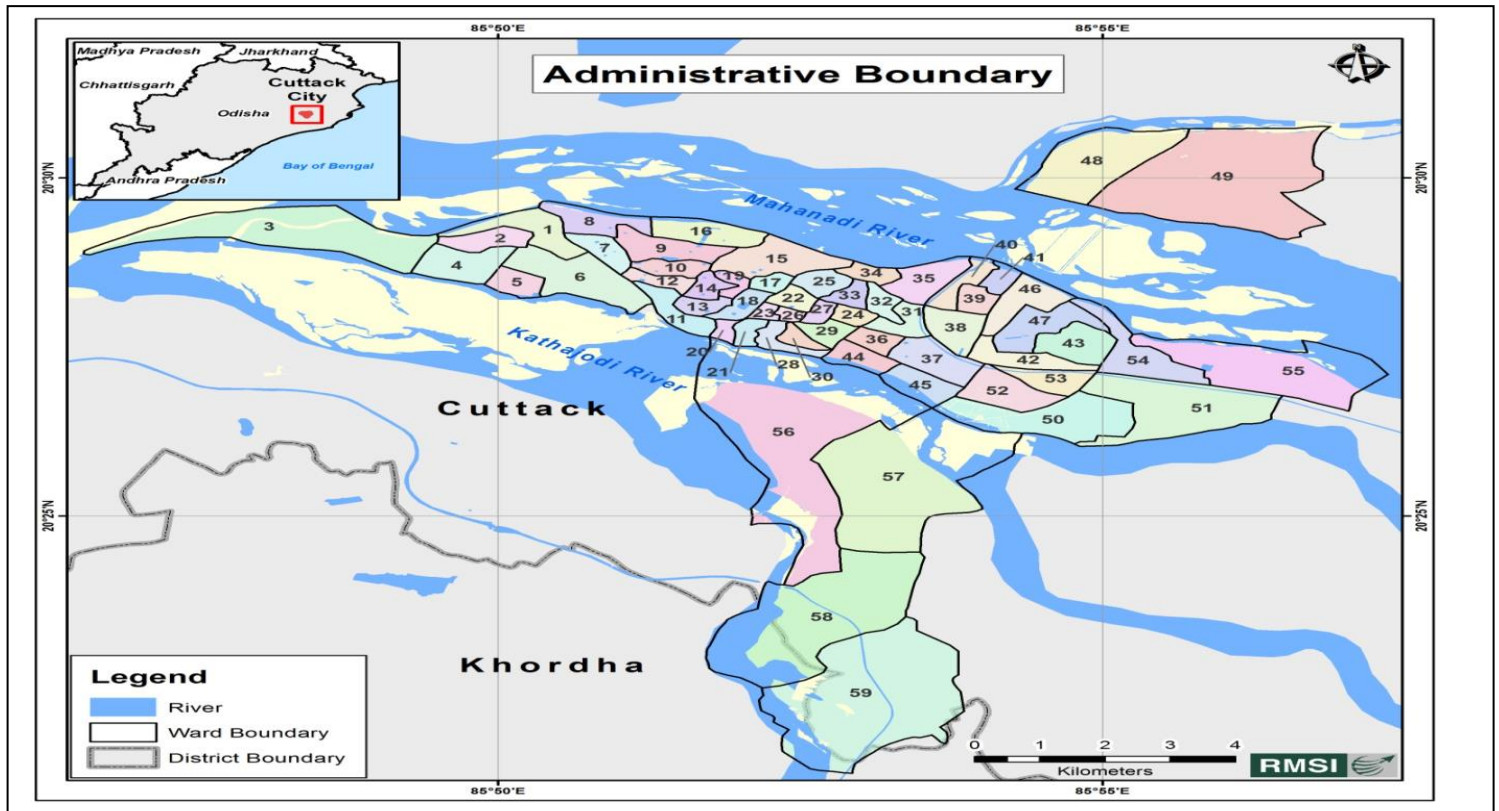


City Disaster Management Plan, Cuttack City-2017-18



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ABBREVIATIONS

ASHA	Accredited Social Health Assistant
AWW	Angan Wadi Workers
CMC	Cuttack Municipal Corporation
BSNL	Bharat Sanchar Nigam Limited
CDMP	City Disaster Management Plan
CHO	City Health Officer
CSO	Civil Society Organization
DCP	Deputy Commissioner Police
DIPRO	District Information and Public Information Officer
DRR	Disaster Risk Reduction
IEC	Information, Education and Communication
JRC	Junior Red Cross
MHA	Ministry of Home Affairs
NCC	National Cadet Corps.
NGO	Non Government Organization
INGO	International Non Government Organization
OSDMA	Orissa State Disaster Management Authority
ULB	Urban Local Body
UNDP	United Nations Development Programme
URR	Urban Risk Reduction
UEVRP	Urban Earthquake Vulnerable Reduction Project

CHAPTER : I

1. Introduction

1.1 Context

The definition of Disaster as per the DMact 2005 is “a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area. Disaster Management (DM) means a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary or expedient for (i) prevention of danger or threat of any disaster; (ii) mitigation or reduction of risk of any disaster or its severity or consequences; (iii) capacity building; (iv) preparedness to deal with any disaster; (v) prompt response to any threatening disaster situation or disaster; (vi) assessing the severity or magnitude of effects of any disaster; (vii) evacuation, rescue and relief and (viii) rehabilitation and reconstruction. It implies the interaction of an external stress or with a human community and it carries the implicit concept of non-manageability. The term is used in the entire range of risk-reduction activities, but it is possibly the least appropriate for response.

Mounting social, economic and cultural losses due occurrence of disaster over the years are causing concern among national and state governments as well as civil society at large. Disaster increase vulnerability of poor people and it has been found that disaster have led to serious fiscal imbalances by placing heavy demands on revenue expenditure.

The super cyclone of 1999 has broadened the disaster management framework of Government of Orissa by adding preparedness, planning and prevention of dimensions viz., relief, rehabilitation and restoration. The subsequent disaster in 2001, the Gujarat Earthquake, has underlined the need to take disaster management measures in the urban centers that are now being acknowledged as engines of economic growth. The phenomenal losses of Kobe earthquake substantiates the need to prepare for this unpredictable disaster. The more recent hurricane Katrina in the United States of America exposed the primary necessity of fellow feeling / neighborhood empathy and community level preparedness planning to face any disaster in the urban context.

One of the five key programme areas of United Nations Development Programme (UNDP), the leading Global Development Agency, Crisis Prevention & Recovery. Both the Disaster Risk Reduction (DRR) and Urban Risk Reduction (URR) project are being implemented by UNDP through National Disaster Management Authority (NDMA) and Ministry of Home Affairs (MHA) respectively at National level across 26 states of our country is a testimony of its long term commitment for poverty reduction. In view of the increasing risk exposure of the urban areas of India, often accentuated by climate change and variability, a project on “Climate Risk Management in Urban Areas through Disaster Preparedness and Mitigation” has been approved jointly by the Government of India (GoI) and United Nations Development Programme (UNDP) with financial support from USAID in October 2012 .In the Phase II of the project titled “Developing Resilient Cities through Risk Reduction in the context of Disaster and Climate Change” implemented over a period of four years (June 2016 – May 2020) in Cuttack.

Orissa State Disaster Management Authority (OSDMA), the premier agency of its kind, is endeavouring to address the multi-dimensional nature of disaster. OSDMA is building capacities of the Government Departments and Civil Society Organizations and Communities as well as strengthening the Public Support System including provision of infrastructure to manage disasters.

Cuttack Municipal Corporation (CMC), arguable the most dynamic, efficient and professional civic body of the state, has taken up the responsibility of disaster preparedness activities as envisaged in the 74th constitutional Amendment Act. The strategic partnership between CMC, OSDMA, MHA and UNDP along with other stake holders signifies the relevance of disaster management in the burgeoning capital city.

1.2 Objective

Cuttack, the commercial capital of Odisha, is one of the oldest cities and is located at the confluence of two big rivers, namely, the Mahanadi in the north and Kathajodi and is about 30 km away from the State capital. It has a population of 6.5 lakhs (2017) distributed among 59 wards with a spatial spread of 82.43 sq km. It has a population density of about 7,823 people per sq km with trade and commerce as the key economic activities.

The city is vulnerable to cyclone, flood, earthquake, and heat wave that affect the socio economics of the city. The city was impacted severely by the 1999 super cyclone and the floods of 1982, 2008 and 2011. The historical cyclone event data shows that 142

cyclonic disturbances passed within 100 km of the city of which the maximum wind speed experienced was 258 km/h. The recent cyclone that affected the city was the Phailin cyclone of 2013 when the city experienced a wind speed of 215 km/h. The impact was mostly in terms of damage to assets, particularly infrastructure and houses.

Considering the location of the city in the delta area, the city is vulnerable to flooding. Flooding is due to heavy localized rainfall as well as discharge of water from the Hirakund dam located 330 km upstream. The topography of the city is saucer shaped with unplanned urban development and choking of the narrow drains with solid waste causing frequent water logging problems in many parts of the city. The flood analysis shows that Ward Nos. 2, 3, 9, 14, 17, 20, 26, 33, 40, 43 are especially vulnerable to water logging. The city operates pumps to pump out water during rainy season to avoid water logging. The city, under various development projects, is also developing drains to reduce the impact of flood and water logging. Climate change can intensify rainfall, which can influence the runoff thus increasing flood vulnerability.

Extremely high-rise in annual average maximum temperature, continuous increase in the number of hot days and rising temperature difference between Cuttack and the nearby cities provides an impression of the gradual emergence of the city as an urban heat island. During May 2013, Cuttack recorded a maximum temperature of 44.5°C. Very severe heat stress conditions prevailed in May/June months.

