

**Draft Report**  
**Evaluation study of Rehabilitation &  
Reconstruction Process in Post Super  
Cyclone, Orissa**

**To**  
**Planning Commission**  
**SER Division**  
**Government of India**  
**New Delhi**

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## **ACKNOWLEDGEMENT**

At the outset we appreciate the thoughtfulness and the concern of the Adviser SER division Planning Commission Govt. of India, New Delhi for appreciating the proposed research project **“EVALUATION STUDY OF REHABILITATION AND RECONSTRUCTION PROCESS IN POST SUPER CYCLONE, ORISSA.”**

The cooperation and assistance provided by various functionaries like officials of OSDMA and the office of Special Relief Commissioner, Orissa and AWWs of ICDS, Medical Officers and Health Workers of Health Centers / Sub Centers, members of Panchayat Raj Institutions are gratefully acknowledged. We are also grateful to the leaders and functionaries of NGOs, CBOs and Civil Society organisations working in the target districts.

We are indebted to the Adviser SER, Planning Commission and the Deputy Adviser State Planning Orissa for the guidance. We are thankful, to Mr. D. K. Mustafi Deputy Secretary Planning Commission, Mr. B S. Rather Senior Research Officer, and Satish Sharma Assistant.

Mr. N C Dash and Mr. S C Panda helped us in the compilation and analysis of data and report preparation. I gratefully acknowledge their assistance. I extend my heartfelt thanks to the Team Leaders and their teammates, who conducted the study sincerely.

Last but not the least, the cooperation and assistance of the respondents in providing required information is gratefully acknowledged.

**(Subrat Kumar Kundu)**

**STUDY OBJECTIVES****General Objective:**

The study aims at evaluating the degree of success in relief, rehabilitation and reconstruction activities undertaken after the supercyclone and ascertain the achievements and the progress from the perceptions of the affected people.

**Specific Objectives:**

- To evaluate the status of relief, rehabilitation and reconstruction activities undertaken
- To identify the areas of strength and weaknesses in performing the tasks;
- To assess the present condition of the victims of the Super Cyclone and
- To derive lessons for meeting such challenges in future.

**STUDY METHODOLOGY****Collection of Secondary Data**

Data related to relief and rehabilitation plan and its implementation, sources of funding (government, loans, donations etc.,) were collected from the secondary sources.

**Study Area**

The study covered ten districts of Orissa badly affected by the super cyclone of 1999.

## PROFILE OF STUDY AREA

### 1. District: BALASORE

SL. NO.	District	Block	Gp	Village
1	Balasore	Basta	Sadanandapur	Baramadhia
2	Balasore	Basta	Mothini	Basu chokarai
3	Balasore	Balasore sadar	Fuladi	Koharakul
4	Balasore	Remuna	Barunsing	Mella
5	Balasore	Balasore sadar	Odandi	Narasinghpur
6	Balasore	Basta	Olanda saragan	Olanda saragan
7	Balasore	Balasore sadar	Buanl	Parikula
8	Balasore	Basta	Baharda	Punasita
9	Balasore	Remuna	Serogada	Sankhua
10	Balasore	Bahanaga	Panpana	Sarsotia

### 2. District: BHADRAK

SL. NO.	District	Block	Gp	Village
1	Bhadrak	Tihidi	Bhatapada	Bhatapada
2	Bhadrak	Dhamnagar	Dobal	Goudbisi/ nuapada
3	Bhadrak	Chandbali	Chandbali	Kandha
4	Bhadrak	Dhamnagar	Khadipada	Kanjiapali
5	Bhadrak	Dhamnagar	Padhani	Kantapada
6	Bhadrak	Dhamnagar	Sohada	Kantapari
7	Bhadrak	Chandbali	Nalagohira	Karanapokhari
8	Bhadrak	Chandbali	Chadadia	Salendrapalli
9	Bhadrak	Dhamnagar	Karada	Sujansingpur
10	Bhadrak	Dhamnagar	Anandapur	Uttepur

### 3. District: CUTTACK

SL. NO.	District	Block	Gp	Village
1	Cuttack	Nischintakoili	Katikata	Ayanda
2	Cuttack	Mahanga block	Bheda	Bhada-salepur
3	Cuttack	Nuabazar	Dherina	Dharina
4	Cuttack	Cuttack sadar	Jashapada	Jashapada
5	Cuttack	Cuttack sadar	Arilo	Kotuar
6	Cuttack	Nischintakoili	Asuraswarpur	Kulugonasala (koilo)
7	Cuttack	Salepur	Mala sasan	Mala sasan
8	Cuttack	Mahanga	Mauda	Mauda
9	Cuttack	Mahanga	Nurtang	Nurtanga
10	Cuttack	Salepur	Narda	Tunpur

### 4. District: DHENKANAL

SL. NO.	District	Block	Gp	Village
1	Dhenkanal	Sadar	Balidar	Balidar
2	Dhenkanal	Bhuban	Bhusal	Bhusal
3	Dhenkanal	Gondia	Neulapoi	Chandrasekharpur
4	Dhenkanal	Gondia	Deogan	Deogan
5	Dhenkanal	Sadar	Gobindapur	Gobindapur
6	Dhenkanal	Sadar	Kaimati	Kaimati
7	Dhenkanal	Sadar	Nagiapasi	Krushnakumarpur
8	Dhenkanal	Bhuban	Mathakarbala	Locapalli
9	Dhenkanal	Bhuban	G.n.prasad	Samala
10	Dhenkanal	Gondia	Sorisiapada	Sorisiapada



## 5. District: GANJAM

SL. NO.	District	Block	Gp	Village
1	Ganjam	Chatrapur	Agasti nuagaon	Agasti nuagaon
2	Ganjam	Chatrapur	Aryapalli	Aryapalli
3	Ganjam	Rangeilunda	Baxipally	Digipuru
4	Ganjam	Chatrapur	Kalipalli	Haripur
5	Ganjam	Chikiti	Katur	Katur
6	Ganjam	Ganjam	Pallibandha	Pallibandha
7	Ganjam	Rangeilunda	Karapalli	Rangeilunda
8	Ganjam	Chikiti	Sonapur	Sonapur
9	Ganjam	Chikiti	Surala	Surala
10	Ganjam	Ganjam	Ramagad	V. Arunapur

## 6. District: JAGATSingHPUR

SL. NO.	District	Block	Gp	Village
1	Jagatsinghpur	Balikuda	Ambasala	Ambasala
2	Jagatsinghpur	Erasama	Jopa	Dhobai jungle
3	Jagatsinghpur	Erasama	Gada harishpur	Tentulia
4	Jagatsinghpur	Kujanga	Gandipur	Gandipur
5	Jagatsinghpur	Erasama	Garhbisunpur	Garhbisunpur
6	Jagatsinghpur	Kujanga	Gopiakuda	Gopiakuda
7	Jagatsinghpur	Erasama	Ambiki	Kankana – uttarapada
8	Jagatsinghpur	Erasama	Kunjakothi	Kunjakothi
9	Jagatsinghpur	Balikuda	Machha gaon	Machha gaon
10	Jagatsinghpur	Nuagan	Nuagaon	Nuagan balisahi

## 7. District: JAIPUR

SL. NO.	District	Block	Gp	Village
1	Jajpur	Bari	Anyasipur	Anyasipur
2	Jajpur	Binjharpur	Chandramu	Banapur
3	Jajpur	Binjharpur	Bangara	Bangara
4	Jajpur	Dasarathpur	Duttapur	Duttapur
5	Jajpur	Binjharpur	Jari	Jari
6	Jajpur	Dasarathpur	Kayan	Kayan
7	Jajpur	Jajpur	Malanda pur	Malandapur
8	Jajpur	Binjharpur	Ranpur	Ranpur
9	Jajpur	Bari	Sherapur	Srirampur
10	Jajpur	Jajpur	Chainapur	Sundarpur

## 8. District: KENDRAPARA

SL. NO.	District	Block	Gp	Village
1	Kendrapara	Mahakalapara	Alailo	Alailo
2	Kendrapara	Derabish	Kurjanga	Bada mangarajpur
3	Kendrapara	Mahakalapada	Baradanga	Baradanga
4	Kendrapara	Rajnagar	Barhapur	Barhapur
5	Kendrapara	Rajnagar	Brahmansahi	Barhmansahi
6	Kendrapara	Marshaghai	Beruhan	Beruhan
7	Kendrapara	Marshaghai	Mangalpur	Gothakhati
8	Kendrapara	Rajnagar	Kurunti	Kurunti
9	Kendrapara	Marshaghai	Mangarajpur	Madhusudanpur
10	Kendrapara	Marshaghai	Barakandha	Tentulikandha

**9. District: KHURDA**

<b>SL. NO.</b>	<b>District</b>	<b>Block</b>	<b>Gp</b>	<b>Village</b>
1	Khurda	Tangi	Badapokharia	Badapokharia
2	Khurda	Balipatana	Rajasa	Batilo
3	Khurda	Balianta	Bainchuan	Bhelurhata
4	Khurda	Balianta	Bhingarpur	Bhingrapur
5	Khurda	Bhubaneswar sadar	Itipur	Itipur
6	Khurda	Chilika	Jaripada	Jaripada
7	Khurda	Bhubaneswar	Dhauri	Khatuapada
8	Khurda	Balipatana	Rajasa	Rajasa
9	Khurda	Tangi	Rameswar	Rameswar
10	Khurda	Chilika	Chilika	Soran

**10. District: PURI**

<b>SL. NO.</b>	<b>District</b>	<b>Block</b>	<b>Gp</b>	<b>Village</b>
1	Puri	Astaranga	Alasahi	Alasahi
2	Puri	Astaranga	Nagar	Balidia
3	Puri	Astaranga	Nagar	Dakhinapantal
4	Puri	Kakatpur	Kaduanuagaon	Dhanitri
5	Puri	Kakatpur	Kurujanga	Kurujanga (beherasahi)
6	Puri	Kakatpur	Kurujanga	Naranpur
7	Puri	Astaranga	Nagar	Nuakaliakana
8	Puri	Gop	Sorava	Sanakula
9	Puri	Gop	Sorava	Tiruna
10	Puri	Kakatpur	Kaduanuagaon	Upula

## Sampling Design

A Three-stage sampling scheme was adopted where districts, villages and Individual Households were selected as the first, second and third stage of study units.

The first stage of sampling related to selection of districts. Ten districts were selected purposively for the study. The second stage of sampling related to selection of villages. In each district a sample of ten villages selected randomly were taken for the study. The 3<sup>rd</sup> stage of sampling related to selection of households. A fixed 20 Households were randomly selected from each of the selected villages covering different strata of the people in proportionate manner.

The data were collected through close-ended structured questionnaires as follows:

- **Household Schedule**
- **Village Schedule**

The schedules were designed, pre-tested, modified and finally canvassed to collect the necessary data and information.

**Village Schedule:** This was designed to collect data about the loss / damage of public infrastructure and facilities. This was canvassed to the local leaders of the villages in group.

**Household Schedule:** This was canvassed to the head of the selected household. In addition, functionaries of the government agencies and some selected NGOs which have been directly involved in the relief and rehabilitation work from the very beginning and continuing were taken as respondents. Besides, **the qualitative data** on community disaster preparedness were collected by the Research Associates through various techniques as In-Depth Interview, Focus Group Discussion. In-depth Interviews were conducted with village key informants. Focus Group Discussions were held with the community members to assess their awareness, perception, preferences, expectations and attitudes to reconstruction and rehabilitation measures.

## **Team Building**

Ten persons were recruited to form five teams of 2 investigators each, one for each of two districts. Each team comprised one Research Associate (RA) & one Research Investigators (RIs), placed under the overall supervision of the Research Director.

## **Training of Investigators**

The investigators underwent an intensive orientation training of 2 days duration scheduled during 11<sup>th</sup> and 12<sup>th</sup> December 2006. The training covered the topics as project objectives; contents of the questionnaires, data collection techniques, scrutiny & consistency check, coding Procedure etc. The training was followed by a field demonstration and testing of the tools in Balakati Village of Khurda District. The Project Director was the sole trainer on the occasion.

## **Field Survey:**

The field survey was conducted during December 2006 - January 2007.

**Cyclones in Orissa**

Climatically, Orissa falls in the tropical climatic zone. The south-west monsoons and the retreating north-east monsoons preponderantly determine the climatic conditions. Orissa falls in a cyclonic zone. The late monsoon symptoms often cumulate to cyclonic developments in the Bay of Bengal. The wind becomes violent as it moves towards the northwest and lashes the whole of north-east coastal belt of the state. Cyclones in Orissa occurred in 1823, 1831, 1932, 1842, 1948, 1874, 1885, 1887, 1890, 1936, 1942, 1967, 1968, 1971 and 1999. Amongst these, the severity of the Super Cyclone of 29 October, 1999 was most devastating. It affected about 97 blocks, 12 districts, the State capital and Cuttack city, 28 NACs, besides affecting around 125.9 lakh people, and causing devastation in about 1200 kms. The super cyclone claimed as much life and property as 1846 Grampanchayats in the state, 14000 villages/wards and 1650086 households were severely affected.

The Super Cyclone that swept the Orissa coast on 29<sup>th</sup> and 30<sup>th</sup> October 1999 was perhaps one of the most ravaging natural disasters that mankind has experienced in modern times. The death and destruction that it left in its trail was not only an appalling shock to the whole world, but was also a traumatic experience, that will continue to haunt the people of Orissa for generations to come. The super cyclone ravaged the Orissa coast on 29<sup>th</sup> and 30<sup>th</sup>, and devastated 12 districts viz., Jagatsinghpur, Kendrapara, Cuttack, Puri, Khurda, Nayagarh, Jajpur, Bhadrak, Balasore, Mayurbhanj, Keonjhar and Dhenkanal.

Another cyclone which preceded the supercyclone just barely 12 days before had also ravaged the southern districts of Ganjam and Gajapati. While the government was trying to get its act together by reaching relief and initiating measures to restore normalcy in those districts, the supercyclone hit other 12 coastal districts. But for all practical purposes, all the fourteen districts have been considered as cyclone affected and

warranted a comprehensive and integrated relief, reconstruction and rehabilitation package.

The Super Cyclone, unprecedented in its sweep and ferocity, killed 9,885 people. Besides causing destruction on a gigantic scale, the Super Cyclone traumatized millions of people who survived its wrath. Over 15 million people were affected by this Super Cyclone. Houses were destroyed, infrastructure ravaged, environment denuded, livelihoods imperiled and economy shattered.

Saline inundation, with tidal waves rising above 10 metres at many places, left most of the drinking water sources polluted and dysfunctional for days. About 4,45 lakh livestock perished and paddy crops in 13 lakh hectares damaged. There was no house left undamaged in Jagasinghpur and Kendrapara districts. Over 1.6 million homes were damaged or destroyed in the supercyclone. A vast area of green cover, consisting of an estimated 9 million trees, was destroyed.

Thousands of hectares of paddy crop and other arable land were destroyed. Due to salination caused by the tidal wave, much of the agricultural land was rendered infertile. The loss of paddy, sugarcane, vegetables, coconut trees and beetle leaf – all important cash and subsistence crops – caused severe economic difficulties for the population, as well as limiting the availability of food. Water sources including tube wells, open wells and village ponds were contaminated by sea water, and animal and human carcasses.

Many artisans and semi-skilled workers lost their tools and workshops. The fishing industry was badly affected with the loss of boats and nets.

Over 17,000 schools were damaged or destroyed. Many of those which survived were turned into temporary shelters for people who had lost their homes. Most of the school equipment and classroom materials were destroyed in the supercyclone. Many children suffered from trauma and psycho-social conditions.

## **Profile of Damage/Loss**

### **Areas Affected:**

About 13 million people in 97 Blocks, 28 Urban Local Bodies in 12 Districts have been severely affected by the Super Cyclonic Storm.

### **Damage due to Super Cyclonic Storm:**

The damages caused by Super Cyclonic Storm can be broadly classified under three categories:

- Loss of human life and loss of livestock
- Devastation caused to public and private properties including private buildings, public buildings, power supply system, communication system, and water supply system.
- Loss caused to agricultural and plantation crops, dislocation of agricultural operation, impact on the livelihood of farmers, agriculture labourers, village artisans, weavers and fishermen.

### **Loss of Human and Animal Life:**

The Super Cyclonic Storm took a toll of 9,885 human lives out of which 8,119 were from Jagasinghpur district alone.

The death toll of livestock was as follows:

Buffalo	-	13464
Bullock	-	52973
Cow	-	156424
Calf	-	90232
Sheep	-	103127
Goat	-	196212
Pig	-	8945
Poultry Birds	-	1151245



**Damages to Houses:**

Over 16 lakh houses were damaged in the cyclone affected areas.

**Damage to Agriculture**

Standing khariff paddy crops in 13.51 lakh hectares, 2.57 lakh hectares of non paddy crops and horticulture crops in 1.76 lakh hectares in the 12 affected districts were severely damaged due to Super Cyclonic Storm. The total value of loss to the standing Khariff crops and horticulture crops was about Rs. 1733.00 crores. The twelve affected districts had crop loss up to 75% affecting about 15 lakhs families.

**Irrigation:**

Due to Super Cyclonic storm and flood, the head works distribution system of 422 minor irrigation projects in the district of Khurda, Cuttack, Jajpur, Kendrapara, Bhadrak, Balesore, Mayurbhanj, Dhenkanal and Keonjhar were damaged.

5,636 L. I. Points in 12 coastal districts were severely affected and the power supply system, head works and distribution system were damaged.

**Traditional Craft**

The total number of fisherman families affected by the cyclone was 25,889. The total no. of boats of traditional fishermen relating to marine sector including Chilika fully or partially damaged by the cyclone was 9,085. The total number of nets of poor traditional fishermen lost in the cyclone is 22143. Eight hundred fifty houses of poor fishermen were completely damaged. The estimated loss of their dwelling houses was reported to be of the tune of Rs. 2.97 crores.

21,702 weavers belonging to 352 Weavers Co-operative Societies were affected. Their looms, work sheds, dying sheds were severely damaged. The total extent of damage was estimated to be Rs. 31.72 crores.

### **Damage of Public Properties:**

Economic, social and administrative infrastructure suffered unprecedented devastation in the affected districts. Surface communication (including Railways), telecommunication, power supply, water supply and irrigation systems had sustained severe unprecedented damages. Large number of Canal embankments, saline embankments, and river embankments and, rural roads were breached.

### **Rural Roads & Building:**

12,000 Kms of rural roads with the C.D. works had been severely damaged.

### **School and Mass Education:**

A very large number of Upper Primary and High School Buildings were damaged due to Super Cyclonic Storm. In total 3,425 High Schools and 14,901 numbers of Primary and Upper Primary Schools were severely damaged.

### **Peripheral Health Institutions:**

The devastating Super Cyclone caused enormous damage to infrastructural facilities at all levels of the healthcare delivery system. Around 1485 number of peripheral health institutions was damaged, either partially or completely.

### **Trees**

An estimated 90 million trees from the coastal shelter belt plantations, reserve forest blocks, village woodlot plantations, roadside avenues, private and Government lands and village common lands, city plantations, research gardens and zoological parks and sanctuaries were uprooted or damaged. About 95,750 hectares of forest area comprising sal, teak and bamboo forests, village woodlot plantations, mangrove forests and coastal wind-brake plantations had been affected, besides loss of tree cover from the cities and vast rural areas, including about 1500 Kms of roadsides. The entire affected belt was denuded of its green cover.

## **Relief Operation in the Aftermath:**

The government began the urgent task of clearing the roads of debris so that the army, state government and NGOs could deliver relief material by truck to the thousands of affected villages.

With corpses and animal carcasses laying all around and water sources being contaminated, the threat of diarrhoea, dysentery and malarial fever was a constant threat. Several NGOs and the army disposed of corpses and animal carcasses. They were also involved in the distribution of relief materials that included food, fresh drinking water and water purifying tablets, clothes and blankets, polythene rolls, medicine and first aid kits. The army also assisted in setting up community kitchens and rural hospitals, where medical personnel were brought in from national and international NGOs.

The large-scale destitution scenario was made worse by the fact that educational, health, sanitation and drinking water facilities remained devastated or non-functional for months after the cyclone. Children could not go to school for a long time and this added to their trauma. In many areas, saline inundation affected all fresh drinking water sources.

Although the districts in the coastal belt are considered to be some of the most prosperous in Orissa, nonetheless, a large segment of this population was already vulnerable and living below the poverty line before the cyclone hit. The cyclone completely destroyed the economic fabric of this region and the people are yet to return to pre-cyclone status. They were forced to depend on external assistance to get back into the production process.

