi	10	30			
		124	Ghatagaon	24	128			
		125	Patna	19	143			
		126	Saharpada	20	138			
		127	Keonjhar	23	199	35	Kendujhargarh	10
		128	Banspal	21	152			
		129	Telkoi	21	145			
		130	Champua	23	151			
		131	Jhumpura	21	150	36	Barbil	6
		132	Joda	15	85	37	Joda	3
17	Khordha	133	Khordha	20	103			
		134	Begunia	21	161			
		135	Bolagarh	19	198			
		136	Tangi	20	190			
		137	Chilika	14	127	38	Balugaon	6
		138	Banpur	10	139			
18	Koraput	139	Borigumma	31	129			
		140	Kotpad	16	83			
		141	Boipariguda	7	34			
		142	Jeypore	6	16			

19	Mayurbhanj	143	Suliapada	15	188			
		144	Rasgovindpur	15	172			
		145	Morada	20	168			
		146	Betnoti	22	227			
		147	Shamakhunta	13	108			
		148	Badasahi	30	219			
		149	Bangriposi	18	217			
		150	Baripada	11	100			
		151	Saraskana	15	198			
		152	Kuliana	17	232			
		153	Bahalda	12	104			
		154	Bisoi	10	145			
		155	Bijatala	10	131			
		156	Tiring	10	80			
		157	Rairangpur	9	117	39	Rairangpur	9
		158	Kusumi	12	96			
		159	Jamda	8	79			
		160	Thakurmunda	15	159			
		161	Raruan	12	110			
		162	Jashipur	20	218			
		163	Karanjia	13	156	40	Karanjia	9
		164	Sukruli	9	90			
		165	G.B. Nagar	8	29			
		166	Udala	3	10			
		167	Khunta	13	71			
		168	Kaptipada	10	13			
20	Nabarangpur	169	Nabarangpur	13	55	41	Nabarangpur	6
		170	Nandahandi	10	46			
		171	Tentulikhunti	15	62			
		172	Papadahandi	22	89			
		173	Kosagumuda	24	120			
		174	Dabugam	8	70			
	17		Umerkote	18	99			
		176	Raighar	24	117			

		177	Jharigam	21	112			
		178	Chandahandi	14	88			
21	Nayagarh	179	Bhapur	19	112			
		180	Daspalla	17	331	42	Daspalla	16
		181	Gania	8	103			
		182	Khandapara	21	185	43	Khandapada	13
		183	Nayagarh	26	146			
		184	Nuagaon	20	232			
		185	Odagaon	29	124			
		186	Ranpur	34	238	44	Ranpur	15
22	Nuapada	187	Nuapada	25	136	45	Nuapada	13
		188	Komna	27	151	46	Khariar Road	14
		189	Khariar	18	112	47	Raj Khariar	1
		190	Boden	14	87			
		191	Sinapali	22	125			
23	Puri	192	Krushnaprasad	20	114			
24	Raygada	193	Rayagada	28	290			
		194	Kolnara	15	189			
		195	K.Singhpur	13	248			
		196	Kashipur	20	407			
		197	Gunupur	18	124	48	Gunupur NAC	9
		198	Gudari	9	151			
		199	Padmapur	11	97			
		200	Ramnaguda	12	118			
		201	Bissamcuttack	20	285			
		202	Muniguda	16	400			
		203	Chandrapur	7	215			
25	Sambalpur	204	Dhankauda	6	23	49	Sambalpur Municipality	7
		205	Rengali	14	62			
		206	Maneswar	8	34			
		207	Jujumura	18	115			
		208	Naktideul	13	167			
		209	Rairakhol	14	199	50	Rairakhol NAC	18

		210	Bamra	17	135			
		211	Kuchinda	17	131	51	Kuchinda NAC	6
		212	Jamankira	21	238			
26	Subarnpur	213	Biramaharajpur	13	166			
		214	Sonepur	13	144	52	Sonepur	4
		215	Tarbha	18	169	53	Tarbha	6
		216	Ullunda	16	158			
27	Sundargarh	217	Hemgir	1	2	54	Biramitrapur	5
		218	Lephripara	13	44	55	Rourkela	4
		219	Tangarpali	4	5			
		220	Sundargarh	14	74			
		221	Balisankara	16	86			
		222	Subdega	14	59			
		223	Kutra	17	54			
		224	Rajgangpur	12	59			
		225	Bargaon	12	69			
		226	Bonai	12	108			
		227	Koira	12	89			
		228	Kuarmunda	20	105			
		229	Bisra	14	70			
		230	Nuagaon	20	119			
		231	Lathikata	14	71			
		232	Lahunipara	17	211			
		233	Gurundia	13	136			
			Total	3807	29175		55	404

N.B: The details of G.P.s, Villages and Wards can be accessed through www. odisha.gov.in > Revenue & Disaster Management > Special Relief Commissioner.

# **District-wise Abstract of Crop Loss (Kharif-2015)**

SI. No.	District	No. of Block	No. of GP	No. of villages	No. of ULBs	No. of wards
1	2	3	4	5	6	7
1	Angul	8	202	1654	2	15
2	Balasore	5	62	260	2	12
3	Bargarh	11	181	943	1	11
4	Bhadrak	1	2	2	0	0
5	Bolangir	14	283	1752	5	60
6	Boudh	3	59	973	1	1
7	Cuttack	7	149	799	2	12
8	Deogarh	3	60	673	1	10
9	Dhenkanal	8	159	624	2	23
10	Gajapati	7	129	1399	2	24
11	Ganjam	16	144	664	3	5
12	Jajpur	9	148	730	1	10
13	Jharsuguda	5	78	324	3	10
14	Kalahandi	12	227	1636	4	8
15	Kandhamal	11	127	1884	3	18
16	Keonjhar	12	232	1561	4	24
17	Khordha	6	104	918	1	6
18	Koraput	4	60	262	0	0
19	Mayurbhanj	26	350	3437	3	18
20	Nawarangpur	10	169	858	1	6
21	Nayagarh	8	174	1471	3	44
22	Nuapara	5	106	611	3	28
23	Puri	1	20	114	0	0
24	Rayagada	11	169	2524	1	9
25	Sambalpur	9	128	1104	3	31
26	Sonepur	4	60	637	2	10
27	Sundargarh	17	225	1361	2	9
	Total	233	3807	29175	55	404 Contd

Contd..