Cuttack city is located in seismic zone-III, which is moderately vulnerable to earthquakes. However, minor to moderate earthquakes, not of damaging scale, have occurred in the past at different localities. Recently, on May 21, 2014 an earthquake of magnitude 6 on the Richter scale occurred in the Bay of Bengal, and shock was felt in different parts of Cuttack and neighboring cities due to local soil-amplifications, though there was no report of any significant damage in the city.

Considering the high-density of population, traditional houses, and high temperatures in the summer months, the city is vulnerable to fire accidents. Historical fire accident data shows that the occurrence of fire hazards is higher in residential buildings compared to commercial and industrial buildings. Climate change analysis shows projected annual mean warming of about 4.56°C by the end of this century over Cuttack with increases in the number of hot days and warmer nights.

Cuttack city, being located in the coastal belt of the state and comes moderate earthquake risk zone, is vulnerable to disasters like Earthquake, Cyclone, Urban Fire, Heat Wave, Health & Accident related hazards etc. it is said that earthquake does not kill, unsafe buildings do. The vulnerable of built-environment in the city needs to be viewed taking into account location of High Court, Railways & National Highway, BSNL and Mobile Telephone Operators, Govt. Offices,, Corporate Offices of Public & Private Sector Companies, Industrial Area; Government Quarters, Apartments, Shopping Malls; large number of Educational Institutions, Hospitals, Cinema Halls with large floating population. Therefore keeping in mind, the current population and existing infrastructure as well as growth potential of the city and probability of occurrence of hazards, measures need to be taken to reduce the risk to lives, livelihood and property. From the experience of the 1999 Super Cyclone and the Mahanadi Flood in 2008, the city administration has internalized the necessity to compile a plan to prevent /minimize the loss and also to facilitate faster recovery during an emergency. The City Disaster Management Plan (CDMP) will be a guidebook that would facilitate the City Administration and concerned stakeholders for preparedness, planning and prevention dimensions of disasters along with relief, rehabilitation and reconstruction.

The CDMP will focus on:

- (i) The need for a total shift from a reactive to proactive policy.
- (ii) Up- gradation and modernization of the existing response mechanism to combat disasters through improved communication and effective response operation;
- (iii) Conduct intensive training programmes to build up human resources for effective disaster management ;
- (iv) School Disaster management plan
- (v) Effective coordination among the Government departments, NGOs and Civil Society Organizations.

Every Year CDMP of Cuttack City will be prepared/updated by City Disaster Management Committee twice in the month of May and November .Nodal Officer Disaster Management ,CMC will be in charge to facilitate the updation of CDMP with support from all the City Level Stakeholders.

2Over view of the city

Cuttack City Profile:

Cuttack, located in the delta of the Mahanadi River, is the commercial capital of Odisha and is one the oldest cities that was established during the Kalinga period	
Latitudinal Extent	20°21'11.98"N to 20°30'45.97"N N
Longitudinal Extent	85°46'14.16"E to 85°57'21.55"E
Area	82.43 sq km
Number of wards	59
Weather characteristics	
Average annual rainfall	1,441 mm
Mean Annual Minimum Temperature	20.0° C
Mean Annual Maximum Temperature	32.9° C
Rainy seasons	June to October
Mean Annual Humidity	70%
Slums details	
Authorized slums 309	Un-Authorized slums 104
Slum Population 2.35 Lakhs (Census,2011)	No. of slum households 32,106 (Census,2011)
Socio economic profile	
Population	659,122 (2017)
Population density	7,823 person/ sq km (2017) – avoiding water area
Key economic activity	Trade and Commerce, Service
No. of households	139,892 (2017)
Literacy rate	82%

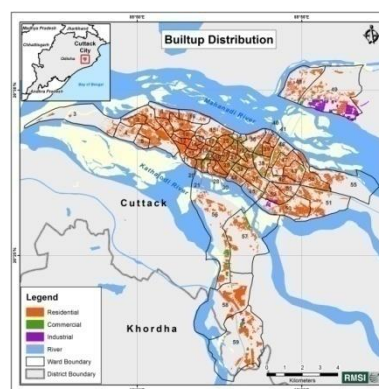


Figure 2-1: Built up map, Cuttack city

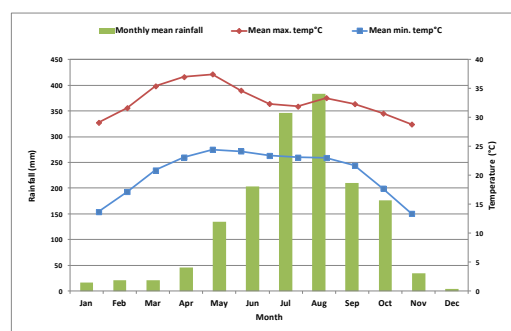


Figure 2-2: Weather data, Cuttack city

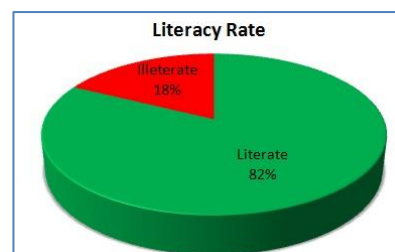
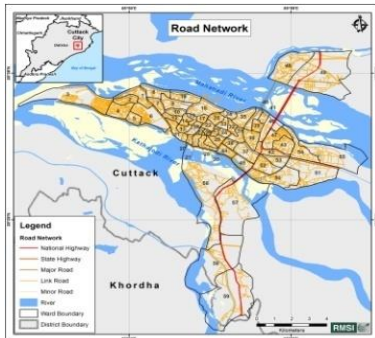


Figure 2-3: Literacy rate, Cuttack city

Infrastructure		
Road length	691 km	
Railway (length)	41.98 km	
Industries	2,303 (Census 2011)	
Hospitals	672 (Census 2011)	
Educational institutions	870 (Census 2011)	Figure 2-4: Road network map, Cuttack city

2.1 Location area and Administrative Division

Cuttack city being the first capital of Odisha encompasses a rich cultural history. Being an important commercial hub of the state, Cuttack city attracts a lot of migrants mostly from rural areas resulting in high increase in population. Over 50 per cent of the city's workforce is engaged in manufacturing, trade, commerce and transportation- related activities. The strategic location of the city bounded by the two major rivers i.e. Mahanadi and Kathajodi has amplified the problem as high density urban sprawl of the city has made its core urbanized area congested within its limited geographical area. It has also led to the degradation of existing areas and the development of slums or clusters particularly in low-lying and vulnerable pockets of the city. As per the 2011 census, the city accommodates 606,007 people, out of which nearly 38 per cent of whom live in slums.

2.2 City Boundary

The city is situated in between 20°21'25" N to 20°34'35" N latitude and 85°43'58" E to 85°59'00" E longitude. The maximum breadth from east to west is around 25 kms, while the maximum length from north to south is about 24 kms. The area is bounded by part of Tangi Choudwar block on the north; Cuttack block on the South; Athagarh and Dampara block on the west and Salepur and Cuttack Sadar block on the east. The Central area includes Old Cuttack bracketed between Kathajodi River towards its west & south; Mahanadi River towards its east and north.

2.3 Access

By Air: Cuttack is connected to the cities of Kolkota, New Delhi, Chennai, Mumbai, Visakhapatnam, Hyderabad, Bengaluru, and Raipur through regular flights. The Biju Pattanaik Airport in Cuttack is modern Airport with night landing facility.

By Rail: Cuttack is directly connected by rail with Kolkata, Chennai, New Delhi, Raipur, Ranchi, Mumbai, Ahmadabad, Bengaluru, Guwahati, Hyderabad, Tirupati, Puducheri, Tiruvanathapuram and Tirichurpali and within the state with Puri, Koraput, Berhampur, Baripada, Balasore, Rourkela & etc.

By Road: Regular buses ply between Cuttack and Berhampur, Cuttack, Konark, Baripada, Paradip, Rourkela, Sambalpur, Koraput, Bhawanipatna and other places in the State. Interstate bus services operate daily to Kolkata (West Bengal), Raipur (Chhatisgarh), Tatanagar & Ranchi (Jharkhand).

2.4 Climate

The City is situated to the south of the Tropic of Cancer and is located in the coastal plains of Orissa for which it receives the moderating influence of Bay of Bengal. As it is situated in the monsoon belt, the climate of the planning area is mostly of monsoon type with slight variation because of a strong maritime influence.

2.5 Temperature

The planning area experiences a hot and humid climate in summer, characterized by temperature going up as high as above 42 °C. Summer starts at the end of March, the effect of which is felt till the middle of June when monsoon sets in. A dry and cold climate in winter, with mercury dipping to as low as below 10 °C, is experienced between November and beginning of January.

2.6 Rainfall

The annual average rainfall varies from 1557.20 mm over the planning area. The rainfall distribution can broadly be divided into two main seasons viz. dry season (Nov-May) and wet season (Jun-Oct). It is observed that 80% of total rainfall occurs between months of Jun-Oct. The relative humidity is 74% which prevails almost throughout the year and which varies from more than 50% in rainy season to less than 35% during the month of December. During the rainy season most of the rainfall is cyclonic, when depressions originate in the Bay of Bengal & move towards the east coast of India and enter the landmass between Paradeep and Chandabali causing considerable rainfall and floods.

2.7 Wind

The wind velocity is moderate throughout the year and it becomes stronger during the south west monsoon. During the south-west monsoon, the average wind speed is 15 kms per hour and it drops to only 5-10 kms per hour in October. From October to January, the wind direction is from North East to South West and the direction is reversed during South

West monsoon when it is from South West to North East. During November to February, the prevailing wind direction is from North- North East to South- South West.