## **Summary list of damage caused by the supercyclone**

**(As recorded by the office of the Special Relief Commissioner,  
Govt. of Orissa)**

**Table: 2.1**

Number of people affected	13,000,000
Number of districts affected	12
Number of blocks affected	97
Number of municipal areas affected	28
Number of deaths	9,885
Number of injuries	7,505
Number of cattle killed	315,886
Number of small animals killed	316,372
Total number of houses damaged or destroyed	1,650,086
Number of houses washed away	23,129
Number of houses fully destroyed	746,337
Number of houses damaged	880,620
Hectares of paddy crop damaged	1,300,000
Hectares of vegetable land damaged	176,000
Hectares of other crop land damaged	257,000
Number of villages with affected power supply	17,032
Number of high schools damaged	3,425
Number of primary schools damaged	14,901
Number of colleges damaged	66
Number of fishing boats damaged	9,085
Number of trees uprooted	9,000,000

**Source: SRC Report.**

**Table: 2.2****District-wise Details of Damage**

Sl. No.	Name of District	No. of Blocks/ ULBs affected	No. of GPs affected	No. of villages/ wards affected	Total population affected	Total agricultural land affected (hectares)	No. of human casualties	Details of house damage			
								Washed away	Fully collapsed	Partially collapsed	Total
1	Balasore	8/3	155	1748	1226000	138000	49	11180	37485	48125	96790
2	Bhadrak	7/2	166	1356	1347000	179000	98	292	33221	82931	116444
3	Cuttack	14/4	278	1977	2367000	197000	471	0	140626	147193	287819
4	Dhenkanal	8/3	144	766	70000	138000	55	5	7909	54318	62232
5	Jagatsingh pur	8/2	165	1308	1200000	101000	8119	9948	217174	57215	284337
6	Jajpur	10/2	242	1160	1550000	176000	188	0	61895	187998	249893
7	Kendrapara	9/2	205	1567	1400000	136000	469	40	145884	125175	271099
8	Keonjhar	3/1	60	546	250000	125000	31	1164	7393	39698	48255
9	Khurda	8/3	124	1167	1310000	80000	91	0	30000	65540	95540
10	Mayurbhanj	9/2	63	341	198000	221000	10	500	6000	3000	9500
11	Nayagarh	2	40	350	150000	80000	3	0	196	14059	14255
12	Puri	11/4	204	1714	1500000	162000	301	0	58554	55368	113922
	<b>Total</b>	<b>97/28</b>	<b>1,846</b>	<b>14000</b>	<b>12569000</b>	<b>1733000</b>	<b>9885</b>	<b>23129</b>	<b>746337</b>	<b>880620</b>	<b>1650086</b>

**Source: Government of Orissa, White Paper, December 1999**

**STATEMENT SHOWING DAMAGED KHARIFF CROP AREA IN SUPER CYCLONE HIT DISTRICTS**

**Table: 2.3**

<b>Sl. No.</b>	<b>Name of the Districts</b>	<b>Total Khariff area of the Districts</b>	<b>Total Khariff area affected</b>
1	Mayurbhanj	30710.00	12846.00
2	Khurda	19621.00	13723.00
3	Nayagarh (Part)	20492.00	5595.00
4	Puri	294.00	228.00
5	Bhadrak	2172.00	1304.00
6	Balasore	8080.00	7463.00
7	Cuttack	19332.00	14417.00
8	Jajpur	10667.00	6264.00
9	Kendrapara	436.00	375.00
10	Keonjhar	24952.00	11254.00
11	Dhenkanal	19422.00	13355.00
<b>Total</b>		<b>156178.00</b>	<b>86824.00</b>

*Source: Report of the SRC.*

**Repair/Restoration of LIPs damaged due to super cyclone and flood vis-à-vis amount required for different purpose**

**Table: 2.4**

<b>Sl. No.</b>	<b>Name of the Districts</b>	<b>No. of LIPs existing by 6/99.</b>	<b>No. of LIPs affected in the Super Cyclone &amp; Flood</b>	<b>Approx. Rabi potential affected (in thousand hecets.)</b>	<b>Approx. restoration cost (Rs. In Lakhs)</b>
1	Jagatsinghpur	519	353	3.50	211.00
2	Cuttack	777	573	6.00	221.00
3	Kendrapara	1202	1093	12.00	455.00
4	Puri	398	393	5.00	196.00
5	Khurda	271	271	3.80	135.00
6	Jajpur	1268	608	7.40	165.00
7	Balasore	1836	1100	12.50	498.85
8	Bhadrak	756	450	5.00	210.00
9	Mayurbhanj	753	183	2.00	176.15
10	Dhenkanal	377	235	2.80	47.00
11	Nayagarh	243	243	3.30	85.00
12	Keonjhar	746	134	1.60	25.00
	<b>Total</b>	<b>9146</b>	<b>5636</b>	<b>64.90</b>	<b>2425.00</b>

**Source: Report of the SRC, Orissa.**

Much has been done to recuperate from the colossal damage caused by the Super Cyclone, 1999. With more than 5 lakh concrete dwelling units provided, a number of cyclone shelters built, embankments reinforced, 400 agro-service centres set up to support farm-based livelihood, more than 5,000 primary school and 900 high school building constructed, and with emergency communication system strengthened, there is a strong hope and confidence among the distressed who look forward to a brighter tomorrow.

### **Government Response**

#### **Emergent Relief:**

Collectors of all the cyclone affected districts provided emergent relief upto a period of 15 days as per need and free kitchen for 7 days and then for another one week in critically affected areas. The total expenditure on Emergent Relief was estimated to be Rs. 65.00 Crores.

#### **House Building Grant:**

As per preliminary assessment of 15,79,000 houses had been fully or partly collapsed/damaged. As per the provisions of Orissa Relief Code, an amount of Rs. 3,500/-, Rs. 2,000/- and Rs. 1,000/- was sanctioned for fully swept away, fully collapsed and partly collapsed houses respectively.

#### **Exgratia Assistance to the Bereaved Families:**

It had been decided to provide ex-gratia assistance to the next of kin of the deceased @ Rs. 25,000/-. This amount was in addition to the grant of Rs. 50,000 from the Prime Minister's National Relief Fund (for which a total sum of Rs. 37.37 crores had already been received and released to the district Collectors).



### **Rural Drinking Water Supply:**

287 repairing teams and 149 mobile vans had been deployed in the rural areas for repair of tube wells and disinfection of drinking water sources. 39,985 tube wells had been repaired and disinfected. 19 water tankers were deployed (17 in Jagatsinghpur and 2 in Puri district) for supply of drinking water in saline inundation areas. 105 new shallow tube wells were installed to provide drinking water in cyclone/flood affected areas. Out of 121 affected Rural Pipe water supply schemes, 61 had been restored to normalcy.

**Veterinary Measures:** 99333 carcasses were disposed of in 10 districts.

### **Orissa State Disaster Mitigation Authority (OSDMA)**

After the relief phase was over or nearing completion, reconstruction work and the rebuilding of Orissa received top priority. The Orissa State Disaster Mitigation Authority (OSDMA) was initially formed to formulate community-based disaster preparedness (CBDP) for the rehabilitation and reconstruction work in the cyclone and flood affected areas. OSDMA played a key role in coordinating the activities of various line departments, the NGOs and the community for development of a long-term strategic disaster management and preparedness plan. OSDMA has been registered as a society under the Societies Registration Act with the Chief Secretary as the Chairperson and Secretaries of other departments as members.

OSDMA and UNDP worked closely for development of the cyclone devastated areas. It is through the constant attempt of the OSDMA and UN that most of the interventions by NGOs were streamlined. It was through this coordination of the various partners in the development process that the Community Based Disaster Preparedness was initiated.

The following data has been taken from the Special Relief Commissioner, Orissa, and Managing Director, OSDMA in October 2000 regarding the financial needs for the proposed rehabilitation efforts of the state government in the cyclone affected areas. Assistance of Rs. 725.82 Crores was requested from the Government of India for cyclone mitigation measures, as follows:

### Cyclone mitigation measures

**Table: 3.1**

Name of the Department	Amount Required (Rs. In Crores)
Agriculture	10.68
Cooperation	12.80
Fisheries & Animal Resources	23.00
Education	6.38
Commerce & Transport	5.68
Inland Water Transport	0.34
State Port Engineering Organisation	0.05
Energy	100.00
Forest	19.10
Home	4.71
Health	1.20
Housing & Urban Development	40.79
Panchayati Raj	78.81
Rural Development	110.57
Works	80.60
Water Resources	53.76
Textile and Handloom	4.79
Special Relief Organisation	173.10
<b>Total</b>	<b>725.82</b>

### **Distribution of House Building Grant**

20.70 lakh houses were washed away, fully collapsed or partly collapsed. Out of an amount of Rs. 276.58 Crores allotted to the Districts for distribution.

### **Ex-Gratia Grant**

9,885 persons died in the super cyclone. Against the above casualty, 4,557, claimants had been found eligible for payment of ex-gratia. 4,262 applications had been rejected. Against the requirement of Rs. 34.18 crores, Rs. 33.41 crores had been disbursed , accounting for 97.77% of the requirement. An amount of Rs. 21.03 crores (CRF Rs. 1.54 crores and NFCR Rs. 19.49 crores) had been allotted out of CRF/NFCR and an amount of Rs. 38.40 crores had been allotted out of PMNRF for payment of ex-gratia to the bereaved families of deceased persons.

### **Progress of Restoration Works Primary Schools**

11,690 school buildings were taken up for immediate repair with funds from ongoing programmes such as EAS, JGSY. Repair of 9,664 school buildings had been completed.

### **Housing**

About 20 lakh houses had been damaged in the cyclone, out of which 7,75,000 had either been washed away or fully collapsed. Funds had been tied up for the following number of houses.

Indira Awas Yojana	2,00,000 houses
HUDCO Loan	1,75,000 houses
NGOs and donors	5,000 houses
<b>Total</b>	<b>3, 80,000 houses</b>

## **Agriculture**

Kharif crop in over 17 Lakh hectare was affected by the cyclone. A massive Rabi programme was taken up in 12,76 lakh ha to partially compensate the loss. 1,17,048 quintals of subsidized seeds were supplied to the farmers for the Rabi crop. 18,336 quintals of seeds were supplied free of cost under different schemes. Government of India had provided Rs. 1 crore for supply of 66,666 vegetable mini-kits. Free land tilling facility was provided in 4,451 ha. Of land during the Rabi season of 1999-2000. Provision for Rs. 33.10 lakh had been made for free tilling facility during the Kharif season of 2000.

25 lakh coconut trees had been damaged by the cyclone. 9 lakh coconut seedlings had been supplied during the current Kharif season in 2000. 111 tractors and 790 power tillers had been sold to farmers at subsidized rates under different centrally sponsored schemes. The State Cooperative Bank had financed 274 tractors, 86 power tillers and 138 pump sets in the cyclone-affected areas. Also, the OSCB had financed the Rabi crop loan of Rs. 118.38 crores.

## **Dairy**

2,602 quality milch animals had been supplied in the cyclone-affected districts.

## **Fishery**

In the marine sector, 10,037 boats (non-mechanised) and 18,619 nets were lost or completely damaged. The boats in the marine sectors were of different categories with the unit costs ranging from Rs. 13,000 to Rs. 60,000. The total cost for replacing all the boats and nets came to Rs. 51.10 crores. Out of this amount, the beneficiaries were entitled to get Rs.  $(3,000 \times 10,037 =)$  3.01 crores for the lost boats and Rs.  $(1500 \times 18,619 =)$  2.79 crores. This amount of Rs.  $(3.01 + 2.79 =)$  5.80 crores was available with the SRC for distribution as per coal provision. As per the project proposal, DFID

was to provide an assistance of Rs. 43.36 crores and the balance amount of Rs. 2.55 crores was to be contributed by the beneficiaries.

By the year ending March 31, 2002 OSDMA received Rs. 104.53 crore from various sources and utilized Rs. 69.82 crore.

During the year 2002 – 03, OSDMA had received Rs. 76.79 crores from government and other related funds like MPLAD, Chief Minister's Relief Fund, UNDP, CARE India and XIth Finance Commission. Apart from that OSDMA had also received as grant Rs. 16.62 crores from DFID for Cyclone Support Health Project and LIP Rehabilitation Project.

During the year 2003 – 04, OSDMA received an amount of Rs. 890,229,768,00 from various sources. Moreover, an amount of Rs. 555,967,000.00 was received from DFID for the construction of primary schools.

### **NGO Response to Cyclone:**

#### **Restoration of Livelihood**

After meeting the immediate need for food and clothes, NGOs turned their attention to the restoration of livelihood of the affected families. They have made significant contribution to this effort and helped people resume their normal way of life. Since agriculture is the mainstay of the people in the affected areas, NGOs paid attention to the resumption of agricultural activity and related occupations by way of providing seeds, tillage support, tools and implements and irrigation facilities. They also supported raising kitchen gardens, orchards and betel vines. Pisciculture, rearing animals and extending support to artisans were the other areas in which NGO made significant interventions.

## **Contributions of Selected NGOs During Relief and Rehabilitation Phases**

The NGOs relief, reconstruction and rehabilitation activities could be broadly classified into the following categories:

### **I. Relief phase**

- ❖ Running of community kitchen
- ❖ Distribution of relief materials (food, water purification tablets, clothing, plastic sheets and tarpaulins for temporary shelters, medicines)
- ❖ Control of communicable and preventable diseases
- ❖ Disposal of corpses and animal carcasses

### **II. Reconstruction phase**

- ❖ Rebuilding and repairing personal houses, schools, hospitals, multipurpose community centres and other public buildings
- ❖ Running of health clinics
- ❖ Restoring drinking water and sanitation facilities
- ❖ Trauma counseling
- ❖ Livelihood assistance through distribution of seeds and fertilisers for restarting agricultural activities immediately after the cyclone
- ❖ Veterinary aid and animal treatment centres
- ❖ Repair of roads, canals and breached embankments
- ❖ Restoration of ponds and irrigation facilities

### **III. Rehabilitation Phase**

- ❖ Support and construction of individual housing
- ❖ Construction of schools-cum-multipurpose community centres
- ❖ Supply of books and other educational materials
- ❖ Construction of cyclone shelters and community-cum-cyclone shelters
- ❖ Livelihood support

- Agriculture – Land reclamation, soil conservation and leveling, supply of seeds (cereals, vegetables and fruits) and fertilizers, sinking of shallow and deep tubewells for irrigation
- Animal Husbandry – Supply of cattle, poultry birds, goats and pigs, building of livestock shelters, veterinary aid and animal health and treatment
- Fisheries – Supply of boats and nets, training in improved fish processing and preservation techniques.
- Artisans and Weavers – Supply of tools, equipment, looms and working capital.
- Training of people in all occupational sectors for improved production.
- Creation of employment opportunities through Food or Cash for Work in rebuilding infrastructure and starting of local brick kilns for supply to housing programs.
- Microcredit Support – Formation of SHGs and group income generation plans for women and other disadvantaged groups.
- Environment – Plantations in coastal belts; homestead and strip plantations and supply of fruit trees.
- Health and Sanitation – Starting of health clinics; training of local people in control and prevention of common diseases; psychosocial counseling; ensuring supply of safe drinking water; supplementary nutritional programmes; and kitchen gardening and low cost sanitation facilities.
- Programs for Special Interest Groups – Starting of “Mamta Gruha” centres for rehabilitation of orphans; special programmes for widows and elders; housing for high risk groups like women and children; and awareness activities to prevent growth of child labour and exploitation of women and girl children.

- Disaster Preparedness – Training, awareness building and planning for community-based disaster preparedness and plans; supply of radios, restoration and improvement of existing wireless communication systems for early warnings; and construction of additional cyclone shelters.

## **Reconstruction**

### **Cyclone Resistant Houses**

Shelter was an important concern of the people, whose houses had been blown over or razed to the ground in the super cyclone. NGOs paid due attention to the housing needs of the cyclone-hit families. NGOs constructed more than seven thousand cyclone resistant houses. Besides cyclone resistant houses, some of the NGOs have built technically improved traditional houses.

### **Reconstruction of Schools**

NGOs have also played a significant role in the reconstruction of primary and high schools and have reconstructed 107 primary schools.

### **Reconstruction by Public Sector Undertakings**

Some of the Public Sector Undertakings built over 600 cyclone resistant houses.

A number of Public Sector Undertakings came forward to serve the people by reconstructing the damaged primary and high schools with their own funds. 25 primary schools were completed with funds provided by the PSUs. The Public Sector had reconstructed 103 high schools with their own funds. Apart from being centers of learning, both primary and high schools would serve as shelters during emergencies.



### Profile of Study Villages

The study was conducted in 100 villages, 10 in each of 10 selected districts of Orissa, hit by the supercyclone of 1999. Almost all the villages are located in coastal plane. In each selected village, 20 households were selected for the quantitative survey.

As regard to the physiographic and ecological conditions, most of the villages experience moderate rainfall with the drainage system either naturally efficient or marshy.

#### Distribution of Villages by Settlement Pattern

**Table: 4.1**

Sl. No.	Name of the District	Linear	Circular	Cluster	Total
1	BALASORE	0	4	6	10
	%	0.00	40.00	60.00	100.00
2	BHADRAK	1	7	2	10
	%	10.00	70.00	20.00	100.00
3	CUTTACK	3	0	7	10
	%	30.00	0.00	70.00	100.00
4	DHENKANAL	4	1	5	10
	%	40.00	10.00	50.00	100.00
5	GANJAM	3	1	6	10
	%	30.00	10.00	60.00	100.00
6	JAGATSINGHPUR	3	4	3	10
	%	30.00	40.00	30.00	100.00
7	JAJPUR	5	2	3	10
	%	50.00	20.00	30.00	100.00
8	KENDRAPARA	4	0	6	10
	%	40.00	0.00	60.00	100.00
9	KHURDA	9	0	1	10
	%	90.00	0.00	10.00	100.00
10	PURI	5	0	5	10
	%	50.00	0.00	50.00	100.00
	<b>TOTAL</b>	<b>37</b>	<b>19</b>	<b>44</b>	<b>100</b>
	%	37.00	19.00	44.00	100.00

### Distribution of Villages by Drainage

**Table: 4.2**

Sl. No.	Name of the District	Natural efficient	Marshy	Others	Total
1	BALASORE	1	9	0	<b>10</b>
	%	10.00	90.00	0.00	100.00
2	BHADRAK	1	9	0	<b>10</b>
	%	10.00	90.00	0.00	100.00
3	CUTTACK	8	1	1	<b>10</b>
	%	80.00	10.00	10.00	100.00
4	DHENKANAL	10	0	0	<b>10</b>
	%	100.00	0.00	0.00	100.00
5	GANJAM	8	2	0	<b>10</b>
	%	80.00	20.00	0.00	100.00
6	JAGATSINGHPUR	4	6	0	<b>10</b>
	%	40.00	60.00	0.00	100.00
7	JAJPUR	2	8	0	<b>10</b>
	%	20.00	80.00	0.00	100.00
8	KENDRAPARA	1	9	0	<b>10</b>
	%	10.00	90.00	0.00	100.00
9	KHURDA	4	6	0	<b>10</b>
	%	40.00	60.00	0.00	100.00
10	PURI	10	0	0	<b>10</b>
	%	100.00	0.00	0.00	100.00
	<b>TOTAL</b>	<b>49</b>	<b>50</b>	<b>1</b>	<b>100</b>
	%	49.00	50.00	1.00	100.00

## Distribution of Villages by Rainfall

**Table: 4.3**

Sl. No.	Name of the District	Heavy	Moderate	Scanty	Total
1	BALASORE	0	7	3	<b>10</b>
	%	0.00	70.00	30.00	100.00
2	BHADRAK	1	9	0	<b>10</b>
	%	10.00	90.00	0.00	100.00
3	CUTTACK	0	10	0	<b>10</b>
	%	0.00	100.00	0.00	100.00
4	DHENKANAL	0	10	0	<b>10</b>
	%	0.00	100.00	0.00	100.00
5	GANJAM	0	9	1	<b>10</b>
	%	0.00	90.00	10.00	100.00
6	JAGATSINGHPUR	1	9	0	<b>10</b>
	%	10.00	90.00	0.00	100.00
7	JAJPUR	2	8	0	<b>10</b>
	%	20.00	80.00	0.00	100.00
8	KENDRAPARA	0	10	0	<b>10</b>
	%	0.00	100.00	0.00	100.00
9	KHURDA	0	10	0	<b>10</b>
	%	0.00	100.00	0.00	100.00
10	PURI	4	6	0	<b>10</b>
	%	40.00	60.00	0.00	100.00
	<b>TOTAL</b>	<b>8</b>	<b>88</b>	<b>4</b>	<b>100</b>
	%	8.00	88.00	4.00	100.00

### Demographic Pattern

The average population size of the village is arrived at 2300 with 803 female per 1000 male. Over 60% of the village population belongs to the General Castes including Other Backward Classes. The backward Schedule Caste constitutes over 1/3<sup>rd</sup> of the total population. However, the incidence of Schedule Tribe population is insignificant (6%). Over 1/3<sup>rd</sup> of the households (36%) are below the poverty line.

About 62% of the population is in the work force – 18% self employed, 27% helper in the household enterprise and 17% wage employed. The literacy rate is arrived at 80.67%.

## Distribution of Villages by Population Size

**Table: 4.4**

Sl. No.	Name of the District	Male	Female	Total
1	BALASORE	6606	5615	12221
	%	54.05	45.95	100.00
2	BHADRAK	13575	12326	25901
	%	52.41	47.59	100.00
3	CUTTACK	8671	6690	15361
	%	56.45	43.55	100.00
4	DHENKANAL	14179	10754	24933
	%	56.87	43.13	100.00
5	GANJAM	18377	16983	35360
	%	51.97	48.03	100.00
6	JAGATSINGHPUR	13625	10484	24109
	%	56.51	43.49	100.00
7	JAJPUR	17650	11800	29450
	%	59.93	40.07	100.00
8	KENDRAPARA	8595	5210	13805
	%	62.26	37.74	100.00
9	KHURDA	23675	20141	43816
	%	54.03	45.97	100.00
10	PURI	2769	2598	5367
	%	51.59	48.41	100.00
	<b>TOTAL</b>	<b>127722</b>	<b>102601</b>	<b>230323</b>
	%	55.45	44.55	100.00

## Distribution of Villages by Caste Group

**Table: 4.5**

Sl. No.	Name of the District	SC	ST	OBC	Total
1	BALASORE	700	362	988	<b>2050</b>
	%	34.15	17.66	48.20	100.00
2	BHADRAK	1571	315	2247	<b>4133</b>
	%	38.01	7.62	54.37	100.00
3	CUTTACK	491	75	600	<b>1166</b>
	%	42.11	6.43	51.46	100.00
4	DHENKANAL	1312	1550	4386	<b>7248</b>
	%	18.10	21.39	60.51	100.00
5	GANJAM	2091	200	4237	<b>6528</b>
	%	32.03	3.06	64.91	100.00
6	JAGATSINGHPUR	1834	3	2387	<b>4224</b>
	%	43.42	0.07	56.51	100.00
7	JAJPUR	2382	26	2673	<b>5081</b>
	%	46.88	0.51	52.61	100.00
8	KENDRAPARA	484	0	1713	<b>2197</b>
	%	22.03	0.00	77.97	100.00
9	KHURDA	3381	171	6848	<b>10400</b>
	%	32.51	1.64	65.85	100.00
10	PURI	605	2	352	<b>959</b>
	%	63.09	0.21	36.70	100.00
	<b>TOTAL</b>	<b>14851</b>	<b>2704</b>	<b>26431</b>	<b>43986</b>
	%	33.76	6.15	60.09	100.00

## Distribution of Population by Current Activity Status

**Table: 4.6**

Sl. No.	Name of the District	Self employed	Helper in HH	Wage employed	Attending sch/coll	Too old/young to work	Total
1	BALASORE	281	128	286	124	77	<b>896</b>
	%	31.36	14.29	31.92	13.84	8.59	<b>100.00</b>
2	BHADRAK	224	148	178	164	125	<b>839</b>
	%	26.70	17.64	21.22	19.55	14.90	<b>100.00</b>
3	CUTTACK	191	343	131	263	34	<b>962</b>
	%	19.85	35.65	13.62	27.34	3.53	<b>100.00</b>
4	DHENKANAL	108	361	168	237	72	<b>946</b>
	%	11.42	38.16	17.76	25.05	7.61	<b>100.00</b>
5	GANJAM	183	178	294	179	121	<b>955</b>
	%	19.16	18.64	30.79	18.74	12.67	<b>100.00</b>
6	JAGATSINGHPUR	349	471	317	449	376	<b>1962</b>
	%	17.79	24.01	16.16	22.88	19.16	<b>100.00</b>
7	JAJPUR	93	371	117	304	161	<b>1046</b>
	%	8.89	35.47	11.19	29.06	15.39	<b>100.00</b>
8	KENDRAPARA	127	344	97	330	224	<b>1122</b>
	%	11.32	30.66	8.65	29.41	19.96	<b>100.00</b>
9	KHURDA	276	304	90	266	128	<b>1064</b>
	%	25.94	28.57	8.46	25.00	12.03	<b>100.00</b>
10	PURI	87	259	149	250	155	<b>900</b>
	%	9.67	28.78	16.56	27.78	17.22	<b>100.00</b>
	<b>Total</b>	<b>1919</b>	<b>2907</b>	<b>1827</b>	<b>2566</b>	<b>1473</b>	<b>10692</b>
	%	17.95	27.19	17.09	24.00	13.78	<b>100.00</b>