SI.											
No.			Non-lı	rigated			Irrig	ated		Grand	
		33-50 %	More than 50% up to 66%	Above 66%	Total	33-50 %	More than 50% up to 66%	Above 66%	Total	Total	
1	2	8	9	10	11	12	13	14	15	16	
1	Angul	13553.01	18745.28	4285.89	36584.18	1025.87	350.75	104.02	1480.64	38064.82	
2	Balasore	418.30	1842.19	6141.63	8402.12	0.00	0.00	0.00	0.00	8402.12	
3	Bargarh	18844.88	26883.45	90774.96	136503.29	95.55	5604.37	3043.27	8743.19	145246.48	
4	Bhadrak	0.00	0.00	132.56	132.56	0.00	0.00	0.00	0.00	132.56	
5	Bolangir	47563.42	16029.55	59913.58	123506.55	1152.65	120.10	12.74	1285.49	124792.04	
6	Boudh	15936.16	14352.04	2021.78	32309.98	6156.88	1341.56	0.00	7498.44	39808.42	
7	Cuttack	21325.00	31731.00	19487.81	72543.81	0.00	0.00	10.00	10.00	72553.81	
8	Deogarh	1281.00	5087.00	12871.00	19239.00	0.00	0.00	0.00	0.00	19239.00	
9	Dhenkanal	7321.24	1166.00	12.00	8499.24	0.00	0.00	0.00	0.00	8499.24	
10	Gajapati	4942.35	4334.47	38.67	9315.49	7717.63	1026.58	0.00	8744.22	18059.71	
11	Ganjam	3725.74	4804.69	4125.02	12655.46	518.36	436.77	1636.22	2591.35	15246.81	
12	Jajpur	8611.63	7043.44	28861.63	44516.70	0.00	0.00	0.00	0.00	44516.70	
13	Jharsuguda	12479.48	8822.61	8325.13	29627.22	277.97	0.00	0.00	0.00	29627.22	
14	Kalahandi	9028.27	35440.74	20291.04	64760.05	2902.79	3652.25	559.63	7114.67	71874.72	
15	Kandhamal	6550.89	2191.14	5790.48	14532.51	98.92	12.46	249.83	361.21	14893.72	
16	Keonjhar	31177.91	42372.66	36591.44	110142.01	3818.84	1526.43	334.73	5680.00	115822.01	
17	Khordha	39598.90	9564.01	12080.41	61243.31	1092.18	707.66	64.93	1864.76	63108.08	
18	Koraput	4765.72	2165.90	829.56	7761.18	178.95	50.67	19.13	248.75	8009.93	
19	Mayurbhanj	36765.70	79487.72	44107.47	160360.89	5440.35	17916.71	6797.36	30154.42	190515.31	
20	Nawarangpur	31399.18	1703.29	59.08	33161.55	294.94	0.00	0.00	294.94	33456.49	
21	Nayagarh	7057.01	44137.30	32592.47	83786.78	4241.87	501.71	395.53	5139.11	88925.89	
22	Nuapara	4459.81	14332.88	57205.45	75998.14	2462.35	485.74	1261.11	4209.20	80207.34	
23	Puri	0.00	0.00	2465.00	2465.00	0.00	0.00	0.00	0.00	2465.00	
24	Rayagada	15931.06	26320.07	12628.35	54879.48	2509.48	2199.41	1200.56	5909.45	60788.93	
25	Sambalpur	31158.47	34583.27	18881.62	84623.36	1141.59	138.77	17.16	1297.52	85920.88	
26	Sonepur	1457.96	35120.28	0.00	36578.24	2772.75	1410.30	0.00	4183.05	40761.29	
27	Sundargarh	21474.91	18387.76	31764.53	71627.20	0.00	0.00	0.00	0.00	71627.20	
	Total	396828.00	486648.74	512278.56	1395755.30	43899.93	37482.23	15706.22	97088.38	1492565.72	

#### Submission of Memorandum to Govt. of India

Based on report of crop loss, the State Government submitted Memorandum to the Government of India in three phases seeking Central Assistance of Rs.2344.99 crore in various sectors to manage the drought situation.

#### **Visit of the Central Team**

Ministry of Agriculture and Farmer welfare, Govt. of India had deputed an Inter Ministerial Central Team for the on the spot damage assessment on account of drought situation under the leadership of Shri K. S. Srinivas, Joint Secretary, Department of Agriculture Co-operation & Farmers, Government of India. The team visited the State during 2-5 December 2015.

#### Assistance received from Govt. of India:

The High Level Committee (HLC) of Govt. of India, in its meeting held on 06.01.2016, considered the Memorandum in the wake of the drought (kharif) during 2015-2016, report of the Central Team, recommendations of the Sub-Committee of National Executive Committee (SC-NEC) thereon and the extant items & norms of assistance from SDRF & NDRF and approved an assistance of Rs.815.00 crore from NDRF subject to the adjustment of 50% of balance available in the SDRF account for the instant calamity.

Taking into account the SDRF instalments released during the financial year 2015-16, details of the expenditure from SDRF account for the year 2015-2016 and opening balance as on 1<sup>st</sup> April 2015, the Government of India have released a net amount of Rs.600.52 crore from NDRF to State Government.

## **CHAPTER-V**

## **Fire Accident**

As many as 26 persons lost their lives due to fire accidents during the year 2015-16. Steps were taken to provide ex-gratia assistance @ Rs 4,00,000/- per deceased to Next of kins out of the SDRF. Besides, funds were provided to different Collectors for disbursement of house building assistance along with assistance for clothing and utensils as per the Norms of Assistance from SDRF.

# The details of Loss of Property due to Fire Accident and Assistance provided during the year 2015-16

[ in Rs.]