2.8 Soil

Different types of soil are observed in different topographical, hydrological as well as geological condition . The texture of the soil is clay loam. The lithology of Cuttack zone is divided into alluvial formation, Laterite, granite gneiss and sandstone. This alluvial ground is not very suitable for large structures having very low bearing capacity (1 ton/sq.ft.). Mostly the levees are sandy soils where as the back swamps are of clayey soils. The area near Kathajodi-Mahanadi flood plain is mostly alluvial in nature and not suitable for large construction. The North western part of the Cuttack planning zone contains laterite soil, which is not very suitable for agriculture purpose.

2.9 Water Resources

The river system includes the Mahanadi, Kathajodi, Kuakhai and Birupa rivers. The other rivers, practically, dry up in the hot months.

There are also many tanks, wells, and swamps found all over the area. Besides, there are innumerable Canals of Mahanadi and its tributaries cutting across the area. Taldanda Canal and Puri Main Canal has been formed out of Mahanadi .Many natural drains in the area have now been converted to Nullah. The iron content in ground water is quite high in the whole area rendering it unfit for daily consumption.

2.10 Flora and Fauna

Sal, Babul, Acasia, Bel, Siris, Tinia, Tenta, Dharua, Kanchan, Arakh Sunari, Chankunda, Jhaun, Amba, Babula, Karanja, Debadaru, Amla, Sijju, Dimiri, Pipal, Saguan, Tentuli, Barakoli, Jack Fruit, Neem are the plan species of the study area. Tulsi, Bel, Amla, Babool, etc. are the medicinal plants found in the study area. Common birds, mammals, rodents, reptiles and fishes area also found in the area. No endangered species of plants and animals has been found in the study area.

2.11 Demographic Profile

As of 2011 India Census, Cuttack has a population of 6,06,007 of which male and female are 303,530 (50.09%) and 302,477 (49.91%) respectively. Its urban / metropolitan population is 658,986. The sex ratio of Cuttack city is 997 per 1000 males. The population density of Cuttack city is 3148/sqkm.

Cuttack has an average literacy rate of 77% with male literacy at 86% and female literacy at 67%. 29% of the population is under 14 years of age. Total children (0-6) in Cuttack city are 48,585. There were 25,358 boys while 23,227 are girls. Child sex ratio of girls is 916 per 1000 boys.

Table - Demographic profile of Cuttack City, 2011

Sl.No.	Cuttack City	Total	Male	Female
1	Population	606,007	303,530	302,477
2	Literates	508,188	272,257	235,931
3	Children (0-6)	48,585	25,358	23,227
4	Average Literacy (%)	91.17	97.87	84.49
5	Sexratio	997		
6	Child Sexratio	916		

2.12 Economic Profile

Though basically and traditionally agrarian, Cuttack is also the business hub for the numerous places around it. There are many renowned industries in and around Cuttack. Apparels, shoes, handicrafts, silver ornaments and animals are also significant contributors to Cuttack economy. Cuttack is the business hub for the entire Orissa and neighboring states.

2.13 Occupational Structure

Cuttack city had a total of about 1.71 lakh workers in 2001 . The workers' participation rate in the city is 32.13% in 2001. Of the total number of workers in the city, a substantial number comprises of main workers (92.06%) whereas the percentage of marginal workers is 7.94%.

Table - Percentage of Main and Marginal Workers in Cuttack City, 2001

SL.No.	Description	Total	Male	Female
1	Total Workers	171,761	148,879	22,882
2	Main Workers	158,124	140,037	18,087
3	Marginal Workers	13,637	8,842	4,795
4	Non Workers	362,893	136,959	225,934

2.14 Use of the Occupied Census Houses

Obviously, most of the census houses are used for residential purposes (72.36%) . But with the increase in commercialization, there has been an increase in the use of the houses as shops, offices, factories, workshops and other non-residential uses etc. The Table shows the break-up of various uses of the occupied census houses in Cuttack City.

Table - Use of Occupied Census Houses in Cuttack City, 2011

Sl No.	Use of Census Houses	%	Number
1	Total number of occupied census houses	100	1,57,855
2	Residence	72.36	1,14,229
3	Residence cum other uses	1.48	2329
4	Shop, Office	14.61	23058
5	School, College etc	0.48	765
6	Hotel, Lodge, Guest house etc.	0.43	680
7	Hospital, Dispensary etc.	0.38	593
8	Factory, Workshop, Workshed etc.	1.46	2303
9	Place of worship	0.82	1,302
10	Other non-residential use	7.02	11,081
11	No. of occupied locked census house	0.96	1515

2.15 Physical Infrastructure

Traffic & Transportation

Cuttack, strategically located on South-Eastern Railway line, National Highway No.5 of 26.35 KM length, National Highway No. 42 of 10.46 Km, State Highway No.9, State Highway No. 12 and O.D. Rs has achieved a remarkable importance in the field of transportation. The means of transportation are mainly through Trains, Buses and other Vehicular transports. Buses in private sector are the main source of communication. About 24 O.S.R.T.C. Buses, 34 Private Buses are plying through and from the Town from different directions. Road transportation by which goods are moved inward and outward also plays an important role in making the city of Cuttack a bustling commercial centre. About 40 Transport Companies having all India network of operations have their offices within the town. About 4,500 Trucks are engaged daily for this purpose. Apart from these 250 Trucks, 1700 tractors, 25 Trekkers, 950 Jeeps, 3,500 Taxis, 72,000 Motor Cycles/Scooters/Mopeds, 800 Auto-Rickshaws, 20 Town Buses, and 70,000 Cycles/Cycle/Rickshaws/Trolley Rickshaws are the common mode of movement inside the town. Vehicles are mostly parked on the both sides of the main roads. In addition to this, commercial activities, numbers of cabins/shops are also created traffic bottlenecks even in non-peak hours. Except the core areas, rest parts of the town are linked with a number of roads.

2.16 Water Supply

A Public water supply system is in operation and the services extended within the town through public stand posts. The source of Water is Ground Water. In addition to the above, 142 production Wells, River Mahanadi and Kathajodi (Subsidiary source) are also providing drinking water to the residents. There are 44809 individual connections available in the town.

2.17 Electricity

The electricity connection to all the areas of Cuttack city is dealt by Central Electricity Supply Utility of Orissa (CESU). Number of households covered under electric connection are 27402. The major areas/zones that are covered with electric connection in the city are electrical sections under Badambadi, Dolamundai, Khapuria, Chauliaganj, Mahanadi vihar and Jagatpur.

2.18 Street Light

Provision of Street Light is an essential requirement in the urban area. The main streets of the town have been provided with 15285 numbers of streets light.

2.19 Sewerage

Sewerage of the city is channelized through main storm channel 1 (MSW-1) and treated by STP at Matagajapur, before it is discharged to River Kathajodi. The average waste water generated per day is 275 ton. The town lacks in respect of sewerage system.

2.20 Drainage

Open surface drains exist in some portion of the town to discharge the storm and Waste Water. Total length of the drain comes to 1028 Kms. However, a well planned drainage system is necessary for the town since most of the areas submerged 2 to 3 months during rainy season.

2.21 Solid Waste Management

Out of the 59 wards of CMC, 18 wards have been outsourced for daily sweeping and sanitation and rest 36 are being managed by CMC own conservancy staff. CMC has 764 Km of Roads and 701 Km of drains in the city. Total area of the corporation is 192.5 Sqkm. Collection of MSW and its transportation to dumping site at Chakradharpur is jointly done by CMC and OSIC daily. CMC utilizes 1000 roadside dustbins and 1500 wheel burrows for collection of municipal Solid waste. About 290 metric tons of MSW is collected daily from the Corporation area. No provision of segregation or scientific treatment is made available.

CMC has 32 temporary collection and garbage points. CMC has one 5MT capacity compost plant at Sati Chaura. CMC has 2 small slaughter house and 4 new are under construction. Sewerage at the city is channelized through main storm channel (MSW1) treated by STP at Matagajapur before it is discharged to river Kathajodi.

CHAPTER : III

3 Hazards and Risk profile

3.1 Past Disasters for the city

The historical hazard information shows that the city is highly vulnerable to cyclones, floods, and heat waves. Being located in seismic zone-III, the city is moderately vulnerable to earthquakes. There are no record of damaging earthquake events recorded in the past affecting the city. .

Hazard and damage information available are mostly at district level. Occurrence of fire accidents is relatively more in residential areas as compared to industrial and commercial areas. Several fire accidents have been reported though not of catastrophic levels. Epidemic outbreaks have not been reported in the city but there are pockets, which have a high incidence of vector (dengue and malaria) and water borne (diarrhea and Jaundice) diseases.

Historical hazard information, including frequency of occurrence and damage, were considered while carrying out detailed hazard assessment. The assessment of hydro metrological hazards, particularly cyclone, flood, and heat wave also factor in the impact of projected climate change in the city.

The city was affected in different disaster in different times. The hazards that affected the city like

1. Super cyclone 1999
2. Flood 2008
3. Urban Fire
4. Mild shake of earthquake in magnitude of 2.9 to 4
5. Road accident
6. Water logging
7. Biological Disaster like Swine Flu (H1N1)

3.2 Hazards, the city is prone to with detailed discussion indicating the areas likely to be affected to be annexed

3.2.1 Flooding / Water Logging

The unique geo-climatic condition makes the city vulnerable to various kinds of natural disasters. The normal annual rainfall of the city is 1470 mm. With 80% of annual rainfall concentrated over 3 months, the city is highly vulnerable to water logging and floods. There is probability of flooding because of the Kuakhai and the Daya. High population density, encroachment on natural drainage systems, poor socio-economic condition and weak infrastructure increase the vulnerability. Flood Hazard Assessment

Hydrology of Floods

The city is situated at the confluence of two big rivers, namely, the Mahanadi in the north and the Kathajodi in the south, which make it highly prone to the flood hazard. The topography of the city is shaped like a saucer, with the central part at a lower elevation than the peripheral. It is surrounded by embankments, which protect it from flooding. The high ground elevations, which are towards the banks of the rivers, are MSL + 30m in the north and MSL + 20m in the south and the east of the city. The central part of the city has an elevation of only about MSL+17 m.