## Distribution of Population by Education Status

**Table: 4.7**

Sl. No.	Name of the District	Illiterate	Literate	Primary	Middle	Secondary	Plus two	Graduation	Techn.	Others	Total
1	BALASORE	112	170	223	169	121	47	9	0	45	<b>896</b>
	%	12.50	18.97	24.89	18.86	13.50	5.25	1.00	0.00	5.02	<b>100.00</b>
2	BHADRAK	165	123	231	196	72	22	4	2	24	<b>839</b>
	%	19.67	14.66	27.53	23.36	8.58	2.62	0.48	0.24	2.86	<b>100.00</b>
3	CUTTACK	108	214	151	206	158	57	33	0	35	<b>962</b>
	%	11.23	22.25	15.70	21.41	16.42	5.93	3.43	0.00	3.64	<b>100.00</b>
4	DHENKANAL	101	146	215	220	145	56	30	0	33	<b>946</b>
	%	10.68	15.43	22.73	23.26	15.33	5.92	3.17	0.00	3.49	<b>100.00</b>
5	GANJAM	345	155	172	117	102	34	14	2	14	<b>955</b>
	%	36.13	16.23	18.01	12.25	10.68	3.56	1.47	0.21	1.47	<b>100.00</b>
6	JAGATSINGHPUR	599	740	187	193	122	38	14	2	67	<b>1962</b>
	%	30.53	37.72	9.53	9.84	6.22	1.94	0.71	0.10	3.41	<b>100.00</b>
7	JAJPUR	225	45	220	212	190	49	29	9	67	<b>1046</b>
	%	21.51	4.30	21.03	20.27	18.16	4.68	2.77	0.86	6.41	<b>100.00</b>
8	KENDRAPARA	198	38	276	248	224	33	34	4	77	<b>1132</b>
	%	17.49	3.36	24.38	21.91	19.79	2.92	3.00	0.35	6.80	<b>100.00</b>
9	KHURDA	93	180	184	198	240	49	69	5	46	<b>1064</b>
	%	8.74	16.92	17.29	18.61	22.56	4.61	6.48	0.47	4.32	<b>100.00</b>
10	PURI	174	38	266	111	208	30	12	1	60	<b>900</b>
	%	19.33	4.22	29.56	12.33	23.11	3.33	1.33	0.11	6.67	<b>100.00</b>
	<b>Total</b>	<b>2120</b>	<b>1849</b>	<b>2125</b>	<b>1870</b>	<b>1582</b>	<b>415</b>	<b>248</b>	<b>25</b>	<b>468</b>	<b>10702</b>
	%	19.81	17.28	19.86	17.47	14.78	3.88	2.32	0.23	4.37	<b>100.00</b>

## Distribution of Villages by BPL/APL Status of Households

**Table: 4.8**

Sl. No.	Name of the District	APL	BPL	Total
1	BALASORE	934	913	1847
	%	50.57	49.43	100.00
2	BHADRAK	1621	1813	3434
	%	47.20	52.80	100.00
3	CUTTACK	1711	1095	2806
	%	60.98	39.02	100.00
4	DHENKANAL	1450	1021	2471
	%	58.68	41.32	100.00
5	GANJAM	3417	1643	5060
	%	67.53	32.47	100.00
6	JAGATSINGHPUR	1762	2062	3824
	%	46.08	53.92	100.00
7	JAJPUR	1865	3210	5075
	%	36.75	63.25	100.00
8	KENDRAPARA	900	1147	2047
	%	43.97	56.03	100.00
9	KHURDA	2385	2272	4657
	%	51.21	48.79	100.00
10	PURI	160	645	805
	%	19.88	80.12	100.00
	<b>Total</b>	<b>16205</b>	<b>15821</b>	<b>32026</b>
	%	50.60	49.40	100.00

### Loss of Human Life

Loss of human life is reported in all the study districts. The highest 2558 out of 2673 (95.7%) is reported from Jagatsinghpur district followed by Kendrapara and Puri as per the village survey. In conformity with the district scenario, 165 out of 213 deaths are reported by the study households in the Jagatsinghpur district followed by Kendrapara (18).

Exgratia has been disbursed for a little above 1/3<sup>rd</sup> (34.23%) of the deceased as reported at the village level. In contrast, the household level survey revealed that in over 90% of the cases the exgratia has been received. The discrepancy in figure is attributed to the deaths after the super cyclone which was not eligible for exgratia.



## Distribution of Villages by Loss of Human Life

**Table: 4.9**

Sl. No.	Name of the District	Below 15		15 - 30		30 - 45		45 - 60		Above 60		Total	
		M	F	M	F	M	F	M	F	M	F	M	F
1	BALASORE	0	0	0	2	0	0	2	1	0	0	2	3
	%	0.00	0.00	0.00	66.67	0.00	0.00	100.00	33.33	0.00	0.00	100.00	100.00
2	BHADRAK	0	0	0	1	2	0	3	0	0	0	5	1
	%	0.00	0.00	0.00	100.00	40.00	0.00	60.00	0.00	0.00	0.00	100.00	100.00
3	CUTTACK	2	0	0	0	1	0	1	0	5	2	9	2
	%	22.22	0.00	0.00	0.00	11.11	0.00	11.11	0.00	55.56	100.00	100.00	100.00
4	DHENKANAL	0	0	0	0	0	4	0	0	0	0	0	4
	%	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	100.00
5	GANJAM	0	1	7	1	1	0	1	0	0	0	9	2
	%	0.00	50.00	77.78	50.00	11.11	0.00	11.11	0.00	0.00	0.00	100.00	100.00
6	JAGATSINGHPUR	188	202	242	111	233	189	589	561	142	101	1394	1164
	%	13.49	17.35	17.36	9.54	16.71	16.24	42.25	48.20	10.19	8.68	100.00	100.00
7	JAJPUR	1	1	2	0	0	0	3	0	2	0	8	1
	%	12.50	100.00	25.00	0.00	0.00	0.00	37.50	0.00	25.00	0.00	100.00	100.00
8	KENDRAPARA	5	6	4	6	6	1	2	2	1	6	18	21
	%	27.78	28.57	22.22	28.57	33.33	4.76	11.11	9.52	5.56	28.57	100.00	100.00
9	KHURDA	0	0	0	0	0	0	0	0	0	1	0	1
	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00
10	PURI	0	0	4	1	18	4	0	2	0	0	22	7
	%	0.00	0.00	18.18	14.29	81.82	57.14	0.00	28.57	0.00	0.00	100.00	100.00
	<b>Total</b>	<b>196</b>	<b>210</b>	<b>259</b>	<b>122</b>	<b>261</b>	<b>198</b>	<b>601</b>	<b>566</b>	<b>150</b>	<b>110</b>	<b>1467</b>	<b>1206</b>
	%	13.36	17.41	17.66	10.12	17.79	16.42	40.97	46.93	10.22	9.12	100.00	100.00

## Distribution of Household by Loss of Human Life by Age

**Table: 4.10**

Sl. No.	Name of the District	0 To 6	7 To 14	15 To 30	31 To 45	46 To 60	Above 60	Total
1	BALASORE	0	0	1	0	0	1	2
	%	0.00	0.00	50.00	0.00	0.00	50.00	100.00
2	BHADRAK	0	0	1	2	0	0	3
	%	0.00	0.00	33.33	66.67	0.00	0.00	100.00
3	CUTTACK	0	1	0	1	1	6	9
	%	0.00	11.11	0.00	11.11	11.11	66.67	100.00
4	DHENKANAL	0	0	0	1	2	0	3
	%	0.00	0.00	0.00	33.33	66.67	0.00	100.00
5	GANJAM	0	0	0	0	1	3	4
	%	0.00	0.00	0.00	0.00	25.00	75.00	100.00
6	JAGATSINGHPUR	14	30	31	36	45	9	165
	%	8.48	18.18	18.79	21.82	27.27	5.45	100.00
7	JAJPUR	2	0	1	0	0	0	3
	%	66.67	0.00	33.33	0.00	0.00	0.00	100.00
8	KENDRAPARA	2	2	5	3	1	5	18
	%	11.11	11.11	27.78	16.67	5.56	27.78	100.00
9	KHURDA	1	0	0	1	1	2	5
	%	20.00	0.00	0.00	20.00	20.00	40.00	100.00
10	PURI	0	0	0	1	0	0	1
	%	0.00	0.00	0.00	100.00	0.00	0.00	100.00
	<b>Total</b>	<b>19</b>	<b>33</b>	<b>39</b>	<b>45</b>	<b>51</b>	<b>26</b>	<b>213</b>
	%	8.92	15.49	18.31	21.13	23.94	12.21	100.00

## Distribution of Households by Loss of Human Life by Sex

**Table: 4.11**

Sl. No.	Name of the District	Male	Female	Self-empld.
1	BALASORE	1	1	2
	%	50.00	50.00	100.00
2	BHADRAK	2	1	3
	%	66.67	33.33	100.00
3	CUTTACK	5	4	9
	%	55.56	44.44	100.00
4	DHENKANAL	0	3	3
	%	0.00	100.00	100.00
5	GANJAM	4	0	4
	%	100.00	0.00	100.00
6	JAGATSINGHPUR	92	73	165
	%	55.76	44.24	100.00
7	JAJPUR	2	1	3
	%	66.67	33.33	100.00
8	KENDRAPARA	7	11	18
	%	38.89	61.11	100.00
9	KHURDA	1	4	5
	%	20.00	80.00	100.00
10	PURI	1	0	1
	%	100.00	0.00	100.00
	<b>Total</b>	<b>115</b>	<b>98</b>	<b>213</b>
	%	53.99	46.01	100.00

## Distribution of Villages Exgratia Received

**Table: 4.12**

Sl. No.	Name of the District	Total No. of Human Life Lost	Family Received Exgratia	
			Yes	No
1	BALASORE	5	4	1
	%	100.00	80.00	20.00
2	BHADRAK	6	1	5
	%	100.00	16.67	83.33
3	CUTTACK	11	7	4
	%	100.00	63.64	36.36
4	DHENKANAL	4	0	4
	%	100.00	0.00	100.00
5	GANJAM	11	7	4
	%	100.00	63.64	36.36
6	JAGATSINGHPUR	2558	830	1728
	%	100.00	32.45	67.55
7	JAJPUR	9	3	6
	%	100.00	33.33	66.67
8	KENDRAPARA	39	37	2
	%	100.00	94.87	5.13
9	KHURDA	1	1	0
	%	100.00	100.00	0.00
10	PURI	29	25	4
	%	100.00	86.21	13.79
	<b>Total</b>	<b>2673</b>	<b>915</b>	<b>1758</b>
	%	100.00	34.23	65.77

## Distribution of Households by Source of Exgratia Receive

Table: 4.13

Sl. No.	Name of the District	Govt.	NGO	Not Received	Total
1	BALASORE	2	0	0	2
	%	100.00	0.00	0.00	100.00
2	BHADRAK	1	0	2	3
	%	33.33	0.00	66.67	100.00
3	CUTTACK	4	0	5	9
	%	44.44	0.00	55.56	100.00
4	DHENKANAL	2	0	1	3
	%	66.67	0.00	33.33	100.00
5	GANJAM	3	0	1	4
	%	75.00	0.00	25.00	100.00
6	JAGATSINGHPUR	162	0	3	165
	%	98.18	0.00	1.82	100.00
7	JAJPUR	2	0	1	3
	%	66.67	0.00	33.33	100.00
8	KENDRAPARA	13	0	5	18
	%	72.22	0.00	27.78	100.00
9	KHURDA	2	0	3	5
	%	40.00	0.00	60.00	100.00
10	PURI	1	0	0	1
	%	100.00	0.00	0.00	100.00
	<b>Total</b>	<b>192</b>	<b>0</b>	<b>21</b>	<b>213</b>
	%	90.14	0	9.86	100

### Loss of Livestock

Apart from loss of human life, loss of livestock like cattle, goat, sheep, pig etc. is reported in all the districts. The village survey in the study villages reported the death of bullocks, cows, and buffaloes as arrived at 7564, 6986 and 8555 respectively. Over 50% of the deaths of buffalo, 47% of bullocks and 31% of cow populations are reported in Jagatsinghpur district alone. As per the household survey the largest number of death of livestock is reported among the goats (2743) followed cows (1121). The incidence of deaths among bullocks (691) and sheep (531) is quite significant.

Over half of the households surveyed reported the loss value of livestock less than Rs. 1000. Nearly 1/5<sup>th</sup> of the households reported loss valued over Rs. 5000.

### Distribution of Villages by Loss of Livestock

**Table: 4.14**

Sl. No.	Name of the District	Bullock	Cow	Buffalo	Goat	Sheep	Pig	Total
1	BALASORE	95	39	0	177	0	23	<b>334</b>
	%	1.26	0.56	0.00	1.28	0.00	3.65	0.91
2	BHADRAK	425	191	2	785	0	22	<b>1425</b>
	%	5.62	2.73	0.23	5.66	0.00	3.49	3.87
3	CUTTACK	1605	1442	0	2130	2990	0	<b>8167</b>
	%	21.22	20.64	0.00	15.35	43.13	0.00	22.17
4	DHENKANAL	66	392	0	760	640	0	<b>1858</b>
	%	0.87	5.61	0.00	5.48	9.23	0.00	5.04
5	GANJAM	208	390	10	750	560	0	<b>1918</b>
	%	2.75	5.58	1.17	5.41	8.08	0.00	5.21
6	JAGATSINGHPUR	3605	2195	432	1500	298	380	<b>8410</b>
	%	47.66	31.42	50.53	10.81	4.30	60.32	22.83
7	JAJPUR	232	246	52	1172	269	30	<b>2001</b>
	%	3.07	3.52	6.08	8.45	3.88	4.76	5.43
8	KENDRAPARA	326	406	281	4306	863	80	<b>6262</b>
	%	4.31	5.81	32.87	31.03	12.45	12.70	17.00
9	KHURDA	917	1403	78	1359	1048	95	<b>4900</b>
	%	12.12	20.08	9.12	9.79	15.12	15.08	13.30
10	PURI	85	282	0	936	265	0	<b>1568</b>
	%	1.12	4.04	0.00	6.75	3.82	0.00	4.26
	<b>Total</b>	<b>7564</b>	<b>6986</b>	<b>855</b>	<b>13875</b>	<b>6933</b>	<b>630</b>	<b>36843</b>

## Distribution of Households by Loss of Livestock

**Table: 4.15**

Sl. No.	Name of the District	Bullock	Cow	Buffalo	Goat	Sheep	Pig	Total
1	BALASORE	55	35	0	227	1	57	<b>375</b>
	%	7.96	3.12	0.00	8.28	0.19	57.58	5.61
2	BHADRAK	127	115	2	302	0	23	<b>569</b>
	%	18.38	10.26	3.51	11.01	0.00	23.23	8.42
3	CUTTACK	25	60	4	128	109	0	<b>326</b>
	%	3.62	5.35	7.02	4.67	20.53	0.00	6.38
4	DHENKANAL	45	114	0	364	20	2	<b>545</b>
	%	6.51	10.17	0.00	13.27	3.77	2.02	9.11
5	GANJAM	53	239	5	372	117	0	<b>786</b>
	%	7.67	21.32	8.77	13.56	22.03	0.00	11.43
6	JAGATSINGHPUR	227	217	0	276	34	0	<b>754</b>
	%	32.85	19.36	0.00	10.06	6.40	0.00	14.10
7	JAJPUR	35	82	0	358	4	0	<b>479</b>
	%	5.07	7.31	0.00	13.05	0.75	0.00	12.44
8	KENDRAPARA	76	96	46	344	112	0	<b>674</b>
	%	11.00	8.56	80.70	12.54	21.09	0.00	15.21
9	KHURDA	24	81	0	141	81	17	<b>344</b>
	%	3.47	7.23	0.00	5.14	15.25	17.17	7.44
10	PURI	24	82	0	231	53	0	<b>390</b>
	%	3.47	7.31	0.00	8.42	9.98	0.00	9.86
	<b>Total</b>	<b>691</b>	<b>1121</b>	<b>57</b>	<b>2743</b>	<b>531</b>	<b>99</b>	<b>5242</b>
	%	100.00	100.00	100.00	100.00	100.00	100.00	100.00

## Distribution of Households by Loss of Livestock In Value

Table: 4.16

Sl. No.	Name of the District	< 1000	1000 - 2500	2500 - 5000	> 5000	Total
1	BALASORE	134	24	18	24	200
	%	67.00	12.00	9.00	12.00	<b>100.00</b>
2	BHADRAK	81	32	43	44	200
	%	40.50	16.00	21.50	22.00	<b>100.00</b>
3	CUTTACK	142	34	14	10	200
	%	71.00	17.00	7.00	5.00	<b>100.00</b>
4	DHENKANAL	133	29	26	12	200
	%	66.50	14.50	13.00	6.00	<b>100.00</b>
5	GANJAM	100	27	28	45	200
	%	50.00	13.50	14.00	22.50	<b>100.00</b>
6	JAGATSINGHPUR	31	12	40	117	200
	%	15.50	6.00	20.00	58.50	<b>100.00</b>
7	JAJPUR	80	43	42	35	200
	%	40.00	21.50	21.00	17.50	<b>100.00</b>
8	KENDRAPARA	83	25	37	55	200
	%	41.50	12.50	18.50	27.50	<b>100.00</b>
9	KHURDA	133	25	21	21	200
	%	66.50	12.50	10.50	10.50	<b>100.00</b>
10	PURI	124	18	35	23	200
	%	62.00	9.00	17.50	11.50	<b>100.00</b>
	<b>Total</b>	<b>1041</b>	<b>269</b>	<b>304</b>	<b>386</b>	<b>2000</b>
	%	52.05	13.45	15.20	19.30	<b>100.00</b>

### Loss/Damage of Houses

Over 35000 houses are reported damaged in the selected study villages, nearly 2/3<sup>rd</sup> being completely damaged and the remaining one- third partially. The non-residential houses are also reported damaged in all the study villages, over 50% of them being completely damaged.

As per the household survey over 98% of the households reported loss/damage of the houses. Of the houses damaged , over 86% houses are reportedly Kutcha, 10% Semi-



Pucca and 4% Pucca. Over 70% of the households reported damage of the cow-sheds. About 90% of the households reportedly received compensation for the loss/damage of the dwelling houses. The compensation for loss/damage of cow sheds is found received by less than 1% of the households.

### Distribution of Villages by Lost/Damaged of Residential Houses

Table: 4.17

Sl. No.	Name of the District	Complete Damaged	Partially Damaged	Total
1	BALASORE	1374	516	1890
	%	72.70	27.30	100.00
2	BHADRAK	1102	1223	2325
	%	47.40	52.60	100.00
3	CUTTACK	1712	1377	3089
	%	55.42	44.58	100.00
4	DHENKANAL	1381	207	1588
	%	86.96	13.04	100.00
5	GANJAM	2058	1257	3315
	%	62.08	37.92	100.00
6	JAGATSINGHPUR	3616	189	3805
	%	95.03	4.97	100.00
7	JAJPUR	1343	1842	3185
	%	42.17	57.83	100.00
8	KENDRAPARA	2624	423	3047
	%	86.12	13.88	100.00
9	KHURDA	5569	5051	10620
	%	52.44	47.56	100.00
10	PURI	2002	214	2216
	%	90.34	9.66	100.00
	<b>Total</b>	<b>22781</b>	<b>12299</b>	<b>35080</b>
	%	64.94	35.06	100.00

## Distribution of Villages by Loss of Non-Residential building

**Table: 4.18**

Sl. No.	Name of the District	Complete Damaged	Partially Damaged	Total
1	BALASORE	8	16	<b>24</b>
	%	33.33	66.67	<b>100.00</b>
2	BHADRAK	7	12	<b>19</b>
	%	36.84	63.16	<b>100.00</b>
3	CUTTACK	50	9	<b>59</b>
	%	84.75	15.25	<b>100.00</b>
4	DHENKANAL	14	22	<b>36</b>
	%	38.89	61.11	<b>100.00</b>
5	GANJAM	47	64	<b>111</b>
	%	42.34	57.66	<b>100.00</b>
6	JAGATSINGHPUR	18	22	<b>40</b>
	%	45.00	55.00	<b>100.00</b>
7	JAJPUR	19	22	<b>41</b>
	%	46.34	53.66	<b>100.00</b>
8	KENDRAPARA	18	4	<b>22</b>
	%	81.82	18.18	<b>100.00</b>
9	KHURDA	27	14	<b>41</b>
	%	65.85	34.15	<b>100.00</b>
10	PURI	4	0	<b>4</b>
	%	100.00	0.00	<b>100.00</b>
	<b>Total</b>	<b>212</b>	<b>185</b>	<b>397</b>
	%	53.40	46.60	<b>100.00</b>

## Distribution of Households by Loss/Damage of Houses

Table: 4.19

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	195	5	200
	%	97.50	2.50	100.00
2	BHADRAK	193	7	200
	%	96.50	3.50	100.00
3	CUTTACK	199	1	200
	%	99.50	0.50	100.00
4	DHENKANAL	199	1	200
	%	99.50	0.50	100.00
5	GANJAM	194	6	200
	%	97.00	3.00	100.00
6	JAGATSINGHPUR	199	1	200
	%	99.50	0.50	100.00
7	JAJPUR	199	1	200
	%	99.50	0.50	100.00
8	KENDRAPARA	190	10	200
	%	95.00	5.00	100.00
9	KHURDA	196	4	200
	%	98.00	2.00	100.00
10	PURI	198	2	200
	%	99.00	1.00	100.00
	<b>Total</b>	<b>1962</b>	<b>38</b>	<b>2000</b>
	%	98.10	1.90	100.00

## Distribution of Residential Houses Damaged by Structure

Table: 4.20

Sl. No.	Name of the District	Pucca	Semi-pucca	Kuchcha	Total
1	BALASORE	13	40	147	<b>200</b>
	%	6.50	20.00	73.50	<b>100.00</b>
2	BHADRAK	18	46	136	<b>200</b>
	%	9.00	23.00	68.00	<b>100.00</b>
3	CUTTACK	2	7	191	<b>200</b>
	%	1.00	3.50	95.50	<b>100.00</b>
4	DHENKANAL	0	3	197	<b>200</b>
	%	0.00	1.50	98.50	<b>100.00</b>
5	GANJAM	34	40	126	<b>200</b>
	%	17.00	20.00	63.00	<b>100.00</b>
6	JAGATSINGHPUR	1	10	189	<b>200</b>
	%	0.50	5.00	94.50	<b>100.00</b>
7	JAJPUR	0	1	199	<b>200</b>
	%	0.00	0.50	99.50	<b>100.00</b>
8	KENDRAPARA	2	3	195	<b>200</b>
	%	1.00	1.50	97.50	<b>100.00</b>
9	KHURDA	2	30	168	<b>200</b>
	%	1.00	15.00	84.00	<b>100.00</b>
10	PURI	0	20	180	<b>200</b>
	%	0.00	10.00	90.00	<b>100.00</b>
	<b>Total</b>	<b>72</b>	<b>200</b>	<b>1728</b>	<b>2000</b>
	%	3.60	10.00	86.40	<b>100.00</b>