SI. No.	Name of the District	No. of accident	No. of villages affected	No. of families affected	approximate value of properties lost	No. of persons died	No. of cattle died	Relief provided towards HBA & Others
1	2	3	4	5	6	7	8	9
1	Angul	264	218	456	1,67,26,500	04	03	1,27,90,000
2	Balasore	361	220	365	1,15,16,036	2	-	41,15,400
3	Bargarh	46	44	57	10,65,500	1	-	5,21,500
4	Bhadrak	278	212	308	1,68,15,750	2	09	49,35,450
5	Bolangir	9	8	9	-	-	-	3,10,000
6	Boudh	87	87	137	42,30,000	-		11,43,100
7	Cuttack	458	276	458	1,35,90,700	2	-	16,00,900
8	Deogarh	61	54	61	4,78,000	-	-	2,76,500
9	Dhenkanal	395	258	532	1,51,86,400	3	-	69,58,600
10	Gajapati	27	24	38	8,48,000	-	-	99,900
11	Ganjam	386	303	888	1,82,76,300	3	3	1,02,15,700
12	Jagatsinghpur	297	236	297	9,66,100	-	-	1,36,000
13	Jajpur	447	384	429	1,30,69,250	2	-	44,03,800
14	Jharsuguda	-	-	-	-	-	-	-
15	Kalahandi	15	9	21	5,17,000	-	-	20,400

16	Kandhamal	79	51	79	23,40,800	-	-	7,63,700
17	Kendrapara	401	315	399	1,56,79,500	1	17	67,63,200
18	Keonjhar	159	80	159	55,34,000	-	-	6,12,500
19	Khordha	186	142	309	63,21,950	4	-	13,78,050
20	Koraput	72	53	93	14,65,100	-	-	4,21,600
21	Malkanagiri	31	31	31	9,41,650	-	-	1,61,200
22	Mayurbhanj	308	255	288	95,15,000	1	-	27,05,200
23	Nawarangpur	59	59	76	13,18,000	1	-	3,61,000
24	Nayagarh	149	130	242	63,64,005	-	-	84,0150
25	Nuapara	9	9	9	2,18,900	-	-	27,300
26	Puri	318	292	443	1,07,62,520	-	16	35,82,000
27	Rayagada	40	40	160	29,20,000	-	-	24,200
28	Sambalpur	15	13	15	1,75,100	-	-	1,46,200
29	Subarnapur	49	49	66	12,98,000	-	15	2,47,200
30	Sundargarh	3	-	3	11,600	-	-	-
Total		5009	3852	6428	17,81,51,661	26	63	6,55,60,750

# **CHAPTER-VI**

### Hailstorm

Due to Hailstorm / Whirlwind as many as 5 persons (Jajpur-1, Keonjhar-1, Mayurbhanj-2 and Nuapada-1) lost their lives during the year 2015-16. Ex-gratia assistance @ 4,00,000/- per deceased has been provided to their Next of kins from SDRF. The disaster also caused damage to private houses, crops and other infrastructure. An amount of Rs.2,89,64,220/- has beenprovided out of SDRF to the Collectors of the affected Districts namely Angul, Bhadrak, Bargarh, Keonjhar, Mayurbhanj, Nawarangpur, Kandhamal, Nuapada, Rayagada and Sundargarh for disbursement of ex-gratia assistance, House Building Assistance, Assistance for Clothing & Utensils to the affected people.

# **CHAPTER - VII**

# **State Specific Disasters**

### **Heat Wave**

### Preparatory measures on Heat wave

In 2015, heat-wave condition prevailed in the State in the months of April, May and June. In order to encounter such condition, the State Government undertook various preparedness/ preventive measures as follows:

- Public Awareness Campaign through electronic and print media was undertaken. Civil Society Organizations and PRI members were involved in awareness campaign and other measures to tackle the situation arising out of Heat Wave. The general public were made alert to the set of "Do's and Don'ts" issued by Health & Family Welfare Department through print media and electronic media. Women & Child Development Department launched public awareness campaign with special focus on children, pregnant and lactating mothers in order to protect them from dehydration. Similarly, Fisheries and Animal Resources Department launched public awareness campaign on protection of animal resources the heat wave. School & Mass Education Department issued suitable instructions for orientation of the school children on heat wave preventive measures.
- Water scarcity areas were identified in advance and supply of water for drinking and other uses through tanker to those areas was ensured.
- "Jala Chhatras" were opened by Urban Local Bodies/ Gram Panchayats at market places, bus stands and other congregation points. Construction/ repair of vats were also ensured for roaming livestock. Civil Society Organisations were encouraged/ involved for opening Jal Chhatras at required places.
- Provision of drinking water in all Schools and Colleges were made instantly.
   Wherever required, tube wells inside the school campus were also repaired to ensure uninterrupted drinking water supply. The timing of classes and examinations in schools & colleges during summer were rescheduled and conducted between 6.30 am and 10.30 am.

- Life saving medicines, saline, ORS was stored in dispensaries, PHCs, CHCs and District Headquarters Hospitals sufficiently to meet the crisis.
   Special arrangement was made and separate beds be earmarked for treatment of heat stroke patients in different hospitals. The ESI Dispensaries were also asked to treat the general public as additional measures.
- The officers of Forest & Environment Department were asked to assess the
  availability of water for animals in reserved/ protected forests and make
  necessary additional provision, where necessary. Drinking water was
  provided through tanker to human habitations facing water scarcity inside
  reserved forests.
- Provision of portable water and ORS packets were made availlable in public transport vehicles. During severe heat wave condition, timings of public transport services was rescheduled and plying of buses during peak hour i.e. between 11.00 AM to 3.00 PM was restricted.
- The timing for engagement of labourers / workmen at worksites was rescheduled. No work executed during peak hours form 11.00 am to 3.30 pm. The employers were advised to make necessary arrangements for supply of drinking water, ORS packets and provision of rest shed at the worksite.
- The Energy Department issued instructions to the Distribution Companies to maintain uninterrupted power supply during summer months.
- Panchayati Raj Institutions in the districts were also impressed upon to remain alert to meet the exigencies.
- The control rooms at the State level and the District level were functioned round the clock during the period of heat wave.
- A meeting of the District Disaster Management Authority were convened to discuss and plan out different preparedness measures to be taken by different officials/ agencies to manage the possible heat wave and water scarcity situation in the district