Primarily the city gets flooded due to heavy rainfall locally as well as in the upstream catchment areas and the release of high discharge from Hirakund dam located 330 km upstream.

In earlier times, the city had many ponds, which used to retain and moderate storm water runoff into the drain. These ponds were eventually filled partially and became low-lying areas with little scope for natural drainage. Besides, the slope of land is mostly away from the river making natural drainage difficult. The only practical way to prevent flooding from water logging is using water pumps that have been installed at the various locations in the city.

In the past, the Mahanadi Basin has experienced high floods in 1982, 2001, 2003, 2006, 2008, and 2011.

Flood Hazard Assessment for Current and Future Climatic Conditions

Flood hazard assessment helps to demarcate the flood-prone area (extent), and assess its intensity and magnitude. Flood-prone areas are those areas subjected to inundation with regular frequency. In the case of Cuttack city, riverine flood hazard is considered. The key components include:

- Identification, acquisition, compilation and review of all the relevant hydro-meteorological and biophysical data. These data include terrain, soil, land use land cover, run off/ river discharge and flood protection measures to form the input for the model.
- For the assessment of localized flooding, delineation of drainage flow lines within the city boundary
- Flood hazard mapping to show flood extent and flood depth for a range of events, which is the result of hazard assessment.

Assessment of localized flooding due to flash flood/water logging

Ward No. 2, 4, 9, 20, 24, 27, 30, 33, 35, 39, 41, and 42 are especially prone to water logging due to the low-lying nature of the land. In the newly expanded areas, there is no proper drainage system. Inside the city, due to its topographical characteristics and disposal of solid waste materials in the drain, storm water drain is a serious concern.

The problem becomes serious when flood water levels in the two major rivers are above the water levels in the drainage channels and the pumping capacity is not sufficient to pump out the water. During such times, many areas in the city remain water logged while low-lying areas are inundated. These conditions cause serious public health and safety problems for the city residents.

The design discharges for each catchment have been carried out. For design discharge estimation, the Detailed Project Report (DPR) prepared under the JICA funded project was taken as a reference. JICA¹ has done an intensity-duration-frequency analysis of the rainfall pattern of Cuttack City. They have used rainfall data for the rain gauge station at Naraj from 1988 to 2007 (a duration of 20 years). As the next step, the time of concentration and catchment areas of each drainage line have

been calculated. The rainfall intensity corresponding to the time of concentration duration has been used. For the estimation of rainfall intensity for selected duration, time distribution curves were used from Mahanadi Basin .

Incorporation of hydraulic structures

Structural river training plans are traditionally known methods of flood mitigation and this method has been used as a general flood management approach in most of the flood plain areas. These hydraulic structures have proven effective in loss reduction due to floods. However, in the case of Cuttack City these structures benefit partially.

Dykes/Levees or Retaining Walls: Most of the areas of Cuttack City are protected by well-maintained embankments from both sides of the city from Kathajodi and Mahanadi rivers. However, some parts of the city continue to be ravaged by riverine flood. Flood embankments have been incorporated in the hydraulic model to demarcate the flood boundaries of flood plains.

Barrages and Diversion Channels: The Naraj Barrage has been constructed on the Mahanadi River upstream of Cuttack City to protect the city from upstream flooding. Flows in the Kathajodi and Mahanadi rivers are distributed in 40:60 ratio for total discharges up to 20,000 cumecs. As the discharge increases beyond this limit, the flows are divided in a 50:50 ratio in both the rivers.

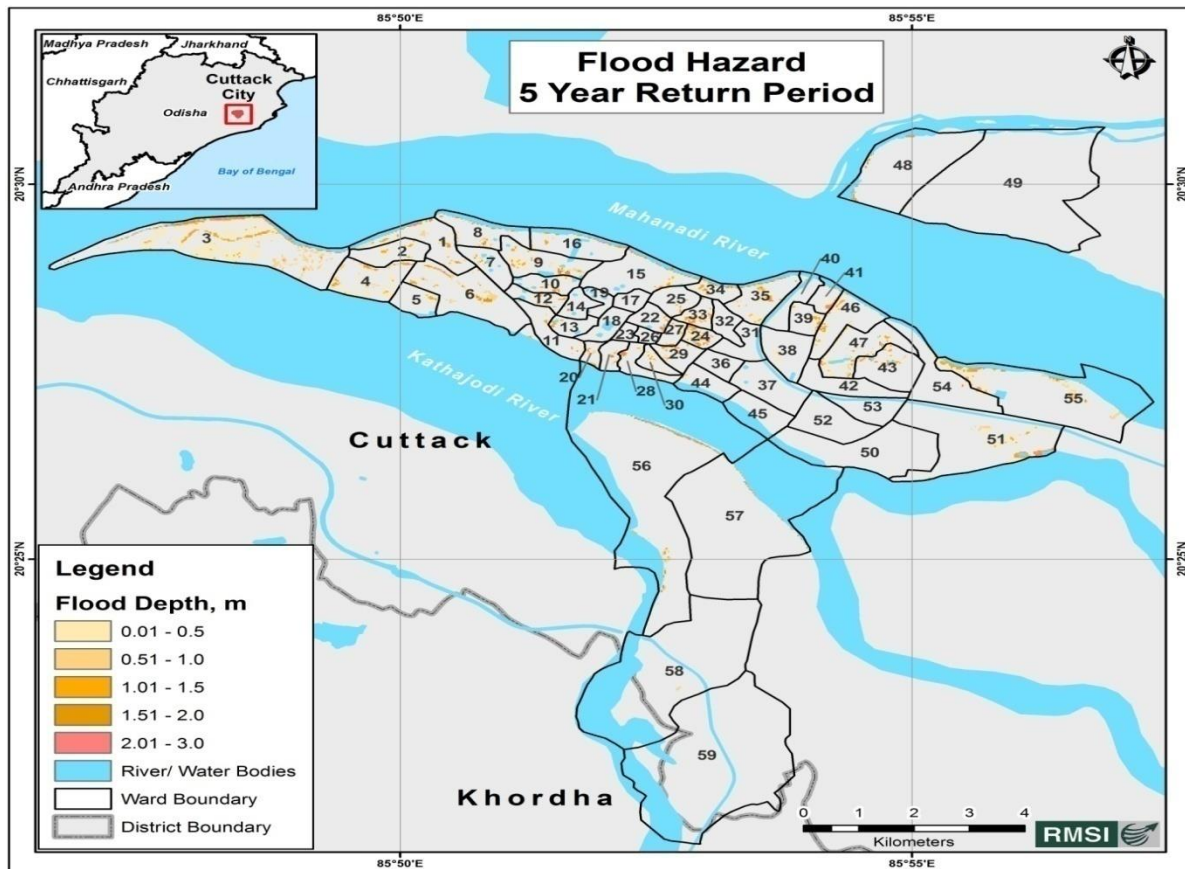
Sluice Gates: Cuttack City currently has two main drains along with their tributary drains. The main drain 1 caters to flows from the central and western part of the city and discharges into Kathajodi River. Similarly, main drain 2 caters to flows from the eastern part of the city and discharges into the right bank Mahanadi River. To prevent the back flow of the river's water from entering into the city during floods, these drains are controlled by sluice gates at their respective discharging ends. The operation of the sluice gates on the drains in the city is based on the total flow in the Mahanadi River at the Mundali Barrage. These gates are manually operated and in general takes 3 to 4 hours to start operation.

In normal conditions, all the sluice gates remain in operation. However, during the monsoon season when the flows increase over a particular threshold discharge at Mundali these sluice gates are closed to prevent flooding.

Pump Stations: When the sluice gates on both the main drains are closed, drainage water is choked within the city. This causes serious flooding in the outlet areas of the drain. In addition to this, flooding in the low-lying areas is very common in Cuttack City as flood and rainwater accumulates in these areas without appropriate outlets. Water pumps have been employed to pump out water from such areas. The details of water pumps have been incorporated in the hydraulic model along with their pump head efficiency curves to analysis the impact of flooding.

Flood hazard mapping under current climatic conditions

The boundaries of the flood plains were determined using return period maps using two-dimensional hydraulic modeling. Flood extent maps have been prepared by integrating model results with GIS data to produce maps with varying flood depth.



Flood Hazard Map for 5-year return period

The flood hazard assessment shows the following:

- Ward numbers 2, 4, 9, 20, 24, 27, 30, 33, 35, 39, 41, and 42 are flood prone wards in the city mostly affected due to localized flooding. At least 10% areas of these wards

are prone to flooding even in low return period events (2-year return period). However, as one moves from low to high frequency flooding, a greater number of wards get affected. In terms of flood depth, average depth of flooding varies from 0.50m to 1.00m for lower return periods in most of the wards. However, some wards show higher values due to proximity to the riverbank or the main city drains. In addition, average depth of flooding can be higher in some wards due to the presence of localized low-lying areas. The maps show that flood extents are not only limited to areas near the riverbanks but are also spread to low-lying areas and areas near drain outlets. In lower return periods, floodwater remains in isolated patches. However, in higher return period floods (more severe cases) flood depths and extents start increasing rapidly and cover larger areas of the city.

- It is clearly visible from the flood hazard maps across all return periods that the city is not significantly affected due to flooding in the Mahanadi River because it is very well protected by embankments. However, there are some locations where houses have been constructed between the embankment and the river, making them highly vulnerable to riverine flooding.
- Ward No. 6, 9, 15, 19, 24, 27, 32, and 33 are highly prone to localized flooding because of the low lying areas in these wards.
- There are many water storage ponds in the City, which are silted and the water holding capacity of these ponds has been decreased drastically. If these ponds and water storing structures are desilted and maintained well, they can help control localized flooding. In addition to the existing ponds and storing structure, there are many natural low-lying areas, which can be developed properly for water storing purposes during flooding. These low-lying areas are in Masik Patna Colony, Srivihar Colony, Police Colony, Kafla Colony, Chotti Masjid Area, Siba Bajar, Chhatara Bajar Pond, and Shankarpur Colony.