## Distribution of Households by Loss/Damage of Cow Sheds

Table: 4.21

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	77	123	<b>200</b>
	%	38.50	61.50	<b>100.00</b>
2	BHADRAK	97	103	<b>200</b>
	%	48.50	51.50	<b>100.00</b>
3	CUTTACK	95	105	<b>200</b>
	%	47.50	52.50	<b>100.00</b>
4	DHENKANAL	99	101	<b>200</b>
	%	49.50	50.50	<b>100.00</b>
5	GANJAM	89	111	<b>200</b>
	%	44.50	55.50	<b>100.00</b>
6	JAGATSINGHPUR	127	73	<b>200</b>
	%	63.50	36.50	<b>100.00</b>
7	JAJPUR	164	36	<b>200</b>
	%	82.00	18.00	<b>100.00</b>
8	KENDRAPARA	170	30	<b>200</b>
	%	85.00	15.00	<b>100.00</b>
9	KHURDA	139	61	<b>200</b>
	%	69.50	30.50	<b>100.00</b>
10	PURI	143	57	<b>200</b>
	%	71.50	28.50	<b>100.00</b>
	<b>Total</b>	<b>1200</b>	<b>800</b>	<b>2000</b>
	%	60.00	40.00	<b>100.00</b>

## Distribution of Households by Compensation Received for Houses

Table: 4.22

Sl. No.	Name of the District	Dwelling house			Cow shed		
		Yes	No	Total	Yes	No	Total
1	BALASORE	184	16	200	0	200	200
	%	10.31	7.41	100.00	0.00	10.02	100.00
2	BHADRAK	187	13	200	0	200	200
	%	10.48	6.02	100.00	0.00	10.02	100.00
3	CUTTACK	182	18	200	0	200	200
	%	10.20	8.33	100.00	0.00	10.02	100.00
4	DHENKANAL	150	50	200	0	200	200
	%	8.41	23.15	100.00	0.00	10.02	100.00
5	GANJAM	182	18	200	0	200	200
	%	10.20	8.33	100.00	0.00	10.02	100.00
6	JAGATSINGHPUR	196	4	200	0	200	200
	%	10.99	1.85	100.00	0.00	10.02	100.00
7	JAJPUR	166	34	200	0	200	200
	%	9.30	15.74	100.00	0.00	10.02	100.00
8	KENDRAPARA	177	23	200	3	197	200
	%	9.92	10.65	100.00	75.00	9.87	100.00
9	KHURDA	186	14	200	0	200	200
	%	10.43	6.48	100.00	0.00	10.02	100.00
10	PURI	174	26	200	1	199	200
	%	9.75	12.04	100.00	25.00	9.97	100.00
	<b>Total</b>	<b>1784</b>	<b>216</b>	<b>2000</b>	<b>4</b>	<b>1996</b>	<b>2000</b>
	%	<b>89.20</b>	<b>10.80</b>	<b>100.00</b>	<b>0.20</b>	<b>99.80</b>	<b>100.00</b>

### Damage of Land

Land is reported damaged in all the study districts, predominantly in Jagatsinghpur, followed by Bhadrak district. As high as 78% of the households surveyed reported damage of non-irrigated land of less than one acre. Damage of irrigated land less than one acre is reported by about 86% of the households.

## Distribution of Villages by Land Damage (In Acres)

**Table: 4.23**

Sl. No.	Name of the District	Irrigated	Non-irrigated	Total
1	BALASORE	715	3480	<b>4195</b>
	%	3.57	17.22	10.42
2	BHADRAK	4150	2170	<b>6320</b>
	%	20.69	10.74	15.70
3	CUTTACK	1465	285	<b>1750</b>
	%	7.30	1.41	4.35
4	DHENKANAL	1917	400	<b>2317</b>
	%	9.56	1.98	5.75
5	GANJAM	75	1555	<b>1630</b>
	%	0.37	7.70	4.05
6	JAGATSINGHPUR	4073	5110	<b>9183</b>
	%	20.31	25.29	22.81
7	JAJPUR	2450	2775	<b>5225</b>
	%	12.22	13.73	12.98
8	KENDRAPARA	2691	2915	<b>5606</b>
	%	13.42	14.43	13.92
9	KHURDA	1930	1129	<b>3059</b>
	%	9.62	5.59	7.60
10	PURI	590	387	<b>977</b>
	%	2.94	1.92	2.43
	<b>Total</b>	<b>20056</b>	<b>20206</b>	<b>40262</b>
	%	100.00	100.00	100.00

## Distribution of Households by Damage of Non-Irrigated Land

**Table: 4.24**

Sl. No.	Name of the District	<=1	>1<=2	>2<=3	>3	Total
1	BALASORE	134	48	16	2	<b>200</b>
	%	67.00	24.00	8.00	1.00	<b>100.00</b>
2	BHADRAK	122	49	25	4	<b>200</b>
	%	61.00	24.50	12.50	2.00	<b>100.00</b>
3	CUTTACK	196	4	0	0	<b>200</b>
	%	98.00	2.00	0.00	0.00	<b>100.00</b>
4	DHENKANAL	199	0	1	0	<b>200</b>
	%	99.50	0.00	0.50	0.00	<b>100.00</b>
5	GANJAM	143	30	10	17	<b>200</b>
	%	71.50	15.00	5.00	8.50	<b>100.00</b>
6	JAGATSINGHPUR	141	39	18	2	<b>200</b>
	%	70.50	19.50	9.00	1.00	<b>100.00</b>
7	JAJPUR	149	14	17	20	<b>200</b>
	%	74.50	7.00	8.50	10.00	<b>100.00</b>
8	KENDRAPARA	125	49	8	18	<b>200</b>
	%	62.50	24.50	4.00	9.00	<b>100.00</b>
9	KHURDA	173	11	15	1	<b>200</b>
	%	86.50	5.50	7.50	0.50	<b>100.00</b>
10	PURI	174	17	3	6	<b>200</b>
	%	87.00	8.50	1.50	3.00	<b>100.00</b>
	<b>Total</b>	<b>1556</b>	<b>261</b>	<b>113</b>	<b>70</b>	<b>2000</b>
	%	77.80	13.05	5.65	3.50	<b>100.00</b>



## Distribution of Households by Damage of Irrigated Land

Table: 4.25

Sl. No.	Name of the District	<=1	>1&<=2	>2&<=3	>3	Total
1	BALASORE	182	18	0	0	200
	%	91.00	9.00	0.00	0.00	100.00
2	BHADRAK	167	33	0	0	200
	%	83.50	16.50	0.00	0.00	100.00
3	CUTTACK	193	2	0	5	200
	%	96.50	1.00	0.00	2.50	100.00
4	DHENKANAL	192	5	1	2	200
	%	96.00	2.50	0.50	1.00	100.00
5	GANJAM	195	3	1	1	200
	%	97.50	1.50	0.50	0.50	100.00
6	JAGATSINGHPUR	135	31	20	14	200
	%	67.50	15.50	10.00	7.00	100.00
7	JAJPUR	138	42	15	5	200
	%	69.00	21.00	7.50	2.50	100.00
8	KENDRAPARA	137	29	15	19	200
	%	68.50	14.50	7.50	9.50	100.00
9	KHURDA	180	14	5	1	200
	%	90.00	7.00	2.50	0.50	100.00
10	PURI	199	1	0	0	200
	%	99.50	0.50	0.00	0.00	100.00
	<b>Total</b>	<b>1718</b>	<b>178</b>	<b>57</b>	<b>47</b>	<b>2000</b>
	%	85.90	8.90	2.85	2.35	100.00

### Loss of Implements

The supercyclone caused extensive damage to farm implements like plough, pump sets, pump houses etc. As many as 2520 ploughs, 98 pump sets, 38 sprayers are reported lost/damaged by the study households. Over 3/4<sup>th</sup> of the households reported loss of implements valued less than Rs. 1,000, another 17% reporting loss between Rs. 1,000 and Rs. 2,500. The study villages acquired 27,293 ploughs, 181 pump sets, 283 sprayers

in the post cyclone period against the reported damage of 39,375 ploughs, 396 pump set, 2515 sprayers.

### Distribution of Villages by Loss of Implements

Table: 4.26

Sl. No.	Name of the District	Plough	Tractor/ Triller	Pumpset	Pump House	Sprayer
1	BALASORE	550	0	23	0	16
2	BHADRAK	2620	1	42	0	0
3	CUTTACK	6800	10	45	1	329
4	DHENKANAL	8620	0	0	0	0
5	GANJAM	170	0	45	0	47
6	JAGATSINGHPUR	5015	4	130	8	28
7	JAJPUR	8400	0	36	0	12
8	KENDRAPARA	4774	4	49	2	2021
9	KHURDA	2133	0	26	0	58
10	PURI	293	0	0	0	4
	<b>Total</b>	<b>39375</b>	<b>19</b>	<b>396</b>	<b>11</b>	<b>2515</b>

### Distribution of Households by Implements Lost/Damaged (In Nos.)

Table: 4.27

Sl. No.	Name of the District	Plough	Tractor/ triller	Pumpset	Pump house	Sprayer	Other
1	BALASORE	280	0	20	2	6	0
	%	11.11	0.00	20.41	50.00	15.79	0.00
2	BHADRAK	382	1	17	0	2	0
	%	15.16	33.33	17.35	0.00	5.26	0.00
3	CUTTACK	157	0	2	0	0	5
	%	6.23	0.00	2.04	0.00	0.00	2.60
4	DHENKANAL	118	0	0	0	0	0
	%	4.68	0.00	0.00	0.00	0.00	0.00
5	GANJAM	33	0	16	0	1	0
	%	1.31	0.00	16.33	0.00	2.63	0.00
6	JAGATSINGHPUR	416	2	31	1	14	9
	%	16.51	66.67	31.63	25.00	36.84	4.69
7	JAJPUR	376	0	2	0	0	103
	%	14.92	0.00	2.04	0.00	0.00	53.65
8	KENDRAPARA	499	0	3	0	3	68
	%	19.80	0.00	3.06	0.00	7.89	35.42
9	KHURDA	216	0	5	0	7	7
	%	8.57	0.00	5.10	0.00	18.42	3.65
10	PURI	43	0	2	1	5	0
	%	1.71	0.00	2.04	25.00	13.16	0.00
	<b>Total</b>	<b>2520</b>	<b>3</b>	<b>98</b>	<b>4</b>	<b>38</b>	<b>192</b>
	%	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

### Distribution of Villages by New Implements Acquired

Table: 4.28

Sl. No.	Name of the District	Plough	Tractor/ Triller	Pumpset	Pump house	Sprayer	Other
1	BALASORE	540	0	22	0	16	0
2	BHADRAK	1065	1	16	0	0	0
3	CUTTACK	5450	5	36	0	204	0
4	DHENKANAL	5950	0	0	0	0	0
5	GANJAM	170	0	40	0	28	0
6	JAGATSINGHPUR	2745	1	18	6	11	0
7	JAJPUR	6400	0	30	0	0	0
8	KENDRAPARA	2952	0	7	0	3	0
9	KHURDA	1766	0	12	0	20	0
10	PURI	255	0	0	0	1	0
	<b>Total</b>	<b>27293</b>	<b>7</b>	<b>181</b>	<b>6</b>	<b>283</b>	<b>0</b>

### Distribution of Households by Loss/Damage of Implements in Value

Table: 4.29

Sl. No.	Name of the District	< 1000	1000 - 2500	2500 - 5000	> 5000	Total
1	BALASORE	138	40	6	16	200
	%	69.00	20.00	3.00	8.00	<b>100.00</b>
2	BHADRAK	150	32	4	14	200
	%	75.00	16.00	2.00	7.00	<b>100.00</b>
3	CUTTACK	174	19	5	2	200
	%	87.00	9.50	2.50	1.00	<b>100.00</b>
4	DHENKANAL	194	3	2	1	200
	%	97.00	1.50	1.00	0.50	<b>100.00</b>
5	GANJAM	182	2	0	16	200
	%	91.00	1.00	0.00	8.00	<b>100.00</b>
6	JAGATSINGHPUR	134	33	9	24	200
	%	67.00	16.50	4.50	12.00	<b>100.00</b>
7	JAJPUR	128	70	0	2	200
	%	64.00	35.00	0.00	1.00	<b>100.00</b>
8	KENDRAPARA	100	92	3	5	200
	%	50.00	46.00	1.50	2.50	<b>100.00</b>
9	KHURDA	144	10	34	12	200
	%	72.00	5.00	17.00	6.00	<b>100.00</b>
10	PURI	169	29	0	2	200
	%	84.50	14.50	0.00	1.00	<b>100.00</b>
	<b>Total</b>	<b>1513</b>	<b>330</b>	<b>63</b>	<b>94</b>	<b>2000</b>
	%	75.65	16.50	3.15	4.70	<b>100.00</b>

## **Loss of Crafts**

The supercyclone caused heavy damage to the traditional crafts like fishing, weaving, pottery etc. Loss of fishing nets, boats etc. are reported lost/damaged in all the study districts except non-coastal Dhenkanal district. In 41 out of 56 villages reporting loss, the value of loss is estimated over Rs. 25,000 per village. Looms and other weaving equipments are reported damaged in only 9 out of 100 villages with estimated value of loss over Rs. 25000 per village.

Nearly 50% of the households (914 out of 2000 households) reported loss/damage of traditional crafts. The majority 359 households reported the estimated loss above Rs. 10,000 followed by 244 households reporting loss less than Rs. 2,500. As many as 181 and 130 households reported loss in the range of Rs. 2,500 – Rs. 5,000 and Rs. 5000 – Rs. 10000 respectively.

172 households out of 914 households reporting loss have received compensation varying from Rs. 2,500 (108 households) to Rs. 2,500 - Rs. 5,000 (235 households), Rs. 5,000 – Rs. 10,000 (24 households) and Rs. 10,000 and above (5 households).

The source of compensation is predominantly the Govt., 126 out of 172 receiving compensation from the Govt agencies. The corporate sector (26) and the non-government organisations (20) are found providing financial assistance for rebuilding the traditional crafts lost/damaged.

### Distribution of Villages by Loss of Traditional Craft in Value (Fishing)

**Table: 4.30**

Sl. No.	Name of the District	0	< 5000	5000 - 10000	1000 - 25000	> 25000	Total
1	BALASORE	7	1	1	0	1	10
	%	70.00	10.00	10.00	0.00	10.00	100.00
2	BHADRAK	5	0	0	0	5	10
	%	50.00	0.00	0.00	0.00	50.00	100.00
3	CUTTACK	5	5	0	0	0	10
	%	50.00	50.00	0.00	0.00	0.00	100.00
4	DHENKANAL	9	0	0	1	0	10
	%	90.00	0.00	0.00	10.00	0.00	100.00
5	GANJAM	4	0	0	0	6	10
	%	40.00	0.00	0.00	0.00	60.00	100.00
6	JAGATSINGHPUR	2	0	0	0	8	10
	%	20.00	0.00	0.00	0.00	80.00	100.00
7	JAJPUR	1	0	0	2	7	10
	%	10.00	0.00	0.00	20.00	70.00	100.00
8	KENDRAPARA	3	0	0	1	6	10
	%	30.00	0.00	0.00	10.00	60.00	100.00
9	KHURDA	2	0	0	4	4	10
	%	20.00	0.00	0.00	40.00	40.00	100.00
10	PURI	6	0	0	0	4	10
	%	60.00	0.00	0.00	0.00	40.00	100.00
	<b>Total</b>	<b>44</b>	<b>6</b>	<b>1</b>	<b>8</b>	<b>41</b>	<b>100</b>
	%	44.00	6.00	1.00	8.00	41.00	100.00

### Distribution of Households by Compensation Received of Traditional Craft

**Table: 4.31**

Sl. No.	Name of the District	< 2500	2500 - 5000	5000 - 10000	> 10000	Total
1	BALASORE	13	0	9	0	22
2	BHADRAK	33	7	10	0	50
3	CUTTACK	1	0	0	1	2
4	DHENKANAL	0	0	0	0	0
5	GANJAM	39	25	2	2	68
6	JAGATSINGHPUR	18	2	3	1	24
7	JAJPUR	0	0	0	0	0
8	KENDRAPARA	3	1	0	1	5
9	KHURDA	1	0	0	0	1
10	PURI	0	0	0	0	0
	<b>Total</b>	<b>108</b>	<b>35</b>	<b>24</b>	<b>5</b>	<b>172</b>

**Distribution of Households by Source of Exgratia Received for Traditional Craft Lost/Damaged**

**Table: 4.32**

Sl. No.	Name of the District	Govt.	NGO	Other	Total
1	BALASORE	20	2	0	<b>22</b>
2	BHADRAK	50	0	0	<b>50</b>
3	CUTTACK	1	1	0	<b>2</b>
4	DHENKANAL	0	0	0	<b>0</b>
5	GANJAM	32	11	25	<b>68</b>
6	JAGATSINGHPUR	18	6	0	<b>24</b>
7	JAJPUR	0	0	0	<b>0</b>
8	KENDRAPARA	4	0	1	<b>5</b>
9	KHURDA	1	0	0	<b>1</b>
10	PURI	0	0	0	<b>0</b>
	<b>Total</b>	<b>126</b>	<b>20</b>	<b>26</b>	<b>172</b>

**Distribution of Households Reporting Loss of Traditional Craft in Value**

**Table: 4.33**

SL. NO.	NAME OF THE DISTRICT	< 2500	2500 - 5000	5000 - 10000	> 10000	TOTAL
1	BALASORE	6	18	4	11	<b>39</b>
2	BHADRAK	33	17	23	31	<b>104</b>
3	CUTTACK	14	10	8	8	<b>40</b>
4	DHENKANAL	1	0	3	3	<b>7</b>
5	GANJAM	28	24	15	70	<b>137</b>
6	JAGATSINGHPUR	27	21	50	85	<b>183</b>
7	JAJPUR	42	20	30	29	<b>121</b>
8	KENDRAPARA	51	10	23	44	<b>128</b>
9	KHURDA	30	9	6	20	<b>65</b>
10	PURI	12	1	19	58	<b>90</b>
	<b>TOTAL</b>	<b>244</b>	<b>130</b>	<b>181</b>	<b>359</b>	<b>914</b>

**Distribution of Households Reporting Loss/Damage of Crops by  
Compensation Received**

**Table: 4.34**

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	0	200	<b>200</b>
	%	0	100	<b>100</b>
2	BHADRAK	0	200	<b>200</b>
	%	0	100	<b>100</b>
3	CUTTACK	2	198	<b>200</b>
	%	1	99	<b>100</b>
4	DHENKANAL	0	200	<b>200</b>
	%	0	100	<b>100</b>
5	GANJAM	46	154	<b>200</b>
	%	23	77	<b>100</b>
6	JAGATSINGHPUR	0	200	<b>200</b>
	%	0	100	<b>100</b>
7	JAJPUR	0	200	<b>200</b>
	%	0	100	<b>100</b>
8	KENDRAPARA	0	200	<b>200</b>
	%	0	100	<b>100</b>
9	KHURDA	0	200	<b>200</b>
	%	0	100	<b>100</b>
10	PURI	0	200	<b>200</b>
	%	0	100	<b>100</b>
	<b>Total</b>	<b>48</b>	<b>1952</b>	<b>2000</b>
	%	2.4	97.6	<b>100</b>

**Crop Loss**

The super cyclone visited during the Khariff season. Paddy is the main Khariff crop of the state. Paddy claimed over 90% (31033 out of 34303 Acres) of the crop land damaged by the super cyclone followed by cash crops (1891 acres) as per the village survey.

The crop is reported damaged by all the 2000 households surveyed, 64% reporting damage fully and 36% partial. Silting (99%) is reported as the principal cause of crop damage. only 48 out of 2000 households(2.40%) reported receiving compensation for the crop damage.