Despite all the measures taken by the Government, as many as 18 human lives were lost due to sunstroke during 2015. Ex-gratia assistance @ Rs.50,000/- was provided to each of the bereaved families from the SDRF. The district-wise number of human casualties is given below:

SI.	Name of the District	No. of persons died
1.	Angul	1
2.	Bhadrak	3
3.	Dhenkanal	6
4.	Jharsuguda	3
5.	Kendrapara	2
6.	Malkangiri	3
	Total	18

# Lightning

As many as 400 persons lost their lives due to lightning in 30 districts during the year 2015-16. Steps were taken to provide ex-gratia assistance @ 4,00,000/-per deceased to Next of Kins of the victims from SDRF. The district-wise number of human casualties is indicated below:

SI. No	Name of the District	No. of death
1	Angul	17
2	Bolangir	11
3	Bargarh	10
4	Balasore	23
5	Bhadrak	14
6	Boudh	03
7	Cuttack	31
8	Deogarh	08
9	Dhenkanal	16
10	Ganjam	27
11	Gajapati	01
12	Jagatsinghpur	11
13	Jajpur	17
14	Jharsuguda	03
15	Kalahandi	08

SI. No	Name of the District	No. of death
16	Kandhamal	07
17	Kendrapara	06
18	Keonjhar	28
19	Khurda	12
20	Koraput	08
21	Malkanagiri	04
22	Mayurbhanj	43
23	Nawarangpur	19
24	Nayagarh	06
25	Nuapara	10
26	Puri	11
27	Rayagada	08
28	Sambalpur	07
29	Sonepur	04
30	Sundargarh	27
	TOTAL	400

# **Boat Capsize**

As many as 17 persons lost their lives due to boat capsize in 5 districts during the year 2015-16. Ex-gratia assistance @ 4,00,000/- per deceased has

been provided to Next of kins of the victims from the SDRF. The district-wise number of human casualties is given below:

SI.	Name of the District	No. of persons died
1.	Bargarh	3
2.	Deogarh	6
3.	Jajpur	3
4.	Kandhamal	2
5.	Koraput	3
	Total	17

# **Drowning**

As many as 191 persons lost their lives due to drowning in 26 districts during the year 2015-16. Ex-gratia assistance @ 4,00,000/- per deceased has been provided to Next of Kins of the victims from SDRF. The district-wise number of human casualties is given below:

SI.	District	No. of Death
1	Angul	4
2	Balasore	14
3	Baragarh	1
4	Bhadrak	25
5	Bolangir	2
6	Cuttack	11
7	Deogarh	2
8	Dhenkanal	8
9	Ganjam	7
10	Jagatsinghpur	5
11	Jajpur	12
12	Kalahandi	5
13	Kandhamal	3
14	Kendrapada	9

15	Keonjhar	7
16	Khordha	6
17	Koraput	19
18	Malkanagiri	1
19	Mayurbhanj	10
20	Nawrangapur	10
21	Nayagarh	2
22	Nuapada	2
23	Rayagada	2
24	Sambalpur	18
25	Subarnapur	1
26	Sundargarh	5
	Total	191

# **Heavy Rain**

Five persons lost their lives due to wall collapse caused by Heavy Rain during the year 2015-16. Ex-gratia assistance @ 4,00,000/- per deceased has been provided to Next of kins of the victims from SDRF. The district-wise number of casualties is given below:

SI.	Name of the District	No. of persons died
1.	Bargarh	1
2.	Jagatsinghpur	1
3.	Malkangiri	1
4.	Nayagarh	1
5.	Sundargarh	1
	Total	5

### **Snake bite**

As many as 305 persons lost their lives due to snake bite in 23 districts during the year 2015-16. Steps were taken to provide ex-gratia assistance @

4,00,000/- per deceased to Next of Kins of the victims from the SDRF. The district-wise number of human casualties is given below:

SI.	Name of the District	No. of persons died
1.	Angul	5
2.	Balasore	20
3.	Baragarh	16
4.	Bhadrak	26
5.	Cuttack	15
6.	Deogarh	17
7.	Ganjam	41
8.	Jajpur	17
9.	Kandhamal	3
10.	Kendrapada	11
11.	Keonjhar	34
12.	Khordha	5
13.	Koraput	6
14.	Malkanagiri	1
15.	Mayurbhanj	25
16.	Nawrangapur	9
17.	Nayagarh	5
18.	Nuapada	1
19.	Puri	10
20.	Rayagada	4
21.	Sambalpur	20
22.	Subarnapur	6
23.	Sundargarh	8
	Total	305

# CHAPTER – VIII State Disaster Response Fund (SDRF)

During the year 2015-16 a total amount of Rs. 1188.647crore was available in SDRF for expenditure. Out of the above, an amount of Rs. 879.774 crore has been spent to meet the expenditure on different approved Natural Calamities as detailed below.

# Status of Expenditure from SDRF Account 2015-16 for State of ODISHA (As on 31.03.2016)

[Rs. in crore]

	[KS. III	crore]					
1	Opening Balance	23.422					
	SDRF releases during the year 2015-16 (Central & State Share)						
	# 1st Installment of current year [State + Central Share]	373.50					
0	# 2 <sup>nd</sup> Installment of current year, if any [State + Central Share]	373.50					
2	# Advance Contribution for 2015-16 [State + Central Share]	-					
	# Refund of unspent Amount	256.947					
	# Interest earned out of investment	13.878					
3	NDRF releases during the year 2015-16: (Though Rs.574.6925 crore received, only Rs.147.40 crore has been transferred to the fund.	147.40					
4	Total funds available in SDRF Account (1+2+3)	1188.647					
	Expenditure incurred on calamities						
	# Avalanches	-					
	# Cloud Burst	-					
	# Cyclone						
	# Drought						
5	# Earthquake						
	# Fire	13.266					
	# Flood	106.536					
	# Hailstorm	1.858					
	# Landslides	0.356					
	# Pest attack	-					
	# Tsunami	-					
	# Cold Wave	-					
	Sub-Total	834.783					
Expend	iture incurred during 2015-16						
6	Expenditure incurred from SDRF up to 10% on procurement of search and rescue equipments etc. during 2015-16	19.505					
7	Expenditure incurred from SDRF up to 5 % on Capacity Building Activities	5.552					
8	Expenditure incurred from SDRF up to 10 % on State Specific disasters	19.939					
9	Total expenditure incurred on all calamities (5+6+7+8+9)	879.779					
10	Balance available in SDRF Account (4 - 10)	308.868					