3.2.2 Cyclone

Cuttack city is often impacted by strong winds and torrential rains associated with tropical cyclones formed in the Bay of Bengal. The 1999 Odisha super cyclone was the most severe storm ever recorded, with wind speeds of 258 km/h, which caused extensive damage to property and loss to human in the State as well as to the city. The

severity of cyclone events over the city can be gauged by analyzing the historical events that occurred from 1877-2016:

- 142 cyclonic disturbances passed within 100 km of Cuttack city during this period
- Of these, 2 were cyclonic storms, 1 was a very severe cyclonic storm, 11 were deep depressions, and 7 were depressions
- The maximum wind speed experienced was 258 km/h

Besides the above, Cuttack city witnessed several storms ranging from tropical depressions (31-61 km/h) to very severe cyclonic storms (88-260 km/h). The tracks of the 142 historical disturbances (1877-2016) considered for cyclone hazard analysis is shown in figure and a list of these events is shown in the table .

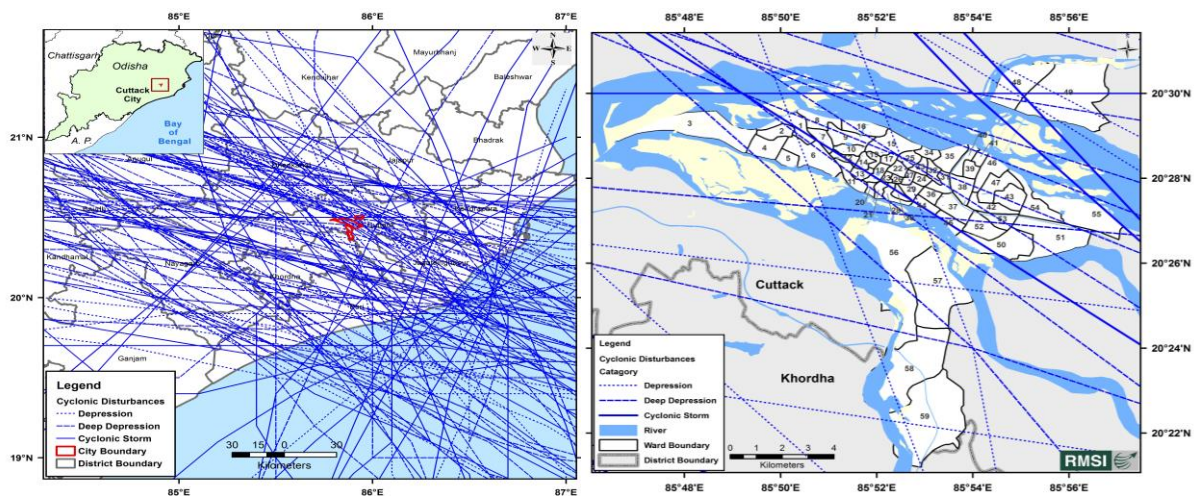


Figure: Tracks of cyclone events from 1877-2016 with landfall around Cuttack city (left) and events crossed the city (right)

Table 3: Number of historical cyclone events considered for Cuttack city (1877-2016)

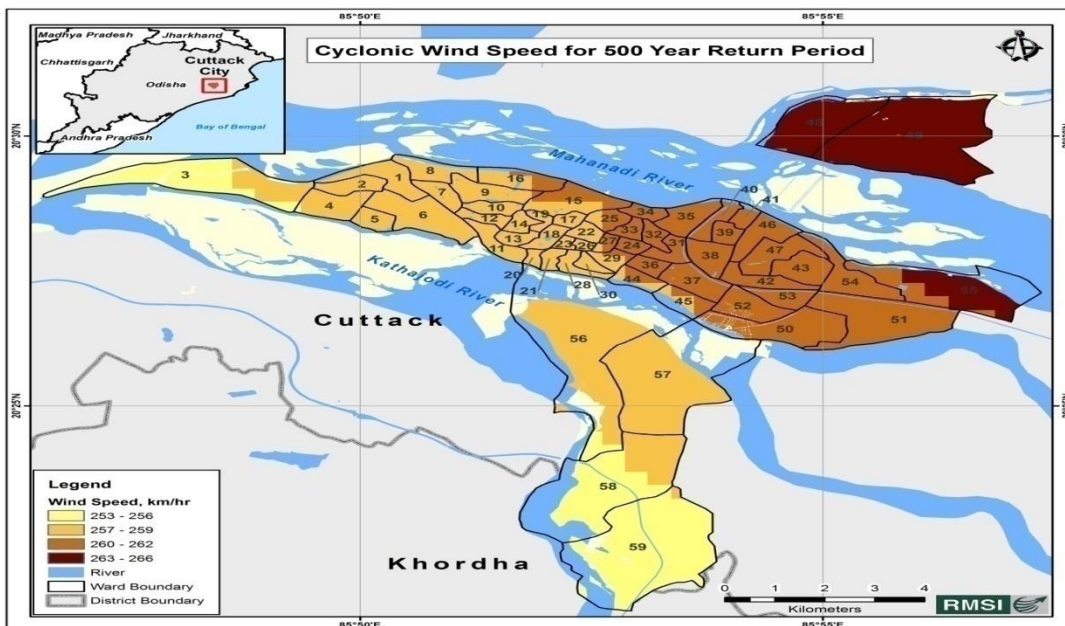
Category	No. of Cyclonic Disturbances
Depressions	26
Deep Depressions	63
Cyclonic Storms	41
Severe Cyclonic Storms	2
Very Severe Cyclonic Storms	9
Super Cyclonic Storms	1

The present day projections and climate change projections of wind intensity at different return periods associated with tropical cyclones over Cuttack city are further explained in the subsequent sections using numerical storm model, historical cyclone track information and future projections of climate change.

Wind hazard maps present scenario

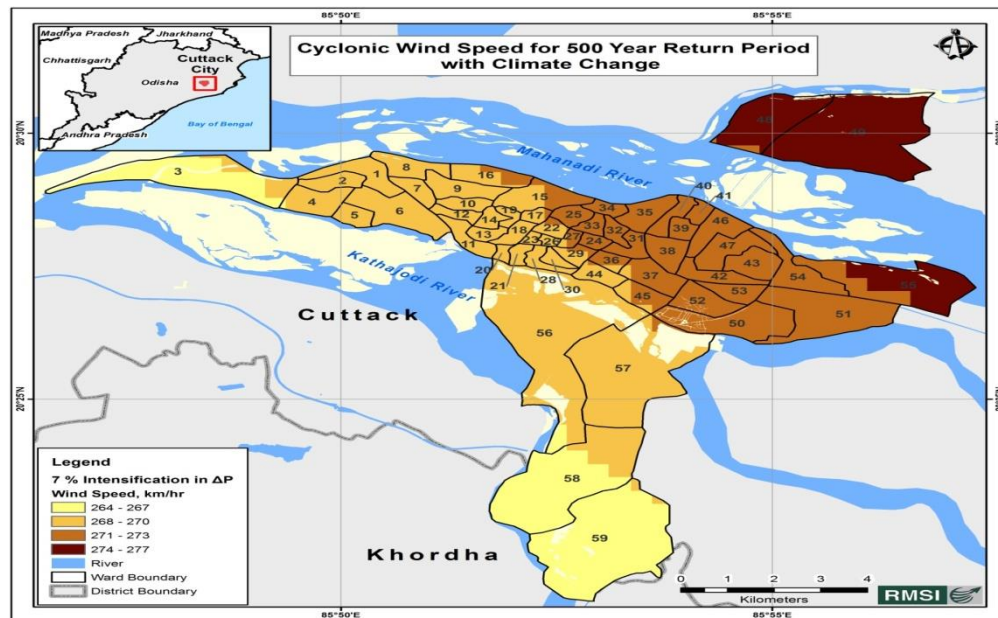
Wind hazard maps at ward level for deterministic events under present climatic conditions over the city for Cuttack city for in the normal scenario suggest that the wind speed varies from 204 km/h in the south to 213 km/h in the north. However, in the extreme scenario , the range may vary from 253 km/h to 266 km/h. Analysis also infers that ward nos. 48, 49, and 55 may be affected with wind speed of more than 262 km/h .