### Distribution of Villages by Crop Loss/Damage (In Acres)

Table: 4.35

Sl. No.	Name of the district	Paddy	Millets	Pulses	Oil seeds	Cash crops	Fiber	Other	Total
1	BALASORE	3545	0	20	305	1190	0	0	<b>5060</b>
	%	70.06	0.00	0.40	6.03	23.52	0.00	0.00	<b>100.00</b>
2	BHADRAK	3674	0	10	320	90	0	0	<b>4094</b>
	%	89.74	0.00	0.24	7.82	2.20	0.00	0.00	<b>100.00</b>
3	CUTTACK	1760	0	0	0	0	0	0	<b>1760</b>
	%	100.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>100.00</b>
4	DHENKANAL	2730	0	0	100	50	0	0	<b>2880</b>
	%	94.79	0.00	0.00	3.47	1.74	0.00	0.00	<b>100.00</b>
5	GANJAM	1103	0	24	40	5	0	0	<b>1172</b>
	%	94.11	0.00	2.05	3.41	0.43	0.00	0.00	<b>100.00</b>
6	JAGATSINGH PUR	6545	0	50	0	500	0	0	<b>7095</b>
	%	92.25	0.00	0.70	0.00	7.05	0.00	0.00	<b>100.00</b>
7	JAJPUR	3631	0	50	50	0	0	0	<b>3731</b>
	%	97.32	0.00	1.34	1.34	0.00	0.00	0.00	<b>100.00</b>
8	KENDRAPARA	4441	0	410	0	0	0	0	<b>4851</b>
	%	91.55	0.00	8.45	0.00	0.00	0.00	0.00	<b>100.00</b>
9	KHURDA	2677	0	0	0	56	0	0	<b>2733</b>
	%	97.95	0.00	0.00	0.00	2.05	0.00	0.00	<b>100.00</b>
10	PURI	927	0	0	0	0	0	0	<b>927</b>
	%	100.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>100.00</b>
	<b>TOTAL</b>	<b>31033</b>	<b>0</b>	<b>564</b>	<b>815</b>	<b>1891</b>	<b>0</b>	<b>0</b>	<b>34303</b>
	%	<b>90.47</b>	<b>0.00</b>	<b>1.64</b>	<b>2.38</b>	<b>5.51</b>	<b>0.00</b>	<b>0.00</b>	<b>100.00</b>



**Distribution of Households Reporting Loss/Damage of Crops by  
Compensation Received**

**Table: 4.36**

<b>SL. NO.</b>	<b>NAME OF THE DISTRICT</b>	<b>YES</b>	<b>NO</b>	<b>TOTAL</b>
1	BALASORE	0	200	<b>200</b>
	%	0	100	<b>100</b>
2	BHADRAK	0	200	<b>200</b>
	%	0	100	<b>100</b>
3	CUTTACK	2	198	<b>200</b>
	%	1	99	<b>100</b>
4	DHENKANAL	0	200	<b>200</b>
	%	0	100	<b>100</b>
5	GANJAM	46	154	<b>200</b>
	%	23	77	<b>100</b>
6	JAGATSINGHPUR	0	200	<b>200</b>
	%	0	100	<b>100</b>
7	JAJPUR	0	200	<b>200</b>
	%	0	100	<b>100</b>
8	KENDRAPARA	0	200	<b>200</b>
	%	0	100	<b>100</b>
9	KHURDA	0	200	<b>200</b>
	%	0	100	<b>100</b>
10	PURI	0	200	<b>200</b>
	%	0	100	<b>100</b>
	<b>TOTAL</b>	<b>48</b>	<b>1952</b>	<b>2000</b>
	%	2.4	97.6	<b>100</b>

### Distribution of Households by Loss Damage of Paddy by Extent of Damage

**Table: 4.37**

Sl. No.	Name of the District	Fully	Partly	Total
1	BALASORE	188	12	<b>200</b>
	%	94.00	6.00	<b>100.00</b>
2	BHADRAK	153	47	<b>200</b>
	%	76.50	23.50	<b>100.00</b>
3	CUTTACK	62	138	<b>200</b>
	%	31.00	69.00	<b>100.00</b>
4	DHENKANAL	54	146	<b>200</b>
	%	27.00	73.00	<b>100.00</b>
5	GANJAM	108	92	<b>200</b>
	%	54.00	46.00	<b>100.00</b>
6	JAGATSINGHPUR	177	23	<b>200</b>
	%	88.50	11.50	<b>100.00</b>
7	JAJPUR	179	21	<b>200</b>
	%	89.50	10.50	<b>100.00</b>
8	KENDRAPARA	185	15	<b>200</b>
	%	92.50	7.50	<b>100.00</b>
9	KHURDA	112	88	<b>200</b>
	%	56.00	44.00	<b>100.00</b>
10	PURI	63	137	<b>200</b>
	%	31.50	68.50	<b>100.00</b>
	<b>Total</b>	<b>1281</b>	<b>719</b>	<b>2000</b>
	%	64.05	35.95	<b>100.00</b>

## Distribution of Households Reporting Land Damage by Cause of Damage

**Table: 4.38**

Sl. No.	Name of the District	Irrigated			Non-irrigated		
		Silting	Salination	Total	Silting	Salination	Total
1	BALASORE	200	0	<b>200</b>	191	9	<b>200</b>
	%	100.00	0.00	<b>100.00</b>	95.50	4.50	<b>100.00</b>
2	BHADRAK	200	0	<b>200</b>	190	10	<b>200</b>
	%	100.00	0.00	<b>100.00</b>	95.00	5.00	<b>100.00</b>
3	CUTTACK	199	1	<b>200</b>	200	0	<b>200</b>
	%	99.50	0.50	<b>100.00</b>	100.00	0.00	<b>100.00</b>
4	DHENKANAL	199	1	<b>200</b>	200	0	<b>200</b>
	%	99.50	0.50	<b>100.00</b>	100.00	0.00	<b>100.00</b>
5	GANJAM	200	0	<b>200</b>	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>	100.00	0.00	<b>100.00</b>
6	JAGATSINGHPUR	200	0	<b>200</b>	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>	100.00	0.00	<b>100.00</b>
7	JAJPUR	200	0	<b>200</b>	196	4	<b>200</b>
	%	100.00	0.00	<b>100.00</b>	98.00	2.00	<b>100.00</b>
8	KENDRAPARA	195	5	<b>200</b>	195	5	<b>200</b>
	%	97.50	2.50	<b>100.00</b>	97.50	2.50	<b>100.00</b>
9	KHURDA	200	0	<b>200</b>	198	2	<b>200</b>
	%	100.00	0.00	<b>100.00</b>	99.00	1.00	<b>100.00</b>
10	PURI	199	1	<b>200</b>	199	1	<b>200</b>
	%	99.50	0.50	<b>100.00</b>	99.50	0.50	<b>100.00</b>
	<b>Total</b>	<b>1992</b>	<b>8</b>	<b>2000</b>	<b>1969</b>	<b>31</b>	<b>2000</b>
	%	99.60	0.40	<b>100.00</b>	98.45	1.55	<b>100.00</b>

## Loss of Trees

Loss of tree (1316), mangroves (50), orchards (230), plantation (101) etc. due to super cyclone is reported by all the 2000 households surveyed.

**Distribution of Households by Loss of Trees**

**Table: 4.39**

Sl. No.	Name of the District	Trees	Mangroves	Plantation	Orchard	Other	Total
1	BALASORE	79	1	5	97	0	200
	%						<b>100.00</b>
2	BHADRAK	88	0	6	28	5	200
	%						<b>100.00</b>
3	CUTTACK	160	12	2	1	14	200
	%						<b>100.00</b>
4	DHENKANAL	136	15	3	0	7	200
	%						<b>100.00</b>
5	GANJAM	136	0	50	23	9	200
	%						<b>100.00</b>
6	JAGATSINGHPUR	164	0	4	52	2	200
	%						<b>100.00</b>
7	JAJPUR	161	5	12	4	48	200
	%						<b>100.00</b>
8	KENDRAPARA	171	3	0	6	44	200
	%						<b>100.00</b>
9	KHURDA	140	10	19	19	23	200
	%						<b>100.00</b>
10	PURI	81	4	0	0	19	200
	%						<b>100.00</b>
	<b>Total</b>	<b>1316</b>	<b>50</b>	<b>101</b>	<b>230</b>	<b>171</b>	<b>2000</b>
	%						<b>100.00</b>

## Loss of Food Stuffs

Almost all the villages reported damage of food stuff meant for Mid Day Meal in the schools and supplementary feeding in the Anganwadi Centres. Over 2/3<sup>rd</sup> of the villages reported the MDM damage valued at/below Rs. 1,000. Damage of food stuff valued over Rs. 5,000 is reported by 17% of the villages. Nearly 3/4<sup>th</sup> of the villages reported damage of supplementary feeding of the Anganwadi Centres valued at/below Rs. 1,000. The estimated value of damage between Rs. 1,000 to Rs. 5,000 is reported by over 1/5<sup>th</sup> of the villages.

### Distribution of Villages by Loss of Food Stuffs in Value (MDM)

**Table: 4.40**

Sl. No.	Name of the District	< 1000	1000 - 2500	2500 - 5000	> 5000	Total
1	BALASORE	7	3	0	0	10
	%	70.00	30.00	0.00	0.00	100.00
2	BHADRAK	10	0	0	0	10
	%	100.00	0.00	0.00	0.00	100.00
3	CUTTACK	4	0	2	4	10
	%	40.00	0.00	20.00	40.00	100.00
4	DHENKANAL	10	0	0	0	10
	%	100.00	0.00	0.00	0.00	100.00
5	GANJAM	1	2	0	7	10
	%	10.00	20.00	0.00	70.00	100.00
6	JAGATSINGHPUR	8	1	0	1	10
	%	80.00	10.00	0.00	10.00	100.00
7	JAJPUR	6	2	1	1	10
	%	60.00	20.00	10.00	10.00	100.00
8	KENDRAPARA	6	2	1	1	10
	%	60.00	20.00	10.00	10.00	100.00
9	KHURDA	5	2	0	3	10
	%	50.00	20.00	0.00	30.00	100.00
10	PURI	10	0	0	0	10
	%	100.00	0.00	0.00	0.00	100.00
	<b>Total</b>	<b>67</b>	<b>12</b>	<b>4</b>	<b>17</b>	<b>100</b>
	%	67.00	12.00	4.00	17.00	100.00

### Distribution of Villages by Loss of Food Stuffs in Value (AWC)

**Table: 4.41**

Sl. No.	Name of the District	< 1000	1000 - 2500	2500 - 5000	> 5000	Total
1	BALASORE	8	2	0	0	<b>10</b>
	%	80.00	20.00	0.00	0.00	<b>100.00</b>
2	BHADRAK	8	1	1	0	<b>10</b>
	%	80.00	10.00	10.00	0.00	<b>100.00</b>
3	CUTTACK	6	0	2	2	<b>10</b>
	%	60.00	0.00	20.00	20.00	<b>100.00</b>
4	DHENKANAL	10	0	0	0	<b>10</b>
	%	100.00	0.00	0.00	0.00	<b>100.00</b>
5	GANJAM	7	2	1	0	<b>10</b>
	%	70.00	20.00	10.00	0.00	<b>100.00</b>
6	JAGATSINGHPUR	7	2	0	1	<b>10</b>
	%	70.00	20.00	0.00	10.00	<b>100.00</b>
7	JAJPUR	4	1	4	1	<b>10</b>
	%	40.00	10.00	40.00	10.00	<b>100.00</b>
8	KENDRAPARA	7	2	0	1	<b>10</b>
	%	70.00	20.00	0.00	10.00	<b>100.00</b>
9	KHURDA	7	1	2	0	<b>10</b>
	%	70.00	10.00	20.00	0.00	<b>100.00</b>
10	PURI	10	0	0	0	<b>10</b>
	%	100.00	0.00	0.00	0.00	<b>100.00</b>
	<b>Total</b>	<b>74</b>	<b>11</b>	<b>10</b>	<b>5</b>	<b>100</b>
	%	74.00	11.00	10.00	5.00	<b>100.00</b>

## Rebuilding of Drinking Water Facilities

All the villages surveyed reported reconstruction of the drinking water sources such as open well and tube wells. There have been in all 367 public and 1664 private open wells reconstructed/repared in the surveyed 100 villages after the super cyclone. As many as 590 community tube wells and 1079 private tube wells are found reconstructed in the surveyed villages.

### Distribution of Villages by Drinking Water Facilities Reconstructed

**Table: 4.42**

Sl. No.	Name of the District	Open well		Tube well	
		Public	Pvt.	Public	Pvt.
1	BALASORE	19	37	39	100
	%	32.76	27.01	67.24	72.99
2	BHADRAK	64	166	127	73
	%	33.51	69.46	66.49	30.54
3	CUTTACK	81	613	102	378
	%	44.26	61.86	55.74	38.14
4	DHENKANAL	20	29	2	3
	%	90.91	90.63	9.09	9.38
5	GANJAM	26	34	72	2
	%	26.53	94.44	73.47	5.56
6	JAGATSINGH PUR	50	444	65	287
	%	43.48	60.74	56.52	39.26
7	JAJPUR	36	211	64	65
	%	36.00	76.45	64.00	23.55
8	KENDRA PARA	10	26	17	22
	%	37.04	54.17	62.96	45.83
9	KHURDA	55	84	84	99
	%	39.57	45.90	60.43	54.10
10	PURI	6	20	18	50
	%	25.00	28.57	75.00	71.43
	<b>Total</b>	<b>367</b>	<b>1664</b>	<b>590</b>	<b>1079</b>
	%	38.35	60.66	61.65	39.34

## Rebuilding of Sanitation

Sanitary facilities like individual household latrines, community latrines and institutional latrines are found constructed in almost all the villages except in the villages of Puri district. 2253 individual latrines and 48 institutional latrines are found constructed in the 90 villages spread over 9 districts of Orissa.

### Distribution of Villages by Rebuilding of Sanitation

Table: 4.43

Sl. No.	Name of the District	Individual	Community	Institutional
1	BALASORE	255	0	6
2	BHADRAK	215	0	1
3	CUTTACK	775	0	0
4	DHENKANAL	70	1	2
5	GANJAM	566	0	24
6	JAGATSINGHPUR	58	0	4
7	JAJPUR	139	0	1
8	KENDRAPARA	57	0	6
9	KHURDA	118	2	4
10	PURI	0	0	0
	<b>Total</b>	<b>2253</b>	<b>3</b>	<b>48</b>

## Rebuilding of Education System

Over 90% of villages surveyed reported reconstruction of the education facilities – Primary Schools (118), ME Schools (64) and High Schools (48).

Over 60% of the villages surveyed reported damage of furniture and drinking water sources that have been completely rebuilt after the super cyclone.

Peripheral health care facilities such as Health Sub-Centre building, dispensary buildings were reported damaged in 6 out of the 100 villages and these houses have been rebuilt. Drinking water sources are found reconstructed in all the villages reporting damage. In 18 out of 20 villages, the health centre furniture have been acquired.



### Distribution of Villages by School Buildings Rebuilt

**Table: 4.44**

Sl. No.	Name of the District	U.P.	M.E.	High school	Total
1	BALASORE	13	2	3	18
	%	11.02	3.13	6.25	7.83
2	BHADRAK	11	2	2	15
	%	9.32	3.13	4.17	6.52
3	CUTTACK	12	8	11	31
	%	10.17	12.50	22.92	13.48
4	DHENKANAL	15	7	4	26
	%	12.71	10.94	8.33	11.30
5	GANJAM	20	12	8	40
	%	16.95	18.75	16.67	17.39
6	JAGATSINGHPUR	12	8	6	26
	%	10.17	12.50	12.50	11.30
7	JAJPUR	10	8	6	24
	%	8.47	12.50	12.50	10.43
8	KENDRAPARA	13	6	2	21
	%	11.02	9.38	4.17	9.13
9	KHURDA	7	10	6	23
	%	5.93	15.63	12.50	10.00
10	PURI	5	1	0	6
	%	4.24	1.56	0.00	2.61
	<b>Total</b>	<b>118</b>	<b>64</b>	<b>48</b>	<b>230</b>

### Distribution of Villages by Damage of School Furniture & Drinking Water Sources

**Table: 4.45**

Sl. No.	Name of the District	Furniture	Drinking Water Source
1	BALASORE	12	12
		9.84	9.84
2	BHADRAK	16	16
		13.11	13.11
3	CUTTACK	18	18
		14.75	14.75
4	DHENKANAL	6	6
		4.92	4.92
5	GANJAM	20	20
		16.39	16.39
6	JAGATSINGHPUR	15	15
		12.30	12.30
7	JAJPUR	6	6
		4.92	4.92
8	KENDRAPARA	12	12
		9.84	9.84
9	KHURDA	13	13
		10.66	10.66
10	PURI	4	4
		3.28	3.28
	<b>Total</b>	<b>122</b>	<b>122</b>

### Distribution of Villages Reporting Rebuilt of Furniture & Drinking Water Source

**Table: 4.46**

Sl. No.	Name of the District	Furniture	Drinking Water Source
1	BALASORE	12	12
	%	9.68	9.68
2	BHADRAK	19	19
	%	15.32	15.32
3	CUTTACK	18	18
	%	14.52	14.52
4	DHENKANAL	6	6
	%	4.84	4.84
5	GANJAM	20	20
	%	16.13	16.13
6	JAGATSINGHPUR	15	15
	%	12.10	12.10
7	JAJPUR	5	5
	%	4.03	4.03
8	KENDRAPARA	12	12
	%	9.68	9.68
9	KHURDA	13	13
	%	10.48	10.48
10	PURI	4	4
	%	3.23	3.23
	<b>Total</b>	<b>124</b>	<b>124</b>

### Distribution of Villages by Damage of Health Care Facilities

**Table: 4.47**

Sl. No.	Name of the District	Building		Furniture		Drinking water	
		Damaged	Rebuilt	Damaged	Rebuilt	Damaged	Rebuilt
1	BALASORE	0	0	0	0	0	0
2	BHADRAK	0	0	0	0	0	0
3	CUTTACK	0	0	0	0	2	2
4	DHENKANAL	0	0	2	0	0	0
5	GANJAM	2	2	5	5	0	0
6	JAGATSINGHPUR	1	1	0	0	1	1
7	JAJPUR	1	1	0	0	0	0
8	KENDRAPARA	1	1	0	0	0	0
9	KHURDA	1	1	13	13	1	1
10	PURI	0	0	0	0	0	0
	<b>Total</b>	<b>6</b>	<b>6</b>	<b>20</b>	<b>18</b>	<b>4</b>	<b>4</b>

## Out Migration

Family out migration is reported in 80% of the villages surveyed, the highest being in Bhadrak district followed by Balasore and Jagatsinghpur. Migration without family is the highest in Jajpur followed by Jagatsinghpur district. Male migration is the common type (97%). Over  $\frac{3}{4}$  of the migrants belong to 15 – 30 age group.

**Distribution of Villages by Migration in Nos.**

**Table: 4.48**

Sl. No.	Name of the District	Family	Individual
1	BALASORE	43	122
2	BHADRAK	155	392
3	CUTTACK	33	150
4	DHENKANAL	0	0
5	GANJAM	0	0
6	JAGATSINGHPUR	37	1410
7	JAJPUR	7	2440
8	KENDRAPARA	1	586
9	KHURDA	8	866
10	PURI	6	27
	<b>Total</b>	290	5993

### Distribution of Migrants by Age

**Table: 4.49**

Sl. No.	Name of the District	0 - 14	15 - 30	31 - 45	Above 45	Total
1	BALASORE	0	48	7	0	<b>55</b>
	%	0.00	17.08	8.43	0.00	<b>100</b>
2	BHADRAK	0	69	20	1	<b>90</b>
	%	0.00	24.56	24.10	5.56	<b>100</b>
3	CUTTACK	0	1	0	0	<b>1</b>
	%	0.00	0.36	0.00	0.00	<b>100</b>
4	DHENKANAL	0	0	0	0	<b>0</b>
	%	0.00	0.00	0.00	0.00	<b>100</b>
5	GANJAM	0	0	0	0	<b>0</b>
	%	0.00	0.00	0.00	0.00	<b>100</b>
6	JAGATSINGHPUR	0	42	13	0	<b>55</b>
	%	0.00	14.95	15.66	0.00	<b>100</b>
7	JAJPUR	0	44	10	4	<b>58</b>
	%	0.00	15.66	12.05	22.22	<b>100</b>
8	KENDRAPARA	3	58	20	3	<b>84</b>
	%	100.00	20.64	24.10	16.67	<b>100</b>
9	KHURDA	0	18	12	10	<b>40</b>
	%	0.00	6.41	14.46	55.56	<b>100</b>
10	PURI	0	1	1	0	<b>2</b>
	%	0.00	0.36	1.20	0.00	<b>100</b>
	<b>Total</b>	<b>3</b>	<b>281</b>	<b>83</b>	<b>18</b>	<b>385</b>

### Distribution of Migrants by Sex

**Table: 4.50**

Sl. No.	Name of the District	Male	Female	Total
1	BALASORE	55	0	<b>55</b>
	%	100.00	0.00	<b>100.00</b>
2	BHADRAK	85	5	<b>90</b>
	%	94.44	5.56	<b>100.00</b>
3	CUTTACK	1	0	<b>1</b>
	%	100.00	0.00	<b>100.00</b>
4	DHENKANAL	0	0	<b>0</b>
	%	0.00	0.00	<b>100.00</b>
5	GANJAM	0	0	<b>0</b>
	%	0.00	0.00	<b>100.00</b>
6	JAGATSINGHPUR	54	1	<b>55</b>
	%	98.18	1.82	<b>100.00</b>
7	JAJPUR	57	1	<b>58</b>
	%	98.28	1.72	<b>100.00</b>
8	KENDRAPARA	83	1	<b>84</b>
	%	98.81	1.19	<b>100.00</b>
9	KHURDA	40	0	<b>40</b>
	%	100.00	0.00	<b>100.00</b>
10	PURI	2	0	<b>2</b>
	%	100.00	0.00	<b>100.00</b>
	<b>Total</b>	<b>377</b>	<b>8</b>	<b>385</b>
	%	97.92	2.08	<b>100.00</b>

#### **Immediate Relief**

44% of the households surveyed reported attending free kitchen. The Govt. and the NGO in equal proportion are found providing free kitchen facilities.

Almost all the households surveyed reported receiving food material mostly from the Govt. sources (94.55).

Over 2/3<sup>rd</sup> of households reported receiving clothes largely supplied by the Govt. agencies (46.50%). 60% of the households surveyed reported receiving health care attention mostly provided by the Govt. health facilities.

43% of households surveyed reported receiving cattle feed largely supplied by the Govt. agencies.