# Appendix-XII

# Statement showing item-wise details of expenditure incurred as per approved items and norms of SDRF/NDRF

Code No.	Items	Calamity												
NO.		Avalanche	Cloud burst	Cyclone	Drought	Earthquake	Fire	Flood	Hailstorm	Landslide	Pest Attack	Tsunami	Cold wave/frost	State Specific Calamity
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Gratuitous Relief													
(a)	(a) Ex-gratia payment to families to deceased persons													
	(i) As per SDRF/NDRF norms	0	0	6.500	0	0.000	83.500	59.000	0	0	0	0	0	1993.915
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of beneficiaries	0	0	6	0	0	39	31	0	0	0	0	0	617
(b)	Ex-gratia payment for	loss of a	limb or ey	/es										
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
(c)	Grievous injury requir	ng hospi	talization											
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
(d)	Relief for the old, infin	m and de	stitute, ch	ildren										
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
(e)	Clothing and utensils/ due to a natural calan		d goods f	or families w	hose hous	es have b	een washed	away/fully o	damaged	/severel	y inund	ated fo	r more	than a week
	(i) As per SDRF/NDRF norms	0	0	0	0	0	101.400	62.200	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0

	(iii) Total no. of beneficiaries	0	0	0	0	0	2669	1637	0	0	0	0	0	0
(f)	Gratuitous relief for fa	milies in	dire need	of immediate	e sustenar	nce after a	calamity							
	(i) As per SDRF/NDRF norms	0	0	122.098	0.0	0	358.631	1892.871	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Supplementary Nutriti	on												
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Assistance to Small a	nd Margi	nal Farme	ers (SMF for										
(a)	Desilting of agriculture	and												
	(i) As per SDRF/NDRF norms	0	0	0.634	0	0	0	14.826	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligibe area (ha.)	0	0	7.896	0	0	0	196.721	0	0	0	0	0	0
	(iv) No. of S&M farmers	0	0		0	0	0		0	0	0	0	0	0
(b)	Removal of debris on	agricultu	ral land ir	hilly areas						•				
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligibe area (ha.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of S&M farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
(c)	Desilting/Restoration/l	Repair of	fish farm	S		"								
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligibe area (ha.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of S&M farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
(d)	Loss of substantial po	rtion of la	and cause	ed by landslid	e, avalanc	che, chang	e of course	of rivers						
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0

	(ii) Outside the	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligibe area (ha.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of S&M farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
(e)	) Agriculture input subsidy where crop loss was 50% / 33% and above													
	(i) As per SDRF/NDRF norms	0	0	17818. 490	52149.080	0	0.073	4319. 671	2.349	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligible area (ha.)	0	0	13143.94	31133.11	0	0.05	2578.852	1.229	0	0	0	0	0
	(iv) No. of S&M farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Input Subsidy to farme	ers other	than Sma	all & Margina	al Farmers									
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligible area (ha.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of S&M farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Assistance to small an	d margin	nal sericu	Iture farmers										
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total area (ha.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of S&M farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Employment Generation	on									<b></b>			
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) No. of man days generated	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) Quantum of food grains distributed as part of wage component	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Animal Husbandry Ass	sistance	to small a	and marginal	farmers/agi	ricultural l	abourers							
(i)	Replacement of draug	ht/milch	animals o	or animals us	sed for haula	age		.,,			<b></b>			
_	(i) As per SDRF/NDRF norms	0	0	0	0	0	7.500	12.070	0	0	0	0	0	0

(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) Total no. of beneficiaries	0	0	0	0	0	25	46	0	0	0	0	0	0		
ii) Provisions of fodder/fe	Provisions of fodder/feed in cattle camps														
(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) No. of cattle camps	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iv) Number of cattle kept in camps	0	0	0	0	0	0	0	0	0	0	0	0	0		
(v) Qty. of fodder(qtls.) supplied in camp	0	0	0	0	0	0	0	0	0	0	0	0	0		
ii) Water supply in Cattle	Camps														
(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) Total no. of Tanker load	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iv) No. of cattle camps and cattle kept therein	0	0	0	0	0	0	0	0	0	0	0	0	0		
v) Additional cost of med	Additional cost of medicines and vaccine ( calamity related requirements)														
(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
v) Supply of fodder outsi	de Cattle	Camps													
(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) Total qty. of fodder transported (Qtls)	0	0	0	0	0	0	0	0	0	0	0	0	0		
vi) Movement of useful c	attle to ot	her areas		1	·		F	·	1	<b></b>	¥	µ			
(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
lux <b>a</b>	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Outside the norms		. "		I						1	l "		_		
	0	0	0	0	0	0	0	0	0	0	0	0	0		

	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
(b)	Input Subsidy for fish	seed farn	n							<b>:::::::::::::::::::::::::::::::::::::</b>	d	5		hannan
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total eligibe area (ha.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of fish farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Assistance to artisans	in handi	crafts/han	dloom secto	ors by way	of subsidy	for repair/re	placement o	of damag	ed equip	oments			
(a)	Traditional Crafts (Ha	ndicraft)												
(i)	For replacement of d	amaged t	ools / equ	ipments										
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	28.999	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) No. of equipments	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of beneficiaries	0	0	0	0	0	0	708	0	0	0	0	0	0
(ii)	For loss of raw materi	als / good	ds in proce	ess/ finished	l goods									
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Qty. of materials (Qtls.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iv) No. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
(b)	For Handloom Weave	rs												
(i)	Repairs/replacement	of loom e	quipments	and acces	sories						<b></b>			
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) No. of equipments/ accessories	0	0	0	0	0	0	0	0	0	0	0	0	0
(88188812-	(iv) No. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0
(ii)	Purchase of yam and	other ma	terials like	dyes and c	hemicals a	nd finishe	d stocks							
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0