Wind hazard map without climate change impact

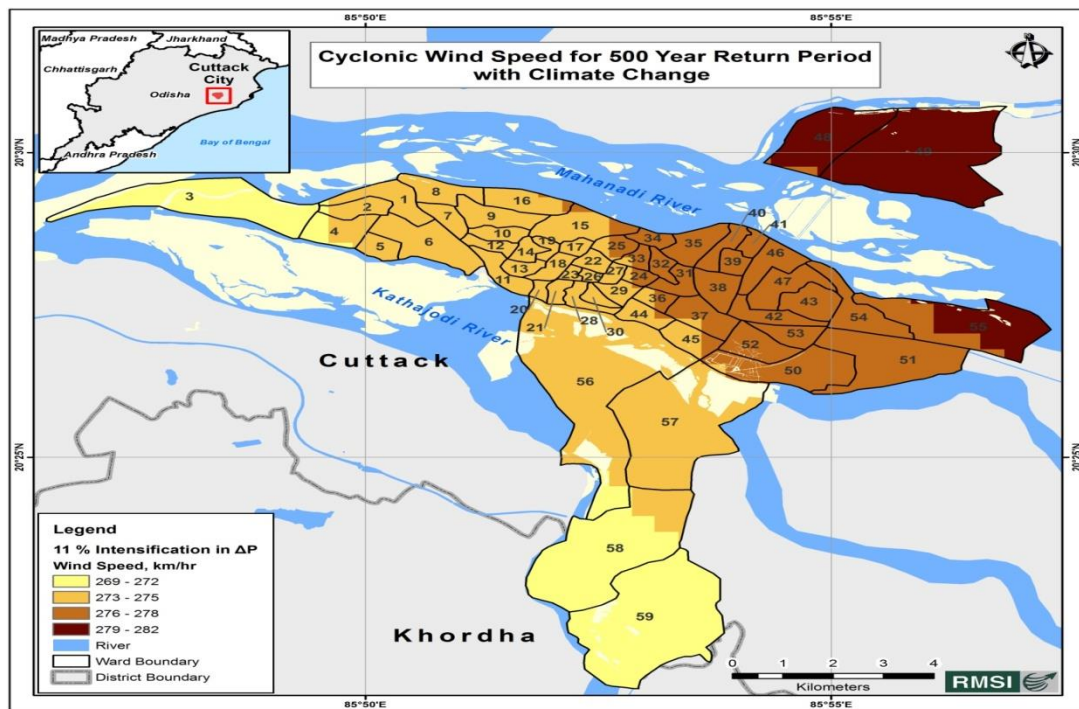


Wind hazard maps with climate change impact

As the intensity and frequency of cyclones will increase under the most likely future climate change scenarios. Analysis indicates that the city experiences a minimum wind speed of 264 km/h in the south to 277 km/h in the north in the extreme scenario . However, the corresponding values may rise to 269 km/h and 282 km/h respectively in the case of extreme scenario .



Wind hazard map period with climate change impact of 7%



Wind hazard map for climate change impact of 11%

The city has a tropical monsoon climate. Tropical cyclone is the term used globally to cover weather systems in which winds exceed “gale force” (minimum of 34 knots or 63 kmph) Tropical cyclones are the most destructive of the seasonally rapid onset natural hazards. The classifications of cyclonic disturbances (low

pressure areas) are made on the basis of the strength of the associated winds. The classification used in India is given in the following table.

Sl.No.	Disturbances	Wind Speed (Knots)
1.	Low	Less than 17
2.	Depression	17-27 (32-50 km/h)
3.	Deep depression	28-33 (51-62 km/h)
4.	Cyclonic depression	34-47 (63-89 km/h)
5	Severe cyclonic storm with a core of Hurricane winds	48-63 (89-118 km/h) & above

The essential services and public installations in the city are vulnerable to cyclones. As per the latest slum survey conducted by CMC there are 377 slums in the Cuttack city and these also are most vulnerable to cyclones. The city was severely affected by Super Cyclone 1999.

3.2.3 Earthquake

“Earthquake” is a sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth’s surface. This shaking can cause buildings and bridges to collapse, disrupt gas, electric and telephone services and sometimes trigger landslides, avalanches, flash floods, fires and huge destructive ocean waves (tsunami). Buildings with foundations resting on unconsolidated landfill, old waterways or on other unstable soil are at most risk. Earthquakes can occur at any time of the year.

Cuttack city falls within the moderate earthquake damage risk zone i.e. Zone III. The technical paper of GIS states that Orissa, if at all, experiences any earthquake, it may attain the intensity of 5.9 on the Richter scale. Accordingly, the intensity as per Modified Mercalli scale is in the range of VI & VII. Thus the possibility of the highest intensity of earthquake and could be felt. As per Seismic Zoning Map of India (IS: 1893, 2002, 2014), Cuttack city is located in seismic zone-III. Cuttack and its surrounding regions lie in a Stable Continental Region (SCR) that is not seismically very active. However, minor to moderate earthquakes not of damaging scale have occurred in the past at different localities. In the recent past, the maximum magnitudes reported are around 4.5 to 5.3 on the Richter’s scale and the maximum-recorded intensity in Cuttack city so far is about VI on the MSK Intensity scale. In spite of the moderate, non-damaging earthquakes observed so far in and near Cuttack, it cannot be confidently said that higher intensity earthquakes are unlikely. Recently, on May 21, 2014, an earthquake of magnitude 6

occurred in the Bay of Bengal, which was severely felt in different parts of Cuttack city. However, there was no significant damage reported in the city.

Seismic hazard assessment identifies and demarcates areas, which are exposed to different levels of earthquake ground motion. It provides information on the expected levels of peak ground motion that might be experienced in different parts of a city for a particular value of probability of exceedance by taking into account all the seismic sources in and around the city. Most of the seismic hazard assessment studies estimate the expected hazard at hard rock level. However, it is important to know that ground motion experienced by structures is not necessarily at hard rock level, and hence should be estimated at the surface level. Since, local soil also plays an important role in ground motion amplifications, especially when V_{s30} (average shear-wave velocity up to a depth of 30 meters) values are much lower 760 meters/second. From the data analysis, it was observed that V_{s30} values in Cuttack city vary from about 180 m/sec to 410 m/sec. Hence, for proper estimation of seismic hazard, modeling of local soil amplification is important. The seismic hazard assessment approach for Cuttack city comprises of the following:

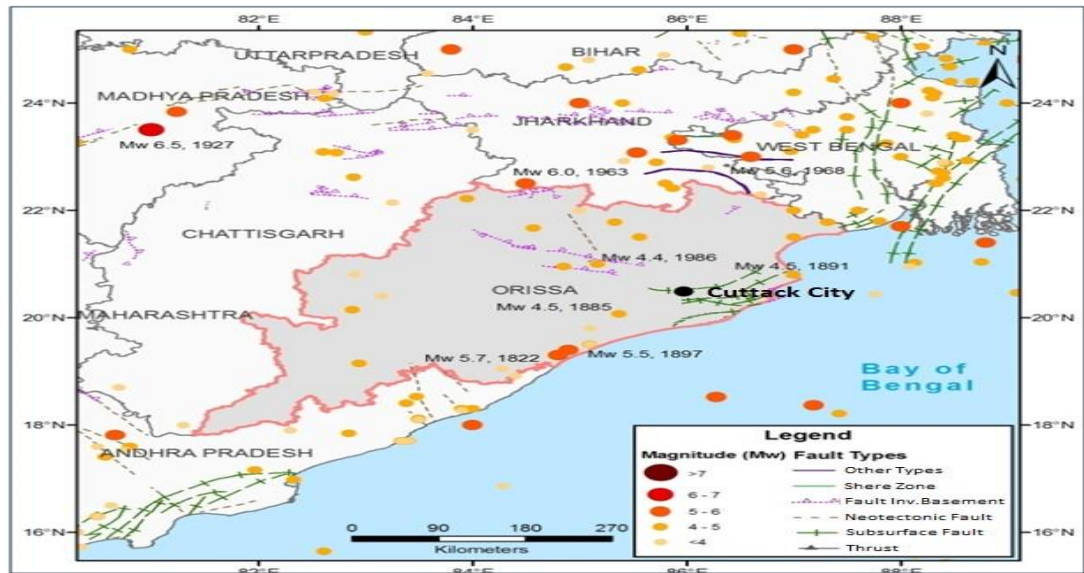
- Seismotectonics of the city
- Review of published probabilistic seismic hazard analyses for key return periods and choose the hazard value(s) at hard rock level

Seismotectonics of the area around Cuttack

Several faults have been identified in the region around Cuttack and some have shown evidence of movement during the Holocene epoch (SEISAT, 2000). The Brahmani Fault near Bonaigarh is one among them (SEISAT, 2000). The Mahanadi River also flows through a graben structure. As per Seismotectonic Atlas of India (SEISAT, 2000), several deep-seated faults are situated beneath the Mahanadi delta.

The Mahanadi and Brahmani graben, Mahanadi delta, and parts of Balasore and Mayurbhanj districts come under earthquake risk zone –III (moderate damage risk zone) as per the earthquake risk zonation map prepared by Bureau of Indian Standards and published by Building Material Technology Promotion Council of India (BMTPC, 2006).

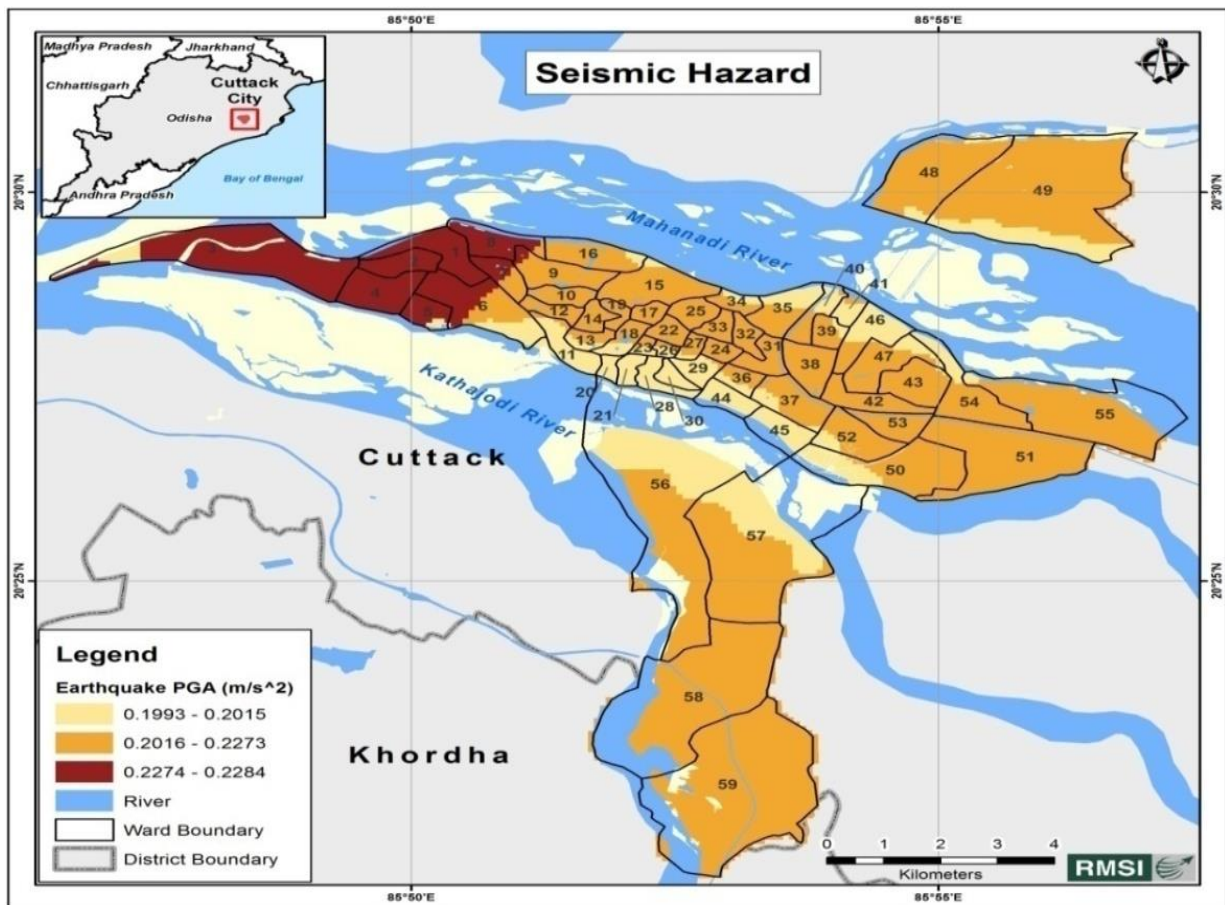
The following figure presents the Seismotectonic map of the areas in and around Cuttack.