### Distribution of Households by Free Kitchen

**Table: 4.51**

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	91	109	<b>200</b>
	%	45.50	54.50	<b>100.00</b>
2	BHADRAK	87	113	<b>200</b>
	%	43.50	56.50	<b>100.00</b>
3	CUTTACK	0	200	<b>200</b>
	%	0.00	100.00	<b>100.00</b>
4	DHENKANAL	4	196	<b>200</b>
	%	2.00	98.00	<b>100.00</b>
5	GANJAM	72	128	<b>200</b>
	%	36.00	64.00	<b>100.00</b>
6	JAGATSINGHPUR	165	35	<b>200</b>
	%	82.50	17.50	<b>100.00</b>
7	JAJPUR	99	101	<b>200</b>
	%	49.50	50.50	<b>100.00</b>
8	KENDRAPARA	109	91	<b>200</b>
	%	54.50	45.50	<b>100.00</b>
9	KHURDA	86	114	<b>200</b>
	%	43.00	57.00	<b>100.00</b>
10	PURI	157	43	<b>200</b>
	%	78.50	21.50	<b>100.00</b>
	<b>Total</b>	<b>870</b>	<b>1130</b>	<b>2000</b>
	%	43.50	56.50	<b>100.00</b>

**Distribution of Households by Source of Free Kitchen**

**Table: 4.52**

Sl. No.	Name of the District	Govt.	NGO	Not Received	Total
1	BALASORE	41	49	110	<b>200</b>
	%	20.50	24.50	55.00	<b>100.00</b>
2	BHADRAK	87	1	112	<b>200</b>
	%	43.50	0.50	56.00	<b>100.00</b>
3	CUTTACK	1	0	199	<b>200</b>
	%	0.50	0.00	99.50	<b>100.00</b>
4	DHENKANAL	3	0	197	<b>200</b>
	%	1.50	0.00	98.50	<b>100.00</b>
5	GANJAM	31	41	128	<b>200</b>
	%	15.50	20.50	64.00	<b>100.00</b>
6	JAGATSINGHPUR	63	101	36	<b>200</b>
	%	31.50	50.50	18.00	<b>100.00</b>
7	JAJPUR	101	0	99	<b>200</b>
	%	50.50	0.00	49.50	<b>100.00</b>
8	KENDRAPARA	60	38	102	<b>200</b>
	%	30.00	19.00	51.00	<b>100.00</b>
9	KHURDA	24	59	117	<b>200</b>
	%	12.00	29.50	58.50	<b>100.00</b>
10	PURI	19	140	41	<b>200</b>
	%	9.50	70.00	20.50	<b>100.00</b>
	<b>Total</b>	<b>430</b>	<b>429</b>	<b>1141</b>	<b>2000</b>
	%	21.50	21.45	57.05	<b>100.00</b>

### Distribution of Households by Food Material Received

**Table: 4.53**

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
2	BHADRAK	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
3	CUTTACK	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
4	DHENKANAL	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
5	GANJAM	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
6	JAGATSINGHPUR	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
7	JAJPUR	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
8	KENDRAPARA	199	1	<b>200</b>
	%	99.50	0.50	<b>100.00</b>
9	KHURDA	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
10	PURI	200	0	<b>200</b>
	%	100.00	0.00	<b>100.00</b>
	<b>Total</b>	<b>1999</b>	<b>1</b>	<b>2000</b>
	%	99.95	0.05	<b>100.00</b>



**Distribution of Households by Source of Food Material**

**Table: 4.54**

Sl. No.	Name of the District	Govt.	NGO	Not Received	Total
1	BALASORE	144	56	0	<b>200</b>
	%	72.00	28.00	0.00	<b>100.00</b>
2	BHADRAK	188	1	11	<b>200</b>
	%	94.00	0.50	5.50	<b>100.00</b>
3	CUTTACK	198	0	2	<b>200</b>
	%	99.00	0.00	1.00	<b>100.00</b>
4	DHENKANAL	197	0	3	<b>200</b>
	%	98.50	0.00	1.50	<b>100.00</b>
5	GANJAM	189	6	5	<b>200</b>
	%	94.50	3.00	2.50	<b>100.00</b>
6	JAGATSINGHPUR	194	6	0	<b>200</b>
	%	97.00	3.00	0.00	<b>100.00</b>
7	JAJPUR	200	0	0	<b>200</b>
	%	100.00	0.00	0.00	<b>100.00</b>
8	KENDRAPARA	194	0	6	<b>200</b>
	%	97.00	0.00	3.00	<b>100.00</b>
9	KHURDA	189	8	3	<b>200</b>
	%	94.50	4.00	1.50	<b>100.00</b>
10	PURI	198	1	1	<b>200</b>
	%	99.00	0.50	0.50	<b>100.00</b>
	<b>Total</b>	<b>1891</b>	<b>78</b>	<b>31</b>	<b>2000</b>
	%	94.55	3.90	1.55	<b>100.00</b>

### Distribution of Households by Clothing

Table: 4.55

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	96	104	<b>200</b>
	%	48.00	52.00	<b>100.00</b>
2	BHADRAK	111	89	<b>200</b>
	%	55.50	44.50	<b>100.00</b>
3	CUTTACK	108	92	<b>200</b>
	%	54.00	46.00	<b>100.00</b>
4	DHENKANAL	119	81	<b>200</b>
	%	59.50	40.50	<b>100.00</b>
5	GANJAM	102	98	<b>200</b>
	%	51.00	49.00	<b>100.00</b>
6	JAGATSINGHPUR	189	11	<b>200</b>
	%	94.50	5.50	<b>100.00</b>
7	JAJPUR	137	63	<b>200</b>
	%	68.50	31.50	<b>100.00</b>
8	KENDRAPARA	182	18	<b>200</b>
	%	91.00	9.00	<b>100.00</b>
9	KHURDA	139	61	<b>200</b>
	%	69.50	30.50	<b>100.00</b>
10	PURI	175	25	<b>200</b>
	%	87.50	12.50	<b>100.00</b>
	<b>Total</b>	<b>1358</b>	<b>642</b>	<b>2000</b>
	%	67.90	32.10	<b>100.00</b>

## Distribution of Households by Source of Clothing

**Table: 4.56**

Sl. No.	Name of the District	Govt.	NGO	Not Received	Total
1	BALASORE	7	74	119	<b>200</b>
	%	3.50	37.00	59.50	<b>100.00</b>
2	BHADRAK	14	99	87	<b>200</b>
	%	7.00	49.50	43.50	<b>100.00</b>
3	CUTTACK	107	2	91	<b>200</b>
	%	53.50	1.00	45.50	<b>100.00</b>
4	DHENKANAL	117	2	81	<b>200</b>
	%	58.50	1.00	40.50	<b>100.00</b>
5	GANJAM	51	52	97	<b>200</b>
	%	25.50	26.00	48.50	<b>100.00</b>
6	JAGATSINGHPUR	106	85	9	<b>200</b>
	%	53.00	42.50	4.50	<b>100.00</b>
7	JAJPUR	133	5	62	<b>200</b>
	%	66.50	2.50	31.00	<b>100.00</b>
8	KENDRAPARA	159	21	20	<b>200</b>
	%	79.50	10.50	10.00	<b>100.00</b>
9	KHURDA	99	41	60	<b>200</b>
	%	49.50	20.50	30.00	<b>100.00</b>
10	PURI	137	40	23	<b>200</b>
	%	68.50	20.00	11.50	<b>100.00</b>
	<b>Total</b>	<b>930</b>	<b>421</b>	<b>649</b>	<b>2000</b>
	%	46.50	21.05	32.45	<b>100.00</b>

### Distribution of Households by Health Care Received

**Table: 4.57**

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	85	115	<b>200</b>
	%	42.5	57.5	<b>100</b>
2	BHADRAK	46	154	<b>200</b>
	%	23	77	<b>100</b>
3	CUTTACK	11	189	<b>200</b>
	%	5.5	94.5	<b>100</b>
4	DHENKANAL	49	151	<b>200</b>
	%	24.5	75.5	<b>100</b>
5	GANJAM	115	85	<b>200</b>
	%	57.5	42.5	<b>100</b>
6	JAGATSINGHPUR	197	3	<b>200</b>
	%	98.5	1.5	<b>100</b>
7	JAJPUR	181	19	<b>200</b>
	%	90.5	9.5	<b>100</b>
8	KENDRAPARA	177	23	<b>200</b>
	%	88.5	11.5	<b>100</b>
9	KHURDA	157	43	<b>200</b>
	%	78.5	21.5	<b>100</b>
10	PURI	157	43	<b>200</b>
	%	78.5	21.5	<b>100</b>
	<b>Total</b>	<b>1175</b>	<b>825</b>	<b>2000</b>
	%	58.75	41.25	<b>100</b>

### Distribution of Households by Source of Health Care

**Table: 4.58**

Sl. No.	Name of the District	Govt.	NGO	Not Received	Total
1	BALASORE	13	58	129	<b>200</b>
	%	6.50	29.00	64.50	<b>100.00</b>
2	BHADRAK	18	30	152	<b>200</b>
	%	9.00	15.00	76.00	<b>100.00</b>
3	CUTTACK	11	0	189	<b>200</b>
	%	5.50	0.00	94.50	<b>100.00</b>
4	DHENKANAL	20	29	151	<b>200</b>
	%	10.00	14.50	75.50	<b>100.00</b>
5	GANJAM	84	32	84	<b>200</b>
	%	42.00	16.00	42.00	<b>100.00</b>
6	JAGATSINGHPUR	173	26	1	<b>200</b>
	%	86.50	13.00	0.50	<b>100.00</b>
7	JAJPUR	184	0	16	<b>200</b>
	%	92.00	0.00	8.00	<b>100.00</b>
8	KENDRAPARA	181	0	19	<b>200</b>
	%	90.50	0.00	9.50	<b>100.00</b>
9	KHURDA	126	32	42	<b>200</b>
	%	63.00	16.00	21.00	<b>100.00</b>
10	PURI	138	21	41	<b>200</b>
	%	69.00	10.50	20.50	<b>100.00</b>
	<b>Total</b>	<b>948</b>	<b>228</b>	<b>824</b>	<b>2000</b>
	%	47.40	11.40	41.20	<b>100.00</b>

### Distribution of Households by Cattle Feed/Fodder Received

**Table: 4.59**

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	0	200	<b>200</b>
	%	0	100	<b>100</b>
2	BHADRAK	24	176	<b>200</b>
	%	12	88	<b>100</b>
3	CUTTACK	1	199	<b>200</b>
	%	0.5	99.5	<b>100</b>
4	DHENKANAL	2	198	<b>200</b>
	%	1	99	<b>100</b>
5	GANJAM	71	129	<b>200</b>
	%	35.5	64.5	<b>100</b>
6	JAGATSINGHPUR	149	51	<b>200</b>
	%	74.5	25.5	<b>100</b>
7	JAJPUR	164	36	<b>200</b>
	%	82	18	<b>100</b>
8	KENDRAPARA	144	56	<b>200</b>
	%	72	28	<b>100</b>
9	KHURDA	122	78	<b>200</b>
	%	61	39	<b>100</b>
10	PURI	177	23	<b>200</b>
	%	88.5	11.5	<b>100</b>
	<b>Total</b>	<b>854</b>	<b>1146</b>	<b>2000</b>
	%	42.7	57.3	<b>100</b>

## Distribution of Households by Source of Cattle Feed Fodder

**Table: 4.60**

Sl. No.	Name of the District	Govt.	NGO	Not Received	Total
1	BALASORE	0	0	200	<b>200</b>
	%	0.00	0.00	100.00	<b>100.00</b>
2	BHADRAK	1	23	176	<b>200</b>
	%	0.50	11.50	88.00	<b>100.00</b>
3	CUTTACK	1	0	199	<b>200</b>
	%	0.50	0.00	99.50	<b>100.00</b>
4	DHENKANAL	2	0	198	<b>200</b>
	%	1.00	0.00	99.00	<b>100.00</b>
5	GANJAM	64	7	129	<b>200</b>
	%	32.00	3.50	64.50	<b>100.00</b>
6	JAGATSINGHPUR	118	32	50	<b>200</b>
	%	59.00	16.00	25.00	<b>100.00</b>
7	JAJPUR	166	0	34	<b>200</b>
	%	83.00	0.00	17.00	<b>100.00</b>
8	KENDRAPARA	123	20	57	<b>200</b>
	%	61.50	10.00	28.50	<b>100.00</b>
9	KHURDA	116	6	78	<b>200</b>
	%	58.00	3.00	39.00	<b>100.00</b>
10	PURI	179	0	21	<b>200</b>
	%	89.50	0.00	10.50	<b>100.00</b>
	<b>Total</b>	<b>770</b>	<b>88</b>	<b>1142</b>	<b>2000</b>
	%	38.50	4.40	57.10	<b>100.00</b>

## Electrification

In about 70% of the villages, the power remained disrupted for over 6 months. The disruption was over 1 year period in case of 28% of the villages surveyed. Prior to the super cyclone 1/4<sup>th</sup> of the households surveyed had domestic consumption of electricity that increased to 41% after the super cyclone.

**Distribution of Households by Disruption of Power**

**Table: 4.61**

Sl. No.	Name of the District	< 6 MTH	6 - 12 MTH	> 12 MTH	Total
1	BALASORE	64	41	95	<b>200</b>
	%	32.00	20.50	47.50	<b>100.00</b>
2	BHADRAK	63	0	137	<b>200</b>
	%	31.50	0.00	68.50	<b>100.00</b>
3	CUTTACK	169	0	31	<b>200</b>
	%	84.50	0.00	15.50	<b>100.00</b>
4	DHENKANAL	190	0	10	<b>200</b>
	%	95.00	0.00	5.00	<b>100.00</b>
5	GANJAM	103	0	97	<b>200</b>
	%	51.50	0.00	48.50	<b>100.00</b>
6	JAGATSINGHPUR	129	11	60	<b>200</b>
	%	64.50	5.50	30.00	<b>100.00</b>
7	JAJPUR	182	0	18	<b>200</b>
	%	91.00	0.00	9.00	<b>100.00</b>
8	KENDRAPARA	172	0	28	<b>200</b>
	%	86.00	0.00	14.00	<b>100.00</b>
9	KHURDA	139	1	60	<b>200</b>
	%	69.50	0.50	30.00	<b>100.00</b>
10	PURI	171	0	29	<b>200</b>
	%	85.50	0.00	14.50	<b>100.00</b>
	<b>Total</b>	<b>1382</b>	<b>53</b>	<b>565</b>	<b>2000</b>
	%	69.10	2.65	28.25	<b>100.00</b>



### Distribution of Households by Current Electrification Status

Table: 4.62

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	155	45	<b>200</b>
	%	77.5	22.5	<b>100</b>
2	BHADRAK	137	63	<b>200</b>
	%	68.5	31.5	<b>100</b>
3	CUTTACK	62	138	<b>200</b>
	%	31	69	<b>100</b>
4	DHENKANAL	37	163	<b>200</b>
	%	18.5	81.5	<b>100</b>
5	GANJAM	96	104	<b>200</b>
	%	48	52	<b>100</b>
6	JAGATSINGHPUR	76	124	<b>200</b>
	%	38	62	<b>100</b>
7	JAJPUR	47	153	<b>200</b>
	%	23.5	76.5	<b>100</b>
8	KENDRAPARA	46	154	<b>200</b>
	%	23	77	<b>100</b>
9	KHURDA	128	72	<b>200</b>
	%	64	36	<b>100</b>
10	PURI	36	164	<b>200</b>
	%	18	82	<b>100</b>
	<b>Total</b>	<b>820</b>	<b>1180</b>	<b>2000</b>
	%	41	59	<b>100</b>

## Distribution of Households by Electrification Status before Cyclone

**Table: 4.63**

Sl. No.	Name of the District	Yes	No	Total
1	BALASORE	89	111	<b>200</b>
	%	44.5	55.5	<b>100</b>
2	BHADRAK	70	130	<b>200</b>
	%	35	65	<b>100</b>
3	CUTTACK	36	164	<b>200</b>
	%	18	82	<b>100</b>
4	DHENKANAL	16	184	<b>200</b>
	%	8	92	<b>100</b>
5	GANJAM	96	104	<b>200</b>
	%	48	52	<b>100</b>
6	JAGATSINGHPUR	66	134	<b>200</b>
	%	33	67	<b>100</b>
7	JAJPUR	17	183	<b>200</b>
	%	8.5	91.5	<b>100</b>
8	KENDRAPARA	26	174	<b>200</b>
	%	13	87	<b>100</b>
9	KHURDA	61	139	<b>200</b>
	%	30.5	69.5	<b>100</b>
10	PURI	33	167	<b>200</b>
	%	16.5	83.5	<b>100</b>
	<b>Total</b>	<b>510</b>	<b>1490</b>	<b>2000</b>
	%	25.5	74.5	<b>100</b>

## Benefits under Govt. Programme/Scheme

There has been an increasing trend of benefits provided to the cyclone affected people under the Govt. Schemes/Programmes such as Indira Awas Yojana, Swarna Jayanti Swarojgar Yojana, etc. The number of persons benefiting under the programmes/schemes is found increased from 176 in 2000 to 218 in 2001 and 874 in 2002.

A little less than 1/5<sup>th</sup> of the households surveyed reported to have been benefited under the Indira Awas Yojana. An equal proportion of the households are found covered under the SGSY scheme.

People's Organisations are found formed in almost all the villages surveyed. Over 55% of the households reported membership in the Self Help Groups. An insignificant number (5) of households, all in Jagatsinghpur district reported membership in the community based disaster preparedness committee.

### Distribution of Households by No. of Families Benefited under Govt. Scheme/Programmes

**Table: 4.64**

Sl. No.	Name of the District	Year			Total
		2000	2001	> 2002	
1	BALASORE	0	40	151	191
2	BHADRAK	5	34	146	185
3	CUTTACK	17	48	52	117
4	DHENKANAL	5	26	18	49
5	GANJAM	2	1	102	105
6	JAGATSINGHPUR	53	36	88	177
7	JAJPUR	42	11	48	102
8	KENDRAPARA	41	7	61	109
9	KHURDA	10	15	72	97
10	PURI	1	0	136	137
	<b>Total</b>	<b>176</b>	<b>218</b>	<b>874</b>	<b>1269</b>

**Distribution of Households Reporting Benefits under Govt. Scheme**

**Table: 4.65**

Sl. No.	Name of the District	No. of Persons Benefited			
		I.A.Y.	Annapurna	SGSY	Total
1	BALASORE	55	0	55	110
	%	14.59	0.00	14.29	14.29
2	BHADRAK	85	5	90	180
	%	22.55	62.50	23.38	23.38
3	CUTTACK	1	0	1	2
	%	0.27	0.00	0.26	0.26
4	DHENKANAL	0	0	0	0
	%	0.00	0.00	0.00	0.00
5	GANJAM	0	0	0	0
	%	0.00	0.00	0.00	0.00
6	JAGATSINGHPUR	54	1	55	110
	%	14.32	12.50	14.29	14.29
7	JAJPUR	57	1	58	116
	%	15.12	12.50	15.06	15.06
8	KENDRAPARA	83	1	84	168
	%	22.02	12.50	21.82	21.82
9	KHURDA	40	0	40	80
	%	10.61	0.00	10.39	10.39
10	PURI	2	0	2	4
	%	0.53	0.00	0.52	0.52
	<b>Total</b>	<b>377</b>	<b>8</b>	<b>385</b>	<b>770</b>
	%	48.96	1.04	50.00	100.00

**Distribution of Households by Existence of Pos**

**Table: 4.66**

Sl. No.	Name of the District	Membership in People Organisations		
		VDC	SHG	CBDP
1	BALASORE	70	130	0
2	BHADRAK	2	131	0
3	CUTTACK	0	34	0
4	DHENKANAL	6	85	0
5	GANJAM	23	176	0
6	JAGATSINGHPUR	49	117	5
7	JAJPUR	0	62	1
8	KENDRAPARA	5	99	0
9	KHURDA	1	119	2
10	PURI	2	176	22
	<b>Total</b>	<b>158</b>	<b>1129</b>	<b>30</b>

**Formation of Exclusive Nodal Agency:**

It was only after the Super Cyclone that the need for an exclusive nodal agency with a more comprehensive mandate to address itself to natural calamities was felt. In the year 1999, Orissa State Disaster Mitigation Authority (OSDMA) was instituted, with a view to planning strategies for monitoring relief operations and rehabilitation programmes in the event of natural disasters.

Orissa State Disaster Mitigation Authority (OSDMA) was set up as an autonomous organisation vide Finance Department Resolution No. IF (C)-74/99. 51779/F Dated the 28<sup>th</sup> December 1999. It was registered under Societies Registration Act 1860 on 29/12/1999 as a non-profit making institution for the interest of the people of Orissa, with its headquarters at Bhubaneswar and jurisdiction over the whole State. Currently, the Department of Revenue is the administrative department of OSDMA (Revenue Department Resolution No. 39373/R dated the 26<sup>th</sup> August 2000).

The main objectives of OSDMA are to:

- (a) act as the nodal agency for disaster reconstruction works;
- (b) Co-ordinate with the line departments involved in reconstruction;
- (c) Co-ordinate with bi-lateral and multi-lateral aid agencies;
- (d) Co-ordinate with UN Agencies, International, National and State-level NGOs;
- (e) promote disaster preparedness at all levels in the State;
- (f) Network with similar and relevant organisations for disaster management.

OSDMA's initiatives were focused on coordinating reconstruction/strengthening of damaged infrastructure; facilitating rehabilitation of disaster affected families and communities; improving emergency response mechanisms; and strengthening

preparedness through appropriate policy, planning, and implementation in collaboration with various govt. and non-govt. agencies. The State and the Central Government apart, OSDMA received financial support from different sources including the World Bank. Activities assisted by World Bank included restoration of damaged infrastructure including roads, embankments; setting up of agro service centres to boost farm-based livelihoods; construction of multi-purpose cyclone shelters; and restoration of social capital in cyclone-hit areas with a view to strengthening “community cohesion” for disaster preparedness.

### ***Cyclone Reconstruction***

Co-ordinating and facilitating reconstruction activities in the cyclone affected districts was one of OSDMA’s major preoccupations during 2000-2001. The agreement signed with World Bank for a soft credit amounting to Rs. 235.00 crore was a significant development. It was carved out of the existing Water Resource Consolidation Project (OWRCP). The sector-wise break-up of the programme was as follows:

1.	Roads of Works Department/R.D. Department/ Urban Local Bodies	Rs. 111.30 Crore
2.	Irrigation and Floor Protection Measures	Rs. 73.70 Crore
3.	Urban and Rural Water Supply	Rs. 14.20 Crore
4.	Agro Service Centres	Rs. 10.00 Crore
5.	Cyclone Shelters	Rs. 20.00 Crore
6.	Disaster Management, Consultancy, Contingency, etc.	Rs. 5.80 Crore

In the middle of 2000, OSDMA was entrusted with a project for construction of one school building in each of the cyclone-affected 128 blocks in 14 districts with assistance from Chief Minister’s Relief Fund. Three Public Sector Undertakings of the State – IDCO, OCC and OB & CC – were given the responsibility of implementing the project. IDCO was given the work of constructing 70 High School buildings in 8 districts. OB & CC was given the responsibility of building 29 in 3 districts and OCC, 29 in 6 districts. The construction of each school building was fixed at Rs. 10.00 lakh. Later, the amount was increased to Rs. 10.60 lakh so that a parapet, a room etc. could be added to the building. These

buildings are all double storied concrete structures, which can be used as shelters during cyclones and floods. Further, an amount of Rs. 12.80 crore was recommended in favour of OSDMA for improvement of 211 health institutions in 128 blocks of 14 districts. The improvement included construction of additional rooms for the PHCs, staff quarters, water supply, etc.

OSDMA played the role of facilitator in the reconstruction works undertaken by other State Governments, and NGOs. During the year 2000 – 2001, Maharashtra Government had started the reconstruction of 45 high school buildings in Jagatsinghpur, Khurda and Cuttack districts. In Kendrapara district, Karnataka Government undertook the reconstruction of 41 high schools. Out of 26 high school buildings which CASA undertook to construct in Balasore, Khurda, Jagatsinghpur and Kendrapara districts, 5 were completed during 2000 – 2001. Ramakrishna Math, Puri constructed one school building in Puri district, whereas NGOs such as Ramakrishna Mission, Bebartha Harihar foundation, ADRA India, and Times Response took up the reconstruction of school buildings in different parts of the cyclone affected districts in the State.

## **Disaster Preparedness Initiatives**

As a part of the disaster preparedness initiative, OSDMA launched a pilot project on Community Based Disaster Preparedness in collaboration with UNDP. The objectives of the programme were (a) to improve disaster preparedness at the village level; (b) to enhance people's ability to cope with disasters; (c) to build capacities of local communities in order to enable them to restore normalcy after disasters; (d) to enable Gram Panchayats to play a pro-active role in disaster management; (e) to promote multi-hazard preparedness and develop management plans at Block and Gram Panchayat levels to guide community response to emergencies. The ten blocks where the project was initiated were Astarang, Bahanaga, Baliana, Balikuda, Ersama, Ganjam, Kujang, Kantapada, Mahakalpada and Rajnagar. The Project Highlights are as follows:

- 10 Block Disaster Management Committees formed.
- 332 Block Disaster Management Committee members trained



- 10 Multi-hazard Block Disaster Management Plans Prepared.
- 205 Gram Panchayats Block Disaster Management Committees prepared.
- 205 Gram Panchayats Block Disaster Management Plans for formed.
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- 10 Block Disaster Management information Centres strengthened.
- 10 GP Disaster Management Information Centres strengthened.
- 9 Earthen Mounds constructed in low-lying areas to be used as safe place during flood season.
- 693 Volunteers trained in operation of HAM equipments.
- 106 Mock-Drills conducted in 10 blocks with all task force members.