	(iii) Qty. of materials (Qtls.)	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iv) No. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0		
10	Assistance for repair/	restoratio	on of dam	aged houses	S	11	**************************************	) h		4		5		500000000000000000000000000000000000000		
(a)	Fully damaged/ destro	ully damaged/ destroyed Pucca houses														
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iii) Number	0	0	0	0	0	0	0	0	0	0	0	0	0		
(b)	Fully damaged/ destro	yed Kut	cha hous	es		"										
	(i) As per SDRF/NDRF norms	0	0	28.530	0	0	110.316	111.267	78.933	35.665	0	0	0	0		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iii) Number	0	0	30	0	0	116	117	83	38	0	0	0	0		
(c)	Severely damaged ho	uses	<u> </u>	<b></b>	<b>-</b>			<u>,                                    </u>		<b></b>			·			
(i)	Severely damaged Pucca houses															
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iii) Number	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii)	Severely damaged K	lutcha h	ouses	<del></del>												
	(i) As per SDRF/NDRF norms	0	0	7.608	0	0	298.614	129.336	13.314	0	0	0	0	0		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iii) Number	0	0	8	0	0	314	136	14	0	0	0	0	0		
(d)	Partially damaged hou	uses ( bo	th pucca a	and kutcha)			ā	i	i	i		ā	i	ā		
	(i) As per SDRF/NDRF norms	0	0	8.528	0	0	140.798	100.928	9.632	0	0	0	0	0		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iii) Number	0	0	164	0	0	4399	3154	301	0	0	0	0	0		
(e)	Huts damaged/ destro	yed	<b>4</b>	<b>d</b>	4	.1				di			·!			
	(i) As per SDRF/NDRF norms	0	0	4.826	0	0	113.342	116.859	9.311	0	0	0	0	0		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
	(iii) Number	0	0	118	0	0	2765	2850	227	0	0	0	0	0		
		L	L	J	I		J		.	J		J	l	I		

11 Provision of emerge	ncy supply	of drinki	ng water in ru	ral areas	and urban	areas	.,								
(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) Total Qty. of water supplied ( No. of Tankers load)	0	0	0	0	0	0	0	0	0	0	0	0	0		
(i) Provisions of medicines, disinfectants, insecticides for prevention of outbreak of epidemics	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) No. of beneficiaries	0	0	0	0	0	0	0	0	0	0	0	0	0		
(i) Medical care for cattle and poultry against eqidemics a a sequel to a notified natural calamity	1	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Total No. of cattle & poultry benefited	0	0	0	0	0	0	0	0	0	0	0	0	0		
(i) Evacuation of people affected/ likely to be affected	0	0	0	0	0	0	0	0	0	0	0	0	0		
14 (ii) No. of people evacuated	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) Average cost/person	0	0	0	0	0	0	0	0	0	0	0	0	0		
15 Hiring of boats for ca	Hiring of boats for carrying immediate relief and saving life														
(i) No. of boat days	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Average hiring cost per boat/day	0	0	0	0	0	0	0	0	0	0	0	0	0		
16 Provisions for tempo	Provisions for temporary accommodation, food, clothing, medical care etc. of people affected/ evacuated (operation of relief camps)														
(i) As per SDRF/NDRF norms	0	0	1130.295	0	0	112.358	1506.128	72.314	0	0	0	0	0		
(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iii) No. of persons provided shelters	0	0	0	0	0	0	0	0	0	0	0	0	0		
(iv) No. of relief camps opened	0	0	0	0	0	0	0	0	0	0	0	0	0		
(v) Average cost per person/per day	0	0	0	0	0	0	0	0	0	0	0	0	0		
17 Air dropping of esse	ntial suppli	es	d		1		117			4	6		ā		
(i) No. of sorties	0	0	0	0	0	0	0	0	0	0	0	0	0		
(ii) Quantity ( in MTs) dropped	0	0	0	0	0	0	0	0	0	0	0	0	0		
18 Repair/restoration of	immediate	e nature o	of the damag	ed infrastr	ucture in e	ligible sector	rs		<b></b>	<b></b> -					
(a) Roads & Bridges															

(i) As per SDRF/NDRF	norma	0	0	0.000	0	0	0	356.878	0	0	0	0	0	0	
(ii) Outside th	<del></del>	0	0	0	0	0	0	0	0	0	0	0	0	0	
(iii) Cumulativ length of road repaired (in Kl	s	0	0	0	0	0	0	191.8	0	0	0	0	0	0	
	Drinking water supply														
(i) As per SDRF/NDRF	norms	0	0	0	0	0	0	0	0	0	0	0	0	0	
(ii) Outside th	е	0	0	0	0	0	0	0	0	0	0	0	0	0	
(iii) Total no. o	of	0	0	0	0	0	0	0	0	0	0	0	0	0	
(c) Irrigation	<u>.</u>		<u></u>	·									·		
(i) As per SDRF/NDRF	norms	0	0	0	0	0	0	1942.490	0	0	0	0	0	0	
(ii) Outside th	е	0	0	0	0	0	0	0	0	0	0	0	0	0	
(iii) Total no. o	of	0	0	0	0	0	0	11	0	0	0	0	0	0	
(d) Power supply	( only lin	nited to i	mmediate	restoration	of electricit	y supply ir	n the affecte	ed areas)		<b></b>	<b>4</b>		<b>!</b>		
(i) As per SDRF/NDRF	norms	0	0	0	0	0	0	0	0	0	0	0	0	0	
(ii) Outside th	е	0	0	0	0	0	0	0	0	0	0	0	0	0	
(e) Primary Educa	ation		<b></b>	·				···· <b>!</b>		<b></b>	<b>J</b>				
(i) As per SDRF/NDRF	norms	0	0	0	0	0	0	0	0	0	0	0	0	0	
(ii) Outside th	e	0	0	0	0	0	0	0	0	0	0	0	0	0	
(iii) No. of prin school buildin repaired	nary gs	0	0	0	0	0	0	0	0	0	0	0	0	0	
(f) Primary Healt	h Centre														
(i) As per SDRF/NDRF	norms	0	0	0	0	0	0	0	0	0	0	0	0	0	
(ii) Outside th	е	0	0	0	0	0	0	0	0	0	0	0	0	0	
(iii) No. of Prir Health Centre buildings repa	s	0	0	0	0	0	0	0	0	0	0	0	0	0	
(g) Community as		ned by f	Panchaya	ts				···							
(i) As per SDRF/NDRF	norms	0	0	0	0	0	0	0	0	0	0	0	0	0	
(ii) Outside th	<u></u>	0	0	0	0	0	0	0	0	0	0	0	0	0	
(iii) No. of con assets repaire		0	0	0	0	0	0	0	0	0	0	0	0	0	