Seismotectonic map of areas around Cuttack

Seismic hazard at rock level

The Global Seismic Hazard Analysis Program (GSHAP; www.seismo.ethz.ch/gshap/), provides probabilistic seismic hazard values in and near Cuttack city of about 0.13 g corresponding to 10% probability of exceedance in 50 years (475 years return period) at base rock level. This clearly indicates that PGA values are almost the same for the entire city, while, in reality, different parts experience different levels of ground motion due to local soil condition effects.



Ward level PGA based Probabilistic Seismic Hazard Map for 10% Probability of exceedance for Cuttack city

3.2.4 Heat Wave

Heat wave can be defined as a condition of atmospheric temperature that leads to physiological stress, which sometimes can claim human life. Quantitatively heat wave can be defined as follows:

- (a) The normal temperature is $<40^{\circ}\text{C}$. Any rise above normal temperature is called heat wave
 - (i) $+ (5 \text{ or } 6)^{\circ}\text{C}$: Moderate heat wave
 - (ii) $+ 7^{\circ}\text{C}$ or more : Severe heat wave
- (b) The normal temperature is $>40^{\circ}\text{C}$. Any rise above normal temperature is called heat wave.
 - I. $+ (3 \text{ or } 4)^{\circ}\text{C}$: Heat wave
 - II. $+5^{\circ}\text{C}$ or more: Severe heat wave
- (c) If the maximum temperature of any place continues to be 45°C consecutively for two days, it is called heat wave condition.

There will be no harm to the human body if the environmental temperature remains at 37 °C. Whenever the temperature rises above 37°C, human body starts gaining heat from the atmosphere. In the case of humidity being high along with a high temperature, a person can suffer from heat stress disorders even with temperatures of 37 or 38°C.

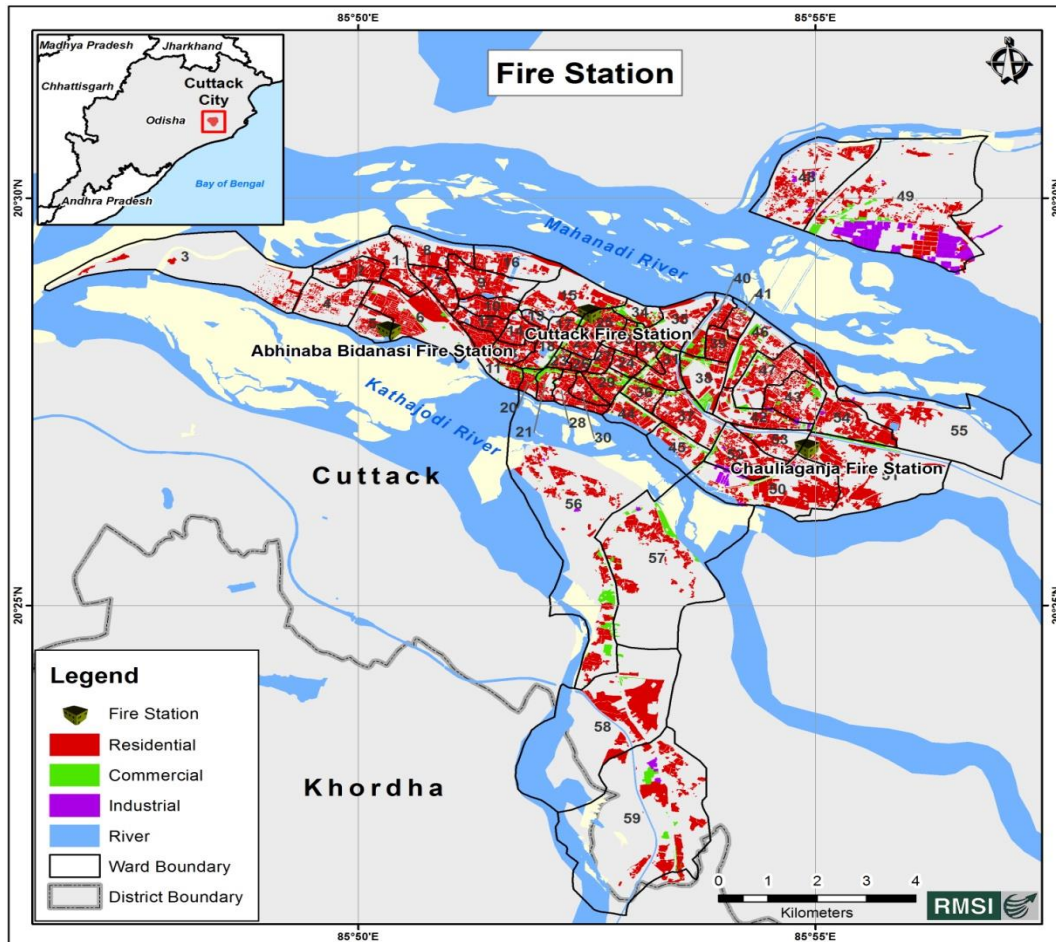
Cuttack district has been experiencing scorching summers and heat-associated deaths reported was highest in 2005. The death in the city was very low. Extremely high increase in average monthly mean maximum temperatures, continuous increase in the number of hot days, and a rising temperature difference between Cuttack and the other nearby cities gives the impression that the city is gradually emerging as an urban heat island.

In Cuttack city, the annual mean surface air temperature has risen during the past two centuries. However, the rate of increasing trend has sharply increased in the last few decades of the 20th century, which could be attributed to global climate change due to anthropogenic forcings. In the year 1998, the entire state of Odisha faced an unprecedented heat wave situation, because of which 2,042 persons lost their lives. Though extensive awareness campaigns have largely reduced the number of casualties during the post-1998 period, a good number of casualties are still reported each year. In the year 2009, Odisha experienced the worst heat wave since the one in 1998. The heat wave killed more than 2,000 people, of which 1,500 died in coastal Odisha alone.

Physical considerations indicate that tropospheric warming due to observed rate of temperature rise should lead to an enhancement of moisture content in the atmosphere, which is associated with an increase in heavy rainfall events. Therefore, even though an overall decrease in annual mean rainfall anomalies has been monitored at Cuttack, more frequent incidences of high intensity rainfall could be expected in coming years and decades. Extreme rainfall events should result in, flash floods, and crop damage that would have major impacts on society, the economy, and the environment.

3.2.5 Fire Accident:

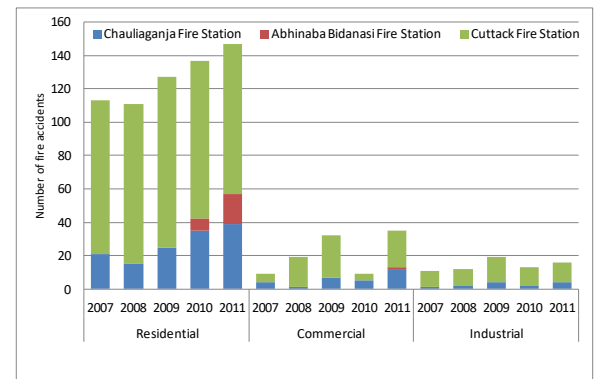
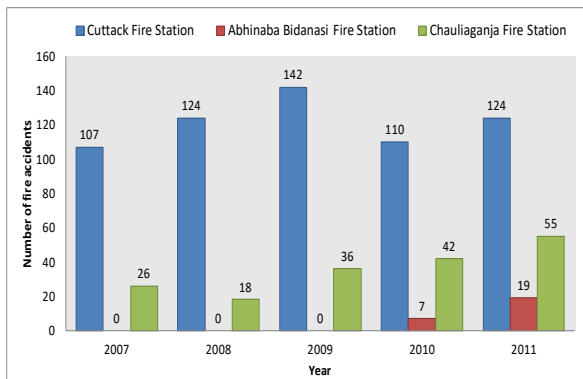
The high-density population, traditional houses, and high temperatures in summer months provide favourable conditions for fire accidents. The City has three fire stations, all located in the central island. The narrow roads can make the operation challenging in case of fire incidents.