Several NGOs, national and international, also came forward to initiate disaster preparedness activities, especially community based disaster preparedness programmes, in the areas where they had undertaken relief and rehabilitation works earlier. These included, among others, CASA (**Clean Air Strategic Alliance**), CRS (**Christian Relief Service**), Action-Aid, LWS (**Lutheran World Federation**), between these organisations and various government agencies.

### **Volunteers' Training**

1,536 were provided training on how to prepare community contingency plans. 880 community contingency plans were completed, and out of these, 269 were approved by Palli Sabhas. Training programmes for the task force constituted from the village preparedness exercises were held at regular intervals.

### **Community Contingency Fund**

200 Community Contingency Funds were created with membership subscription, and donations from the villagers.

Mock Drills: Mock drills were conducted in 22 villages.

### **Gram Panchayat Disaster Management Plan**

96 GP Disaster Management Committees were formed. Members of 77 committees were trained.

### **Training for PRIs**

As Panchayati Raj Institutions play a key role in the development of disaster management plans, they are given training on disaster management. An orientation programme on disaster preparedness was held for the newly elected chairpersons of the ten pilot blocks on March 15, 2002.

### **Block Disaster Management Plan**

Block Disaster Management Plans have been prepared for 6 blocks.

### **Disaster Risk Management Programme**

In order to reduce the vulnerability of communities to natural hazards, Government of India and United Nations Development Programme signed an agreement in August 2002 to implement **Disaster Risk Management Programme** in identified multi-hazard prone areas. Its objectives are:

- i) Environment building, education, awareness programmes and strengthening the capacity at all levels in natural disaster risk management and sustainable recovery;

- ii) Multi-hazard preparedness, response and mitigation plans for the programme at state, district, block, grampanchayat and village/ward levels in select programme states and districts; and
- iii) Networking knowledge on effective approaches, methods and tools for natural disaster risk management, developing and promoting policy frameworks.

The disaster risk management plan starts at the village level and was consolidated through similar planning at the panchayat, block, district and urban local body levels in selected districts. Plans at the village level were prepared by a cadre of volunteers and those at other levels by the concerned Disaster Management Teams. The plans focus on disaster risk prevention and recovery through community based preparedness and response plans; skill development for construction of hazard-resistant housing and enhanced access to information as per the need of the community.

### **Training/Capacity Building**

Training of trainers at the state, district and block levels to enhance the capacity of the DMC was conducted. Specialized training to Disaster Management Teams, exposure visit of Government Officials, PRIs and DMTs. Studies, research and workshops were conducted at the state level. Training manuals, standard operating procedures and documentation on best practices were made.

### **DRM Plan**

Multi-hazard risk management plans were prepared by trained volunteers at the village, grampanchayat, block, district and state levels. Mock drills were carried out to ascertain the feasibility of the plan.

In Orissa, the **Community-based Disaster Management programme** was implemented in ten blocks of seven coastal districts on pilot basis. This has been scaled up under Disaster Risk Management (DRM) programme and is being implemented in disaster prone blocks of eleven districts. This programme was launched in Orissa in October

2002. Collectors and Project Directors, DRDAs are the nodal officers at the district level; BDOs look after the implementation of the programme at the block level with the help of PRIs, local NGOs and CBOs.

By the end of June 2003, 16,886 villages under 2,184 Gram Panchayats in 95 blocks have been covered. Block Disaster Management Committees have been formed in all the 95 blocks where the programme has started; 914 persons have participated in the training programmes undertaken in 40 blocks. 11 blocks have prepared draft preparedness plans. Gram Panchayat Disaster Management Committees have been formed in 269 grampanchayats and 2,291 persons have participated in the training programmes. 439 Village Disaster Management Committees have been formed with the approval of Palli Sabhas.

<b>Activity</b>	<b>Progress</b>
Blocks programmed	95
GPs programmed	2184
Villages programmed	16865
Training of DDMC No. of participants	260
BDMC formed: No. of Blocks	95
BDMC training: No. of Blocks	40
BDMC Training: Participants	914
Draft preparedness plan: No of Blocks	11
PRIs training: Nos.	2499
No. of blocks where volunteers trained	61
No. of Volunteers trained (CCP)	2281
No. of Volunteers trained (First Aid)	542
No. of Volunteers trained (Search & Rescue)	493
GPDMC constituted and training: No. of GPs	269
No. of GP DMC training participants	2291
GPDM plan prepared & approved	1
VDMC approved by Palli Sabh: Nos.	439
Community fund generated: No. of Vills	139

## **Social Capital Restoration Programme**

**Social Capital Restoration Programme (SCRP)** is an important sub-project being implemented with World Bank assistance. SCRCP mainly aims at “improving community cohesiveness” through group and community-based initiatives in cyclone-hit areas. SCRCP will make use of existing social capital and generate more that will strengthen present and future preparedness and development imitativeness.

Social Capital refers to societal norms and ties enhancing cooperation, trust, and mutual help in the community. In addition to human, material, and financial resources, social capital is considered a key factor of successful development activities. Social Capital also plays a positive role in strengthening community-based emergency response and post-disaster recovery activites through cooperative initiatives involving people’s participation and ownership. Strengthening existing community-based organisations and facilitating their engagement in local initiatives will have a positive role in making vulnerable livelihoods disaster resilient; in enhancing community preparedness, facilitating greater involvement of local government in disaster management; and in enabling vulnerable groups such as women, scheduled tribes and castes to reduce their vulnerability to disasters. A major benefit of such initiatives will be in terms of ensuring sustainable community management of multi-purpose cyclone shelters set up in localities vulnerable to natural disasters.

The process of social capital restoration would centre around strengthening existing community-based organisation (CBO) such as women self help groups, youth and interest group organisations including cooperatives of farmers, fisher folk, milk producers, weavers, artisans, and wage labourers, initiatives. Establishing horizontal and vertical linkages with local institutions and local representatives bodies were key aspects of the project. SCRCP would also focus on capacity building of Panchayati Raj Institutions to strengthen their participation in management of cyclone shelters, community development, partnership with NGOs, well-established registered CBOs with considerable experience in grassroots development and expertise in community based disaster preparedness.

## **Objectives of SCRP**

SCRP focuses on steps to enhance 'social cohesiveness' of the cyclone affected communities and restore capacities of affected families and groups so that they are able to overcome material losses and psychological trauma caused by the cyclone, reduce their social and economic vulnerability and enable them to cope with future disasters. The major objectives of SCRP are as follows:

- Strengthening existing CBOs, Cooperatives, and other such interest groups, Gram and Palli Sabhas to cope with disasters through community based training and awareness raising programmes related to all aspects of disaster management including disaster preparedness.
- Skills and vocational training of members of CBOs including self-help groups, Youth Groups, Cooperatives, etc. for various types of skill improvement for income-generating activities.
- Fostering civic engagement and enlarging public sphere through community initiatives which may involve activities such as restoration/creation of community assets such as village ponds, and other such water bodies, community woodlots/plantations, and Panchayat Ghar (Village Council House) and organisation of Community Seed/Grain Banks.
- Organisation and strengthening of Cyclone Shelter Maintenance and Management Committees (CSMMCs) for management of MCS as community development centre.
- Provision of psychological counseling for traumatized disaster affected persons; and strengthening community-based disaster mental health care preparedness through capacity building and awareness raising activities.

## **Assistance available under SCRP?**

- Making vulnerable farm-based livelihoods disaster resilient through innovative community-based initiatives.
- Stabilizing livelihoods of vulnerable families against the threat of disasters;
- Community initiatives (work camps) for restoring community assets damaged by disaster and for creating new assets to improve disaster resilience of the community;
- Strengthening people's capacities and skills for adopting alternative building technologies for disaster resilient construction activities;
- Strengthening women's participation in development and preparedness initiatives;
- Addressing special needs of vulnerable groups strengthening their participation in collective development and disaster preparedness initiatives;
- Strengthening the role of local governance in disaster management;
- Strengthening community-based disaster preparedness, environmental management for reducing disaster impact, psycho-social intervention for disaster impact mitigation and preparedness;
- Innovative community based initiatives aimed at strengthening civic engagement at the grassroots;

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**SUMMARY FINDINGS**

- The study was conducted in 100 villages, 10 in each of 10 selected districts of Orissa, hit by the supercyclone of 1999. Almost all the villages are located in coastal plane. In each selected village, 20 households were selected for the quantitative survey.
- The average population size of the village is arrived at 2300 with 803 female per 1000 male. Over 60% of the village population belongs to the General Castes including Other Backward Classes. The backward Schedule Caste constitutes over 1/3<sup>rd</sup> of the total population. However, the incidence of Schedule Tribe population is insignificant (6%). Over 1/3<sup>rd</sup> of the households (36%) are below the poverty line.
- Loss of human life is reported in all the study districts. The highest 2558 out of 2673 (95.7%) is reported from Jagatsinghpur district followed by Kendrapara and Puri as per the village survey. 165 out of 213 deaths are reported by the study households in the Jagatsinghpur district followed by Kendrapara (18).

Exgratia has been disbursed for a little above 1/3<sup>rd</sup> (34.23%) of the deceased as reported at the village level. In contrast, the household level survey revealed that in over 90% of the cases the exgratia has been received.

- Loss of livestock like cattle, goat, sheep, pig etc. is reported in all the districts. Over 50% of the deaths of buffalo, 47% of bullocks and 31% of cow populations are reported in Jagatsinghpur district alone. As per the household survey the largest number of death of livestock is reported among the goats (2743) followed cows (1121). The incidence of deaths among bullocks (691) and sheep (531) is quite significant.



- Over 35000 houses are reported damaged in the selected study villages, nearly 2/3<sup>rd</sup> being completely damaged and the remaining one- third partially. The non-residential houses are also reported damaged in all the study villages, over 50% of them being completely damaged.

As per the household survey over 98% of the households reported loss/damage of the houses. About 90% of the households reportedly received compensation for the loss/damage of the dwelling houses.

- Land is reported damaged in all the study districts, predominantly in Jagatsinghpur, followed by Bhadrak district. As high as 78% of the households surveyed reported damage of non-irrigated land of less than one acre. Damage of irrigated land less than one acre is reported by about 86% of the households.
- The supercyclone caused extensive damage to farm implements like plough, pump sets, pump houses etc. As many as 2520 ploughs, 98 pump sets, 38 sprayers are reported lost/damaged by the study households. Over 3/4<sup>th</sup> of the households reported loss of implements valued less than Rs. 1,000, another 17% reporting loss between Rs. 1,000 and Rs. 2,500. The study villages acquired 27,293 ploughs, 181 pump sets, 283 sprayers in the post cyclone period against the reported damage of 39,375 ploughs, 396 pump set, 2515 sprayers.
- The supercyclone caused heavy damage to the traditional crafts like fishing, weaving, pottery etc. Loss of fishing nets, boats etc. are reported lost/damaged in all the study districts except non-coastal Dhenkanal district. In 41 out of 56 villages reporting loss, the value of loss is estimated over Rs. 25,000 per village.

Nearly 50% of the households (914 out of 2000 households) reported loss/damage of traditional crafts. The majority 359 households reported the estimated loss above Rs. 10,000 followed by 244 households reporting loss less than Rs. 2,500. As many as 181

and 130 households reported loss in the range of Rs. 2,500 – Rs. 5,000 and Rs. 5000 – Rs. 10000 respectively.

172 households out of 914 households reporting loss have received compensation varying from Rs. 2,500 (108 households) to Rs. 2,500 - Rs. 5,000 (235 households), Rs. 5,000 – Rs. 10,000 (24 households) and Rs. 10,000 and above (5 households).

The source of compensation is predominantly the Govt., 126 out of 172 receiving compensation from the Govt agencies. The corporate sector (26) and the non-government organisations (20) are found providing financial assistance for rebuilding the traditional crafts lost/damaged.

- Paddy claimed over 90% (31033 out of 34303 Acres) of the crop land damaged by the super cyclone followed by cash crops (1891 acres) as per the village survey.

The crop is reported damaged by all the 2000 households surveyed, 64% reporting damage fully and 36% partial. Silting (99%) is reported as the principal cause of crop damage. only 48 out of 2000 households (2.40%) reported receiving compensation for the crop damage.

- Almost all the villages reported damage of food stuff meant for Mid Day Meal in the schools and supplementary feeding in the Anganwadi Centres. Over 2/3<sup>rd</sup> of the villages reported the MDM damage valued at/below Rs. 1,000. Damage of food stuff valued over Rs. 5,000 is reported by 17% of the villages. Nearly 3/4<sup>th</sup> of the villages reported damage of supplementary feeding of the Anganwadi Centres valued at/below Rs. 1,000. The estimated value of damage between Rs. 1,000 to Rs. 5,000 is reported by over 1/5<sup>th</sup> of the villages
- All the villages surveyed reported reconstruction of the drinking water sources such as open well and tube wells. There have been in all 367 public and 1664 private open wells reconstructed /repaired in the surveyed 100 villages after the super cyclone. As

many as 590 community tube wells and 1079 private tube wells are found reconstructed in the surveyed villages.

- Sanitary facilities like individual household latrines, community latrines and institutional latrines are found constructed in almost all the villages except in the villages of Puri district. 2253 individual latrines and 48 institutional latrines are found constructed in the 90 villages spread over 9 districts of Orissa.

- Over 90% of villages surveyed reported reconstruction of the education facilities – Primary Schools (118), ME Schools (64) and High Schools (48).

Over 60% of the villages surveyed reported damage of furniture and drinking water sources that have been completely rebuilt after the super cyclone.

Peripheral health care facilities such as Health Sub-Centre building, dispensary buildings were reported damaged in 6 out of the 100 villages and these houses have been rebuilt. Drinking water sources are found reconstructed in all the villages reporting damage. In 18 out of 20 villages, the health centre furniture have been acquired.

In about 70% of the villages, the power remained disrupted for over 6 months. The disruption was over 1 year period in case of 28% of the villages surveyed. Prior to the super cyclone 1/4<sup>th</sup> of the households surveyed had domestic consumption of electricity that increased to 41% after the super cyclone.

- 44% of the households surveyed reported attending free kitchen. The Govt. and the NGO in equal proportion are found providing free kitchen facilities.

Almost all the households surveyed reported receiving food material mostly from the Govt. sources (94.55%).

Over 2/3<sup>rd</sup> of households reported receiving clothes largely supplied by the Govt. agencies (46.50%). 60% of the households surveyed reported receiving health care attention mostly provided by the Govt. health facilities.

43% of households surveyed reported receiving cattle feed largely supplied by the Govt. agencies.

- There has been an increasing trend of benefits provided to the cyclone affected people under the Govt. Schemes/Programmes such as Indira Awas Yojana, Swarna Jayanti Swarajgar Yojana, etc. The number of persons benefiting under the programmes/schemes is found increased from 176 in 2000 to 218 in 2001 and 874 in 2002.

A little less than 1/5<sup>th</sup> of the households surveyed reported to have been benefited under the Indira Awas Yojana. An equal proportion of the households are found covered under the SGSY scheme.

People's Organisations are found formed in almost all the villages surveyed. Over 55% of the households reported membership in the Self Help Groups. An insignificant number (5) of households, all in Jagatsinghpur district reported membership in the community based disaster preparedness committee.

### **Role of the State Government and NGOs:**

The magnitude of the destruction in the wake of the Super Cyclone was so huge that any state would find it difficult to manage and provide relief and rehabilitation effectively. It was the super Cyclone itself which set the Government in a disaster preparedness mode.

Until recently, except some INGOs such as Red Cross, Oxfam, and CARE, NGOs played a small role in disaster response. The little attention paid to NGOs in the Orissa Relief Code could be seen as both cause and effect of the limited role hitherto played by NGOs in the disaster response process. NGOs emerged in large numbers in the 1980's in the state and took up community development work in interior areas. The twin cyclones of 1999, however, radically changed the scenario when NGOs responded to the disaster by engaging themselves in emergency response as well as rehabilitation.

The state was simply not prepared for such a massive disaster. NGOs active in Orissa responded to the 1999 cyclone in three phases: immediate, short-term, and long term. In the immediate phase, the NGO response focused on emergency food relief, carcass

disposal, temporary shelter, emergency medical aid, debris removal and habitat restoration, trauma counseling, and raising awareness for reconstruction.

The second phase, which was actually an extension of the initial relief phase, focused on interim food security, restoration of community assets, revival of schools, social mobilisation and group formation. The third phase focussed on livelihood restoration, multi-purpose cyclone shelters, and community based disaster preparedness.

In the immediate phase NGOs ran community kitchens in hundreds of villages providing cooked food to people. Professional NGOs utilised such food relief to initiate immediate restoration activities in partnership with local communities, which included clearing village roads, schools, cleaning water sources, disposing carcasses, etc. Alongside the State Health Department and visiting medical teams from other parts of the country, NGOs provided medical aid to the ailing cyclone victims by running mobile health camps. Preventive measures taken by NGOs included distribution of medicine, and efforts to raise disaster health awareness amongst people by organising community health camps. The government provided temporary shelter building materials to all affected families.

Some NGOs also distributed temporary shelter materials among people soon after the cyclone. Rejuvenating people's spirits and raising awareness about reconstruction challenges was an important part of NGO intervention. Death and devastation had filled the victims with a sense of gloom. Cases of depression and trauma were reported in many affected villages. Some NGOs tried to raise people's depressed spirits by organising street theatres and participatory cultural shows, while some others set up Trauma Care Centres and undertook trauma counselling in worst affected villages. Some NGOs ran Legal Aid Centres to sensitise people about their rights to compensation offered by the Govt. NGOs Regional Workshop on Networking and Collaboration among NGOs.

Major NGO short-term rehabilitation activities included food security, creation of community assets, reviving schools, social mobilisation and group formation,

During this period, some NGOs carried out participatory impact and need assessment studies to prepare rehabilitation action plans. Children received special attention of NGOs, as efforts were made to ensure community based rehabilitation of orphan children at Mamata Grihas (transit houses). Many NGOs set up community day care centres for orphan children where widows and single women worked as matrons.

NGOs formed village development committees to coordinate restoration and rehabilitation initiatives at the community level.

NGOs that could mobilise resources went ahead with long-term rehabilitation initiatives even as others withdrew from the scene. Restoration of farm and non-farm livelihoods, construction of schools cum cyclone shelters, and initiatives to strengthen community based disaster preparedness were highlights of rehabilitation efforts made by NGOs. NGOs tried to restore livelihoods of worst affected farming families by extending support to farmers' groups in the form of seeds, implements, tillage, irrigation facilities, and training. Some NGOs including CARE took special measures to restore non-farm livelihoods, which focused on fishermen, handloom weavers, artisans, etc. Others facilitated income-generating activities by artisans, craftsmen, and the poor. Promoting micro-credit activities among women groups and facilitating their participation in income generating activities formed a part of the rehabilitation efforts of some NGOs.

### **Disaster Preparedness Initiatives:**

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In Orissa, the **Community-based Disaster Management programme** was implemented in ten blocks of seven coastal districts on pilot basis. This has been scaled up under Disaster Risk Management (DRM) programme and is being implemented in disaster prone blocks of eleven districts. This programme was launched in Orissa in October 2002. Collectors and Project Directors, DRDAs are the nodal officers at the district level; BDOs look after the implementation of the programme at the block level with the help of PRIs, local NGOs and CBOs.



**Social Capital Restoration Programme (SCRP)** is an important sub-project being implemented with World Bank assistance. SCRP mainly aims at “improving community cohesiveness” through group and community-based initiatives in cyclone-hit areas. SCRP will make use of existing social capital and generate more that will strengthen present and future preparedness and development imitativeness.

The process of social capital restoration would centre around strengthening existing community-based organisation (CBO) such as women self help groups, youth and interest group organisations including cooperatives of farmers, fisher folk, milk producers, weavers, artisans, and wage labourers, initiatives. Establishing horizontal and vertical linkages with local institutions and local representatives bodies were key aspects of the project. SCRP would also focus on capacity building of Panchayati Raj Institutions to strengthen their participation in management of cyclone shelters, community development, partnership with NGOs, well-established registered CBOs with considerable experience in grassroots development and expertise in community based disaster preparedness.

## Orissa Disaster Rapid Action Force (ODRAF)

There are five units of ODRAF formed out of the State Armed Police at Jharsuguda, Koraput, Cuttack, Chhatrapur and Balasore. The ODRAF is assigned the tasks of evacuation, rescue and emergency services at the time of calamities. The ODRAF units are supposed to use the tools available with Govt. / Public Sector and private agencies for road clearing, earth moving and rescue operations. Apart from these, the following additional equipments are at the disposal of the ODRAF units.

SI. No	Equipment	Quantity
1	Hydraulic Crane 12 Ton capacity	8
2	TATA Truck(Troop carrier)6 Ton capacity	10
3	TATA Truck 12 Ton capacity	4
4	Generator 10KVA	6
5	Concrete cutting equipment	3
6	Generator 5 KVA	9
7	Power Saw with portable power unit	6
8	Tree pruner-cum-chair saw	8
9	Water filter (portable)	20
10	Ramp-2Ton capacity(fabricated) M,S	16
11	Telescopic Aluminum Ladder ( 40 Feet Long)	20
12	Life Jacket	100
13	Life Buoy	100
14	Chain Power Saw(steel 026 model)	4
15	Tractor with Traier	4
16	Inflatable Tower Lighting System with Generator	6
17	Brach Cutting Saw(motor Drive)	3
18	Brach Cutting Saw	6
19	Commando Search Light	10, 4Infra red
20	Mahindra & Mahindra F J -460- DP/4WD Ambulance	1
21	Tata SFC -407/31Ambulance	3
22	GI Trunk	2
23	Wire Ropes and Strings	8 Sets
24	Lifting and Pulling Machines	4
25	Battery Chargers	4
26	Small Tools and Jacks	8 sets

27	Nilon Ropes	600 KG
28	Hydraulic Tipper	5
29	Small Rescue Items Like Rope, carabineers etc	2 sets

## **RECOMMENDATIONS**

- The Disaster Mitigation Policy should address the need to revive and strengthen traditional cropping patterns and varieties that are more resilient against coastal calamities.
- The policy is silent on what livelihood building capacities will be resorted to by the government for non-farm communities, and in what timeframe. The recovery processes are usually delayed and differential for fisherfolk, animal rearers, artisans and weavers.
- Adequate social/livelihood insurance, especially for non-farm communities, should prevail.
- The Orissa Relief Code (ORC) does not address long-term aspects of food insecurity and impact of disasters on women, children, destitute, aged, small farmers and non-farming communities.
- The Disaster Mitigation Policy should lay down (a) standards of entitlements and standards of services that must be humanitarian and based on national Sphere standards for food security.
- The ORC does not take into account community perspectives and preparedness. A disaster mitigation policy should identify interventions that build on existing capacities and coping mechanisms of the people and their institutions. The role of various community institutions in monitoring interventions by the government and other service providers should be legitimized in the Disaster Mitigation Policy.