	TOTAL	0.000	0.000	19257.465	52250.299	0.000	1326.532	12928.049	185.853	35.665	0.000	0.000	0.000	1993.915
	Cost of equipments procured	0	0	0	0	0	0	1950.545	0	0	0	0	0	0
26	Procurement of esser	itial Sear	ch, Rescu	ue and Evacı	uation equip	ments inc	cluding Com	munication	equipme	nts	<b></b>			
	Sub-Total Calamity wise (including capacity building activities)	0	0	19257.465	52250.299	0	1326.532	10977.504	185.853	35.665	0	0	0	1993.915
	(ii) No. of persons trained	0	0	0	0	0	0	0	0	0	0	0	0	0
	(i) No. of training organized	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Training to specialist r management of disas			roups/ teams	s of the Stat	e personi	nel drawn fro	m different	cadres/ s	services	persor	nnel in\	olved i	n
	(iv) Total no. of carcasses disposed	0	0	0	0	0	0	0	0	0	0	0	0	0
	(iii) Total no. of dead bodies disposed	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Disposal of dead bodi	es/ carca	ısses	.]	<u>                                     </u>		<u> </u>		l	J	<u> </u>	<u>                                     </u>	<u> </u>	
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(i) As per SDRF/NDRF norms	0	0	129.956	101. 219	0	0	323.981	0	0	0	0	0	0
23	Capacity building Acti	vities	<u> </u>	<u> </u>	<u> </u>				<u> </u>	<u> </u>	İ	<u> </u>	<u> </u>	
	Draining off flood water in affected areas	0	0	0	0	0	0	0	0	0	0	0	0	0
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Cost of clearance of d	ebris	L	·I	IL				i	J	J	ā		
	(ii) Outside the norms	0	0	0	0	0	0	0	0	0	0	0	0	0
	(i) As per SDRF/NDRF norms	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Operational cost ( of F	OL only	) for Amb	ulance Servi	ce, Mobile N	Medical To	eams and Te	emporary Di	ispensari	es	··	ā		
	Replacement of damaged medical equipments and lost medicines of Govt.Hospitals/ Health centres	0	0	0	0	0	0	0	0	0	0	0	0	0

# **CHAPTER - IX**

# **Other Disaster Management Activities**

# Gol-UNDP Project "Enhancing Institutional and Community Resilience to Disaster and Climate Change" (2013- 2015):

Odisha State Disaster Management Authority (OSDMA) with the support of the Ministry Home Affairs (MHA) and United Nation Development Programme (UNDP), has been implementing the GOI-UNDP Project on "Enhancing Institutional and Community Resilience to Disaster and Climate Change' programme in the three Districts such as Puri, Kendrapara and Ganjam of Odisha. The project has been supporting efforts to strengthen capacities of government, communities and institutions to accelerate implementation of disaster risk reduction and climate change adaptation plans. This project come under the broad sector of 'crisis management & recovery' of UNDP operations. Followings are five key components of the project based on which detailed activities has been planned under Annual Work Plan (AWP) 2015-

- 1. Mainstreaming DRR/CCA
- 2. Urban Risk Reduction
- 3. Technical Assistance and Capacity Building
- 4. Knowledge Management
- 5. Community Resilience

## Output 1: Mainstreaming DRR / CCA

- **1.1** District level consultation meetings held on 1st Sept 2015 at Kendrapra, 3rd Sept'2015 at Puri and 4th Sept'2015 at Ganjam for review and revision of District Disaster Management Plans (DDMPs) Kendrapra, Ganjam and Puri were
- **1.2.** Revised DDMPs of three Project districts (Ganjam, Puri & Kendrapara) prepared with integration of DRR and Climate Change aspect through appropriate mitigation/ adaptation strategy.

### **Output 2: Urban Risk Reduction**

2.1. City Disaster Management Plan (CDMP) of Bhubaneswar City updated with incorporation of the findings of the HRVA study and the revised plan submitted to

District Disaster Management Authority to incorporate the CDMP in District Disaster Management Plan.

- **2.2.** Consultation meeting for formalization of Standard Operating Procedure, Incidence Response Team and Emergency Support Function of Bhubaneswar City held in the month of July which was participated 40 Officers from different line departments.
- **2.3.** A draft Early Warning Action Plan for BBSR city has been prepared by IIPH and submitted to BMC, UNDP and OSDMA for feedback.
- **2.4.** Training on Search and Rescue and First Aid for Ward level Volunteers were organized by BMC in the month of July in which around 200 ward level volunteers participated.
- **2.5.** Nine Officers from Bhubaneswar city were trained on Incidence Response System for different groups such as- planning, operation and logistics at YASADA, Pune.

### **Output 3: Capacity Development**

- **3.1** A standardized training module on Mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) has been developed with the technical support of All India Disaster Mitigation Institute (AIDMI). The final training module has been field tested through a 3 days ToT Programme involving all related departments, practitioners and professionals on DRR and CCA.
- **3.2** A three days residential Training of Trainers (ToT) programme on 'Mainstreaming Disaster Risk Reduction and Climate Change Adaptation' was held during 28th 30th Sept'2015 at Puri by OSDMA in association with AIDMI. About 33 professionals from government and humanitarian agencies from different districts of Odisha participated in the said ToT Programme.
- 3.3 A state level consultation was on Training Need Assessment (TNA) on DRR & CCA on 17.04.2015 to review and finalize the draft TNA report and the report was finalised.

#### **Output 4: Knowledge Management**

A state level consultation meeting was held on October 8' 2015 to review the draft report on Flood Inundation Mapping (FIM), of Kendrapara district.

The Flood Inundation Mapping of Kendrapara finalised and the final report and ATLAS shared in a state level meeting held on 4th Dec' 2015 with the committee members and stakeholders.

District level Dissemination Meeting on Study of Flood Inundation Mapping of Kendrapara District was organized by District Administration in the DRDA Conference Hall on 30th January 2016. About 50 district level and block level officers involving all related departments participated in the said meeting. The objective of the meeting was to present the FIM to District Administration and all line departments, to share the objectives behind the mapping and to familiarize the participants with the features of the mapping.

### **Output 5: Community Resilience**

- **5.1.** Base line database of three project districts have been collected and draft Community Resilience Plan of three most vulnerable communities in three selected districts developed.
- **5.1.1.** The draft report and Community Resilience Plan have been reviewed by the review committee in a state level consultation meeting held on 27th Jan 2016 and based on the collaborative feedback, the report has been finalised..

# **Odisha Disaster Recovery Project (ODRP)**

Despite limited loss of life, the catastrophic storm Phailin severely impacted the state, particularly the Districts of Ganjam, Puri & Khordha. On the principle of Build Back Better, Odisha Disaster Recovery Project (ODRP) is under implementation in these district under World Bank assistance (70: 30 funding from World Bank & the State Govt.).

As many as 16985 disaster resilient houses have been taken up under this Project within 5 km from the High Tide Line (HTL) in Ganjam, Khordha & Puri Districts of Odisha. A policy guideline for the purpose was approved by the state Govt. on 24.12.2013. Owner driven approach has been adopted for construction of housesand a sum of Rupees Three Lakh is provided to each beneficiary for construction of a 294 sq.ft. house (one bed room, one drawing-cum-bed room, kitchen & toilet) having other facilities like electricity & water supply. Beneficiaries

are also encouraged, wherever possible, to build larger houses with their own Slum improvement, expanding creation of risk mitigation contributions. infrastructure, enlarging the scope of plantations and livelihood enhancement activities are also taken up under the project.

#### **Beneficiaries Identification Process**

- Identification of Beneficiaries is carried out by revenue & disaster management Department at District & Block level.
- Beneficiary List is discussed & endorsed in the Village Meeting (Palli sabha) organized & facilitated by Dist Officials. (Proceedings is duly Documented)
- Beneficiary list is made Public via appropriate media inviting suggestion /objection for 10 days. Complaints, if any is forwarded to Grievance Redress Unit
- Beneficiaries is excluded from any other housing Scheme like AAY/Mo Kudia /RAY etc.

## **Resilient Housing and Community Infrastructure**

Houses are being constructed by the beneficiaries either 'In-situ' or 'Relocation' depending on availability of suitable Land. Beneficiaries ranging from 50 to 1000 are accommodated in the relocated sites. These habitations will be developed into model villages with all basic community infrastructures like roads & drains, piped water supply, electricity, community buildings & complete sanitation measures.

# **Project highlights**

### **Habitation Planning**

- Electrification & Street Lights
- Water Supply & Sanitation
- Connectivity Roads
- Internal Roads
- Basic Civic Infrastructure

### **Housing Construction**

- Well laid Architecture planning Land entitlement to beneficiaries
  - 1000 Sq.ft. plot & plinth area of 254 Sq. ft.
  - amenities viz. Kitchen / Toilet & Piped water
  - House rent allowance for 8 months
  - Multi Hazard Insurance for 10 years
  - Social & dignified living

## **Housing Finance**

For construction of house, fund is released in tranches (into beneficiary bank accounts) based on achieved milestones as determined by the PMU. All owner driven houses will be constructed by the beneficiaries. Beneficiaries will be provided INR 3.00 lakh lump – sum cash grant in five instalments as mentioned below.

SI. No	Installment	Condition	Amount (INR)						
1	First	On signing of agreement for construction	30,000/-						
2	Second	At plinth level	60,000/-						
3	Third	At roof level	100,000/-						
4	Fourth	After Roof Casting & plastering	80,000/-						
5	Fifth	After completion of the house in all respect	30,000/-						
	Total								

### **Infrastructure Development**

Providing Basic infrastructure like approach roads, internal roads, drains, Piped Water Supply & Electrification to the beneficiaries in the relocation site is an integral part of the project. The relocation sites are to be developed into model habitation commensurate with Swachh Bharat Abhiyan, The habitat & infrastructure development planning are being prepared by the Socio Technical Support Agency, Gram Vikas, in consultation with Project Management Unit (PMU), District Project Implementation Unit (DPIU) & line departments. Further, thrust is given for streamlining the infrastructure development at par with the civil construction in all relocation sites. Some of the major accomplishment under infrastructure development are: -.

- More than 2000 Skilled Mason force created, imparting skill based training for uninterrupted civil construction.
- Approx. 72 KMs of internal roads & drainage is under construction.
- 314 Tube wells have been sunk for civil construction & almost 70 Piped
   Water Supply Projects has been commissioned.
- 1106 Substations/Transformers installed in 141 relocation sites & about 5000 households have been provided with electricity connection under BGJY.
- 67 Community centres, 39 AWCs, 9 Mini AWCs, 11 ANM centres & 6
   Schools are under progress in the relocation sites.

# **Resilience Building & Sustenance**

Constructing houses, developing new habitations, ensuring sustainability with dignified living of the primary stakeholder is quite challenging. Under ODRP all the 141 new habitations are on the process to be converted into lively & model villages. However, all possible care has been taken & efforts made to ensure sustenance of the habitation like -

- 11815 houses insured against Multi hazard.
- 71 village Water & Sanitation Committee (VWSC) s registered for operation
   & maintenance of infrastructures in the relocation Sites.
- Approx. 70 KM of Permeable Internal road & drain ensuring enhanced water table recharge.
- 653 trees have been planted for avenue & peripheral plantation
- 75 street theatres & 52 mason training programmes have been organized
- 10 video diaries & 2 Nos. of documentary on ODRP have been developed & circulated

移移移移移