- Instead of looking at calamity as an ad hoc event, there is a need to connect it to poverty alleviation.
- Right to Disaster Insurance should be another area of legislative action. A proper disaster insurance policy needs to be chalked out in the state involving various insurance companies and creating a separate disaster insurance fund.
- With repeated disasters, there is an urgent need to incorporate disaster management and preparedness as a basic component of all development initiatives.
- In areas identified as disaster-prone, the major thrust in preparing normal developmental plans and strategies should primarily focus on the reduction and elimination of impacts of disasters on the people, their livelihoods and infrastructure. Traditional knowledge and local coping mechanisms should be combined with modern science, technology and information systems to facilitate the proposed planning process.
- One aspect that needs special emphasis is the extremely poor and inadequate communication systems in the affected areas. This crucial aspect, which includes roads, electricity, warning systems and other forms of advanced communications, should be a top priority.
- In the past, there were varieties of paddy that could survive long periods of water logging and flooding. These varieties have nearly disappeared because of the influx of low-height, high yielding varieties. In areas that are flood and cyclone-prone, there is an emergent need to reintroduce such varieties. To do so, these varieties need to be multiplied, propagated and preserved. Similarly, there is a need to link traditional science and culture with modern technology, in rebuilding housing, infrastructure and livelihoods.

- To initiate the process of integration of relief, disaster mitigation and preparedness into normal developmental plans, it is paramount that these three components not be treated as separate from such plans.
- In disaster-prone areas, environmental restoration and regeneration must be given the topmost priority.
- The preventive and preparedness measures should be a part of normal developmental plans.
- There is also an urgent need to facilitate a comprehensive disaster management and preparedness policy with a compatible legal and administrative framework to implement it.
- Though activities like relief and restoration are different from developmental interventions during normal periods, organisations and their personnel should be encouraged to develop a comprehensive intervention policy that includes relief, restoration, rehabilitation and long-term sustainable development as a single package.
- Government officials, especially at the district and block levels, panchayat members, and personnel of NGOs and local organisations should be supported with training and information inputs for incorporating disaster preparedness into all normal developmental activities. Schools and other public institutions could play a very proactive role in disseminating information, in local languages, on disaster preparedness, safeguarding the environment, preventive health measures and responsibilities of various government agencies.
- In areas where there is an absence of effective traditional organisations, NGOs could play a key role in promoting local organisations, separately for men and women, and train them in various aspects of disaster management and preparedness.

- The most vital task at hand is to ensure a high degree of peoples' participation in the disaster coping process. This will assist in rebuilding community confidence and give the people a more scientific rationale to face natural disasters in a prepared and organized manner,
- There is also a need to promote community ownership through village-based micro-planning processes designed for vulnerability reduction. Strategies to reduce human vulnerability to natural hazards should also address issues of poverty and environmental sustainability.
- Social and gender issues need to have a separate focus within disaster management and development planning. Unless such issues are identified, included in the guidelines and enforced, the most vulnerable groups will continue to be the worst affected during natural disasters.
- There should be a comprehensive guidance and monitoring to identify and reduce the existing gaps in the current response mechanism to information, damage assessment and warning systems, decision making, planning and logistic support.
- There is a policy gap in the ORC in stating the full range of vulnerable peoples' entitlements, to employment assurance in a post-disaster situation for recovery. The policy should clearly lay down the various poverty alleviation and employment generating development schemes under the various departments and institutions of the governments.

## Annexure : 1

### **Name of the Persons involve in the Study project In Orissa**

1.	Dr. Nirmal Biswas	:	Director
2.	Subrata kumar kundu	:	Project Coordinator
3.	Subash Panda	:	Project Manager
4.	Akshaya Kumar Kanhar	:	field Co-ordinator
5.	Vaishnab Chran Sahoo	:	field Co-ordinator
6.	Alok Ranjan Dalai	:	Field Investigator
7.	Rudra Prasad Bishoyi -	:	Field Investigator
8.	Sanjaya Kumar Sethy -	:	Field Investigator
9.	Surendra Prasad Mallick	:	Field Investigator
10.	Ram Chandra Mahanty	:	Field Investigator
11.	Srinibas Dala Behera	:	Field Investigator
12.	Jitendra Sahu	:	Field Investigator
13.	Baikuntha Nath Sal	:	Field Investigator
14.	Banwari lal Verma	:	Computer Programmer
15.	Madhu Smita Moharana	:	Data Entry Operator
16.	Deepak Kumar	:	Data Entry Operator
17.	Suchismita Moharana	:	Data Entry Operator
18.	Basudev Majhi	:	Data Analysis
19.	H.K.Das	:	Data Analysis

## **Annexure : 4**

### **LIST OF ABBREVIATIONS**

<b>AFPRO</b>	Action For Food Production
<b>AWW</b>	Angan Wadi Worker
<b>ANM</b>	Auxiliary Nurse Midwife
<b>AWC</b>	Angan Wadi Centre
<b>BDO</b>	Block Development Officer
<b>BPL</b>	Below Poverty Line
<b>CASA</b>	Clean Air Strategic Alliance
<b>CBO</b>	Community Based Organisation
<b>CBDP</b>	Community Based Disaster Preparedness Programme
<b>CCP</b>	Community Contingency Plan
<b>CD</b>	Cross Drainage
<b>CDMO</b>	Chief District medical Officer
<b>CDPO</b>	Child Development Project officer
<b>CRS</b>	Christian Relief Service
<b>DFID</b>	Department for International Development
<b>DRDA</b>	District Rural Development Agency
<b>DRM</b>	Disaster Risk Management
<b>EGS</b>	Education Guarantee Scheme
<b>FGD</b>	Focus Group Discussion
<b>GDP</b>	Gross Domestic Production
<b>GoO</b>	Government of Orissa
<b>H &amp; FW</b>	Health and Family Welfare



<b>ICDS</b>	Integrated Child Development services
<b>IEC</b>	Information Education Communication
<b>LWS</b>	Lutheran World Federation
<b>LIP</b>	Lift Irrigation Points
<b>NGO</b>	Non Governmental Organisation
<b>NFCR</b>	National Fund for Calamity Relief
<b>OC</b>	Other Caste
<b>ORC</b>	Orissa Relief Code
<b>OSCB</b>	Orissa State Cooperative Bank
<b>OSDMA</b>	Orissa State Disaster Mitigation
<b>PHC</b>	Primary Health Centre
<b>PRI</b>	Panchayat Raj Institution
<b>PSU</b>	Public Sector Undertaking
<b>SRC</b>	Special Relief Commissioner
<b>SC</b>	Scheduled Caste
<b>SCRIP</b>	Social Capital Restoration Programme
<b>SHG</b>	Self Help Group
<b>ST</b>	Scheduled tribe
<b>UP</b>	Upper Primary
<b>VLW</b>	Village Level Worker
<b>WCD</b>	Women and Child Development

# EVALUATION OF REHABILITATION AND RECONSTRUCTION PROCESS IN POST CYCLONE, ORISSA

## HOUSEHOLD SCHEDULE

### 1. Household Identification

1.1	State	
1.2	District	
1.3	Block	
1.4	GP	
1.5	Village	
1.6	Hamlet	
1.7	Name of the Head of Household	
1.8	Name of the Respondent	

### 2. Household Background Profile

2.1	Religion	Hindu/Muslim/Christian/Other
2.2	Caste	SC/ST/OBC/OC
2.3	Type of family	Nuclear-1/ Joint-2
2.4	Family Size (nos.)	
2.5	Poverty Status	BPL / APL
	Land Holding Size	<0.25/0.25-1.00/1.00-2.5/2.5-5.00/>5.00
2.6	Major Source of Income	Farm / Non Farm /Trade and Commerce/ Salary / Wage / NTFP / Other

### 3. Demographic profile of Household

Sl.#	Name of the family member	Relation with Head of HH	Age	Sex	Marital Status (M-1/UM-2)	Age at Marriage	Educational qualification (Code)	Current Activity Status (Code)	Occupation
3.1									
3.2									
3.3									
3.4									
3.5									
3.6									
3.7									
3.8									
3.9									
3.10									
3.11									
3.12									

**CODE:**

**Educational qualification:** Illiterate-1, Literate-2, Primary-3, Middle-4, Secondary-5, Plus Two – 6, Graduation and Above-7, Technical-8, Others-9,

**Current Activity Status:** Self-Employed-1, Helper In HH Enterprises-2, Wage Employee-3, Attending School/ College-4, Too Old / Too Young to work-5, Other-6

**Occupation :** 0- non employed, 1- employed, 2- Self employed, 3-student, 4-farmer

#### 4. Loss of Human Life

Sl. No.	Name of the Person Dead	Age	Sex	Cause of Death	Exgratia if Received, Amount	Source of Exgratia	Remarks
4.1							
4.2							
4.3							
4.4							
4.5							

#### 5. Loss of livestock

Sl. No.	Particulars	Number Dead	Cause of Death	Value (in Rs.)	Compensation if Received, Amount	Source of Compensation	Remarks
5.1	Bullock						
5.2	Cow						
5.3	Calve						
5.4	Buffalo						
5.5	Goat						
5.6	Sheep						
5.7	Pig						
5.8	Other						

#### 6. Damage to House

Sl. No.	Type of House	Structure (Pucca/ Semi-Pucca/ Kuchcha)	Extent of Damage	Value (in Rs.)	Compensation if Received, Amount	Source of Compensation	Remarks
6.1	Dwelling Place						
6.2	Cowshed						
6.3	Other						

## 7. Loss of Household Assets

Sl. No	Assets Owned	Unit	Quantity	Value (In Rs.)
7.1	Utensils			
7.2	Clothes			
7.3	Musical Instruments			
7.4	Furniture			
7.5	Ornaments			
7.6	<b>Household durables</b>			
7.7	Torch/Lantern			
7.8	TV/Radio			
7.9	Bullock Cart			
7.10	Cycle/motor cycle			
7.11	Others (Specify)			
7.12				
7.13				
7.14				

## 8. Loss of Trees/Plantation

Sl. No.	Particulars	Extent of Damage	Value of Damage	Compensation if Received, Amount	Source of Compensation	Remarks
1	Trees					
2	Mangroves					
3	Plantation					
4	Orchards					
5	Others					
6						
7						
8						

## 9. Use of Electricity

9.1	Was the house electrified before cyclone?	Yes/No.
9.2	If yes, period of disruption in supply after the cyclone?	
9.3	Is the house currently electrified	Yes/No.

## 10. Agriculture

### 10.1 Land Damaged

Sl. No.	Type of Land	Area in Acres	Cause of Damage (Siltting/ Salination/ Other)	Assistance, if Received, Amount	Source of Assistance	Area Reclaimed	Remarks
10.1.1	Irrigated						
10.1.2	Non-irrigated						
10.1.3	Total						
10.1.4							
10.1.5							
10.1.6							
10.1.7							
10.1.8							

### 10.2 Implements Lost/Damaged

Sl. No.	Particulars	Quantity	Value	Cause of Damage	Assistance, if Received, Amount	Source of Assistance	Remarks
10.2.1	Plough						
10.2.2	Tractor/Tiller						
10.2.3	Pump-set						
10.2.4	Pump House						
10.2.5	Sprayer						
10.2.6	Other						
10.2.7							
10.2.8							
10.2.9							

### 10.3 Crops Loss/Damage

Sl. No.	Particulars	Area in Acres	Extent of Damage	Cause of Damage	Compensation, if Received, Amount	Source of Compensation	Remarks
10.3.1	Paddy						
10.3.2	Millets						
10.3.3	Pulses						
10.3.4	Oil Seeds						
10.3.5	Cash Crops						
10.3.6	Fiber						
10.3.7	Other						
10.3.8							
10.3.9							
10.3.10							

### 10.4 Loss/Damage of Food Stuff

Sl. No.	Particulars	Quantity	Value	Cause of Damage	Assistance, if Received, Amount	Source of Assistance	Remarks
10.4.1	Paddy						
10.4.2	Rice						
10.4.3	Pulses						
10.4.4	Oil Seeds						
10.4.5	Cash Crops						
10.4.6	Others						
10.4.7							
10.4.8							
10.4.9							

### 11. Loss/Damage of Traditional Craft

Sl. No	Craft/ Implements	Quantity	Value (in Rs.)	Compensation, if Received, Amount	Source of Compensation	Remarks
11.1	Fishing					
11.2	Boats					
11.3	Nets					
11.4	Fishing Equipment					
11.5	Weaving					

11.6	Loom					
11.7	Threads					
11.8	Weaving Equipment					
11.9	Pottery					
11.10	Potter's Wheel etc.					
11.11						
11.12						
11.13	Other					
11.14						
11.15						
11.16						

### 12. Health Care Availed Immediately After Cyclone

Sl.#	Name of sick person	Age	Sex	Nature of Illness	Duration of Illness	Type of Care Received	Outcome of Care (Relieved/ Cured/ Other)	Remarks
12.1								
12.2								
12.3								
12.4								
12.5								



### 13. Household Annual Income

Sl. No	Source	Particulars	Total Income (Rs.)
13.1	Agriculture		
13.2	Non-Agricultural Enterprise		
13.3	Trade and commerce		
13.4	Salary		
13.5	Wage Labour		
13.6	Disposing of HH Assets		
13.7	Remittance / Pension etc		
13.8	Others (Specify)		
	<b>TOTAL</b>		

### 14. Household Borrowings

Sl. No.	Source	Amount of Loan (RS.)	Type of loan (Kind / Cash)	Month / Year of Loan	Purpose Investment-1 Consumption-2	Rate of interest	Security	Total Outstanding (Rs)
14.1	Bank							
14.2	Co-operative							
14.3	Money lenders							
14.4	Friends/ Relatives							
14.5	Others							

### 15. Migrations After Cyclone

Sl. No	Name of member migrated	Age	Sex	Place of Migration	Nature of work	Reason
15.1						
15.2						
15.3						
15.4						

### 16. Benefits availed under Govt schemes / program during last five years.

Sl. No.	Name of the Scheme/ Program	No of Persons Benefited	Year	Particulars of benefit availed
16.1	I.A.Y.			
16.2	ANNAPURNA			
16.3	S.G.S.Y			
16.4				
16.5				

### 17. Membership in POs:

Sl. No.	Type of PO	Year of Formation	Membership (Yes/No)	Remarks
17.1	VDC			
17.2	SHG			
17.3	CBDP Program			
17.4				
17.5				

## 18. Relief Received

Sl. No.	Particulars	Yes/No	Source (Govt./NGO)	Duration {Days}	Remarks
18.1	Food Materials				
18.2	Free Kitchen				
18.3	Potable Water				
18.4	Utensil				
18.5	Clothing				
18.6	Health Care				
18.7	ORS				
18.8	Cattle Feed Fodder				
18.9	Others				

# EVALUATION OF REHABILITATION AND RECONSTRUCTION PROCESS IN POST CYCLONE, ORISSA

## VILLAGE SCHEDULE

### 1. Village Identification Particulars:

1.1	State	
1.2	District	
1.3	Block	
1.4	G.P	
1.5	Village	

### 2. Physiographic and Ecological Conditions:

2.1	Physiographic	Hilly/ Plane / Riverine/ Others
2.2	Drainage	Natural efficient/ Marshy/ Others
2.3	Rain Fall	Heavy / Moderate / Scanty
2.4	Settlement Pattern	Linear/ Circular/ Cluster

### 3. Village Demography

3.1	Population by Sex	<b>Male</b>	<b>Female</b>	<b>Total</b>	
3.2	Households by Caste	<b>SC</b>	<b>ST</b>	<b>OBC</b>	<b>Total</b>
3.3	Households by APL/BPL	<b>APL</b>		<b>BPL</b>	

#### 4. Village Amenities / Facilities:

SI No	Facility	Pre-Existing-1 /Post-Existing-2	Extent of use (Commonly/Occasionally/ Rarely)
4.1	Pre-Primary School		
4.2	EGS School		
4.3	Primary School		
4.4	M.E.School		
4.5	High School		
4.6			
4.7	Health Sub-centre		
4.8	PHC (New)		
4.9	ISM		
4.10	Private Clinic/Hospital		
4.11	TBA		
4.12			
4.13	Fair price shop		
4.14	Cooperative		
4.15	Post Office		
4.16	Cyclone Shelter		
4.17	Village Road		
4.18	Village Connecting Road		
4.19	Drainage System		
4.20			

#### 5. Electrification:

SI. No.	Particulars	Pre-Cyclone	Post-Cyclone
4.1	Is the Village Electrified	Yes/No	Yes/No
4.2	No. of Domestic Consumers		
4.3	No. of Commercial Consumers		
4.4	Mode of Commercial Use	Agriculture/ Industry/ Other	Agriculture/ Industry/ Other

## 6. Loss of Human Life

Sl. No.	Age Group	No. of Male	No. of Female	Number Received Exgratia	Reason, if not Received	Remarks
6.1	Below 15					
6.2	15 – 30					
6.3	30 – 45					
6.4	45 – 60					
6.5	Above 60					
	Total					

## 7. Loss of Livestock

Sl. No.	Particulars	No. Dead	No. of HH Reporting Death	No. of HH Receiving Compensation	Remarks
7.1	Bullock				
7.2	Cow				
7.3	Calve				
7.4	Buffalo				
7.5	Goat				
7.6	Sheep				
7.7	Pig				
	Other				

## 8. House Loss/Damage

Sl. No.	House Type	No. Completely Damaged	No. Partially Damaged	Remark
<b>a.</b>	<b>Residential</b>			
	Pucca			
	Semi-Pucca			
	Kuchcha			
<b>b.</b>	<b>Non-Residential</b>			
	School-Building			
	Anganwadi Centre			
	Health Centre			
	Veterinary Centre			
	GP Office Building			
	Community Hall			
	Cooperative Building			
	Shelter House			
	Other			

**9. (a) Village Sanitation**

<b>Sl. No.</b>	<b>Type</b>	<b>No. Fully Damaged</b>	<b>No. Partially Damaged</b>	<b>No. Rebuilt</b>	<b>Source of Support</b>	<b>Remarks</b>
9.1	Individual Household Latrine					
9.2	Community Latrine					
9.3	Institutional Latrine					
9.4	Community Garbage Pits					
9.5	Village Drainage System					
9.6	Other					

**9. (b) Drinking Water:**

<b>Sl. No.</b>	<b>Irrigation Sources</b>	<b>No. Damaged</b>		<b>No. Reconstructed</b>		<b>Source of Support (GO/NGO)</b>
		<b>Public</b>	<b>Private</b>	<b>Public</b>	<b>Private</b>	
9.1	Open Well					
9.2	Tube Well					
9.3	Piped Supply with OHT					
9.4	Other (Specify)					

### 10. Communication System

Sl. No.	Type	Pre-Existing Structure (Earthen/Mohrrum/Black Top)	Extent of Damage (Fully/Partially)	Post-Existing Structure (Earthen/Mohrrum/Black Top)	Source of Support	Remarks
10.1	Village Connecting Road					
10.2	Village Road					
10.3	Other					

### 11. Village Forest/Plantation

Sl. No.	Particulars	Area Damaged (in Acres)	Extent of Damage		Area Regenerated	Source of Support	Remarks
			Fully (in Acres)	Partially (in Acres)			
1	Mangroves						
2	Plantation						
3	Orchards						
4	Others						
5							
6							
7							



## 12. Damage to Agriculture

### 12.1 Land Damaged

Sl. No.	Type of Land	Area in Acres	Cause of Damage (Silting/Salivation/ Other)	Area Reclaimed	Source of Assistance	Remarks
12.1.1	Irrigated					
12.1.2	Non-irrigated					
12.1.3	Total					
12.1.4						
12.1.5						
12.1.6						
12.1.7						
12.1.8						

### 12.2 Loss/Damage of Implements

Sl. No.	Particulars	Quantity	Value	Cause of Damage	No. New Acquired	Source of Assistance	Remarks
12.2.1	Plough						
12.2.2	Tractor/Tiller						
12.2.3	Pump-set						
12.2.4	Pump House						
12.2.5	Sprayer						
12.2.6	Other						
12.2.7							
12.2.8							
12.2.9							

### 12.3 Loss/Damage of Crops

Sl. No.	Particulars	Area in Acres Damaged	Extent of Damage	Cause of Damage	Compensation, if Received, Amount	Source of Compensation	Remarks
12.3.1	Paddy						
12.3.2	Millets						
12.3.3	Pulses						
12.3.4	Oil Seeds						
12.3.5	Cash Crops						
12.3.6	Fiber						
12.3.7	Other						
12.3.8							

### 12.4 Loss of Institutional Food Stuff

Sl. No.	Particulars	Quantity	Value	Cause of Damage	Compensation, if Received, Amount	Source of Compensation	Remarks
12.4.1	AWC						
12.4.2	MDM						
12.4.3	Grain Bank						
12.4.4	Other						
12.4.5							
12.4.6							

### 12.5 Irrigation System

Sl. No.	Irrigation sources	No. Damaged		No. Reconstructed		Source of Support	Remarks
		Public	Private	Public	Private		
12.5.1	Dug well						
12.5.2	LIP						
12.5.3	Bore well						
12.5.4	MIP						
12.5.5	Canal						
12.5.6	Other						

### 19. Traditional Craft

Sl. No	Craft/ Implements	No. of HHs Reporting Damage		Value (in Rs.)	No. of HHs Received Compensation	Amount of Compensation Received	Source of Compensation	Remarks
		Fully	Partially					
19.1	Fishing							
19.2	Weaving							
19.3	Pottery							
19.4	Other							
19.5								
19.6								
19.7								

### 20. Migration:

Sl. No.	Migration Type	No.
20.1	Family migrated after cyclone	
20.2	Persons migrated after cyclone	

### 21. Education System

Sl. No.	School Type	Building Damaged	Building Rebuilt	Furniture Damaged	Furniture Rebuilt	Drinking Water Source Damaged	Drinking Water Source Rebuilt	Remarks
21.1	L.P.							
21.2	U.P.							
21.3	M.E.							
21.4	High School							
21.5	College							
21.6	N.F.E.							
21.7	Others							

## 22. Health System

Sl. No.	Institution Type	Building Damaged	Building Rebuilt	Furniture/ Equipment Damaged	Furniture Rebuilt	Drinking Water/ Sanitation Sources Damaged	Drinking Water / Sanitation Sources Rebuilt	Remarks
22.1	ANM Centre							
22.2	Dispensary							
22.3	PHC (N)							
22.4	I.S.M.							
22.5	Others							

## 23. Civil Society Organizations

Sl. No.	Type of CBO	Year of Formation	Functional Status (Active / Defunct)
23.1	VDC		
23.2	SHG		
23.3	Youth Club		
23.4	Other		

## 24. Community Responses and Preparedness to Disaster

<b>SL. NO.</b>	<b>PARTICULARS</b>
24.1	Is there any Community Contingency Plan for the village? If yes, year of formation.
24.2	What are the Action Groups formed?
24.3	Are the Action Groups trained in disaster risk management and response plan? If yes, Month/year of training, duration, resource persons and venue of training.
24.4	Do the Action Groups/Task Force formed exercise mock drill? If yes, how frequently? How long back the last drill was undertaken?
24.5	What are the emergency Rescue Kits available in the village?