Location of fire station in Cuttack city

Fire accident data recorded in the fire stations based on the fire calls is the only data available in Cuttack city for this purpose. All the fire call details available are in ledger form and are recorded manually. Ideally, the ward reference available can provide better analysis and will help to understand, which ward is more vulnerable to fire risk.

The occurrence of fire is higher in residential buildings compared to commercial and industrial buildings. More events are reported in Cuttack fire station compared to the rest to the fire stations. The Cuttack fire station is located in the most densely populated area, which has a high density of residential, and commercial buildings.



Fire accidents – station wise and building type wise

The market areas of Cuttack city are characterized by narrow roads and most of the buildings have basements that are used as godowns or offices, which are more vulnerable to fire hazard risks. Fire safety drills and installation of fire alarms are not available in these traditional markets. The only precaution available is having fire insurance, which acts as a safety net in case of an event and mostly for medium to big commercial establishments only.

3.2.6 Festival related Accident :

Cuttack the ancient city is famous for its rich cultural heritage. It observes many festivals in a calendar year. Festivals attract visitors including pilgrims and tourists. Baliyatra in Kartik and Dussehra are the significant for the city when many people gather. Apart from these Car Festival is also an important festival where Stampede, fire, terrorist attack etc. pose serious threat to lives, property and livelihoods in these cases. The city being an oldest and ancient city mass congregations for different purposes pose threat for traffic management and for the arrangements of basic amenities during the time of huge gathering. The risk of festival related disaster is very high and the risk would be multiplied by rapid explosion of population.

3.2.7 Road Accident :

Road accidents occur due to human error, environmental factors and mechanical failures. The major causes of road accidents are

- Rash and negligent driving habits of the drivers
- Driver's poor physical condition, bad habits e.g. consumption of alcohol while driving;

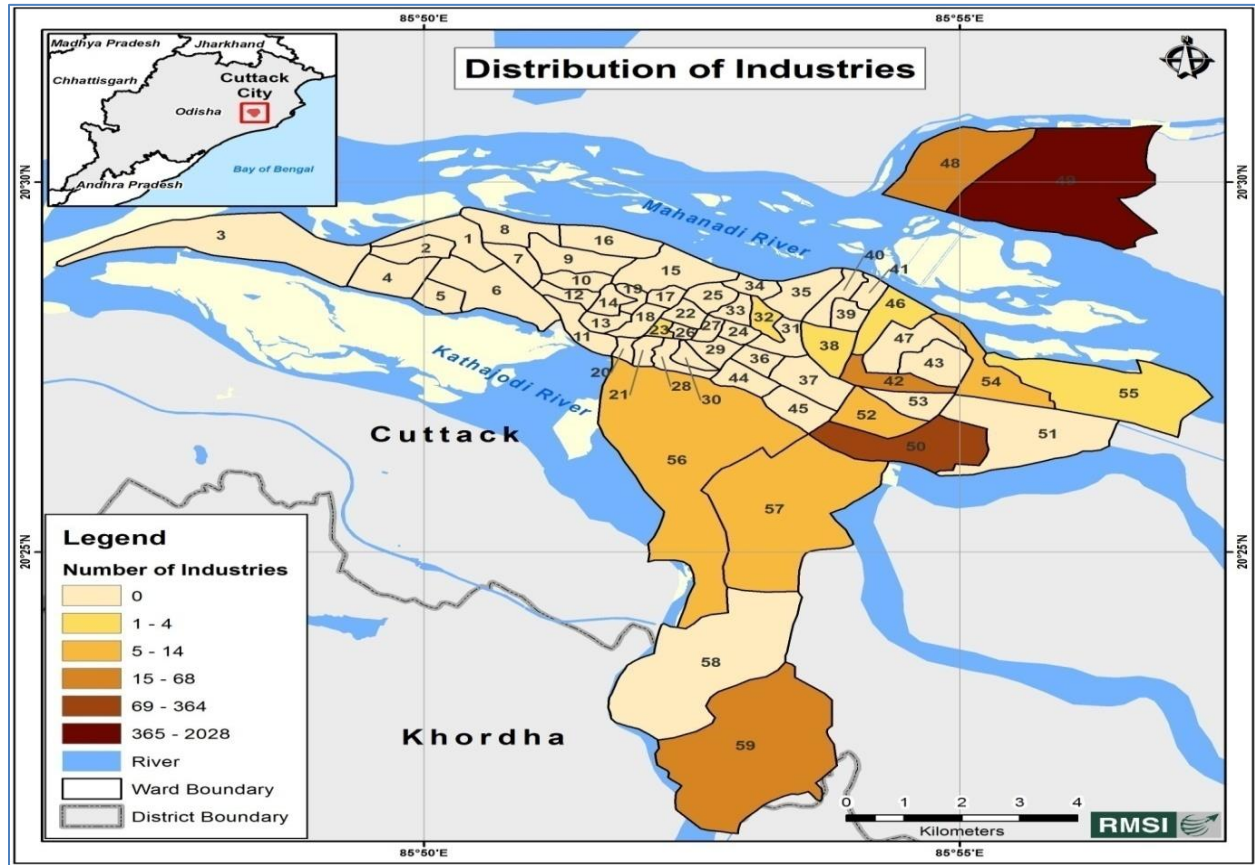
- (c) Mechanical failures of the vehicles
- (d) Carelessness of other road users;
- (e) Presence of animals on the roads;
- (f) Deficiencies in the construction and layouts of roads

National Highways pass through the city and frequent accidents have been reported at NH5. The city is prone to road accidents.

3.2.8 Railway Accident:

Cuttack railway station of East Coast Railway in the state and is directly connected by rail with various major cities of the country. The railways have a time tested railway accident response plan. The district through which the railway line passes shall have a contingency plan for immediate response after a train accident is reported in terms of rescue, first aid, transport for hospitalization, cutting equipment in case of people being trapped inside the train compartments, food and drinking water for stranded passengers arrangement for emergency treatment and blood transfusion and protection against looting and vandalism. This contingency plan shall be in place till the railway authorities arrive and after their arrival, the local administration shall assist the railway authority to take all measures for passenger care, transportation of other passengers to their destination, counting and confirmation of casualties and any other supportive requirements of the injured passengers, stranded passengers, relatives of injured or dead persons and other infrastructural support that the railway authorities might need. To ensure better coordination with the local administration an annual rehearsal should be organized. Still City and District Administration extends support hand to Railway Authorities in Evacuation, Shelter, Transportation, Health Facilities, Food & Critical Supplies to the Victims and their families in case of any accidents. Helpline supports are also supported with manpower /communication facilities along with related help in co-ordination with district administration.

3.2.9 Industrial Disasters : Industrial Hazards pose a threat to people and life support



Chapater IV

Ward Level Exposure & Vulnerability Analysis

4.1 Seasonal Hazard Analysis

Type of Hazards	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Remarks
Flood/water logging						←	→						
Cyclone				←	→					←	→		
Heat-stroke			←	→									
Earthquake	←	→										→	
Epidemic						←	→						
Fire	←	→				→				←	→		

4.2 Areas vulnerable to Hazards and degree of vulnerability

Ward No	Heat Wave	Flood	Earthquake	Fire	Industrial Disaster	Remarks
1	√	√	√	√	√	
2	√		√	√		
3	√		√	√		
4	√	√	√	√		
5	√	√	√	√		
6	√	√	√	√	√	
7	√	√	√	√	√	
8	√		√	√		
9	√	√	√	√		
10	√		√	√		
11	√		√	√		
12	√	√	√	√		
13	√	√	√	√		
14	√		√	√		
15	√	√	√	√		
16	√	√	√	√		
17	√	√	√	√		
18	√	√	√	√		

19	√		√	√		
20	√		√	√		
21	√	√	√	√		
22	√		√	√		
23	√	√	√	√		
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25	√	√	√	√		
26	√		√	√		
27	√	√	√	√		
28	√		√	√		
29	√		√	√		
30	√	√	√	√		
31	√		√	√		
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55	√		√	√		
56	√		√	√		
57	√		√	√		
58	√	√	√	√		
59	√	√	√	√		

Climate Analysis of Extreme Weather Events

With the projected annual mean warming of about 4.56°C by the end of this century over Cuttack, increases in the number of hot days and warmer nights are expected. The projected annual and seasonal mean changes in number of hot days over Cuttack are provided in the table. On an annual mean basis, the total count of hotter days is expected to increase on an average by about 12 over Cuttack by the end of this century. During pre-monsoon season, the peak in number of days with hotter daytime surface air temperatures is projected at all time slices. This could be attributed to rise in daytime temperature with time such that day temperature becomes pronounced. This results in higher numbers in 90th percentile and is reflected in more number of hot days during the pre-monsoon season. There are significant changes in the number of hotter days over Cuttack during winter and post-monsoon seasons also, particularly during mid-century of beyond.

Projected changes in wet and very wet rainfall spells in Cuttack

Cuttack normally receives an average annual rainfall of about 144.39 cm. The strength of the southwest monsoon in Cuttack during the season in a year depends

on the frequency, the tracks and the strength of synoptic systems such as monsoon lows and depressions. About 75% to 80% of rainfall is received from June to September. Heavy rainfall is experienced by the city in the months of July and August (peak monsoon season). During March - May, the hot-weather pre-monsoon season, thunderstorm activity accounts for some rainfall in Cuttack. During post-monsoon season also, some rains occur due to the remnant NE monsoon and/or cyclonic storms developing in Bay of Bengal and hitting the Indian east coast.

The heavy rains and floods over vast areas of the delta region of Mahanadi river system are common during the monsoon season. In Cuttack (situated on the delta formed by Mahanadi and its subsidiaries), more than 50% of the city is exposed to extreme flood risk basically due to urban flooding, which is due to poor drainage facilities including narrow channel exits, encroachment of flood plain areas, and choking of drains due to dumping of solid waste. Climate change could exacerbate the flood intensity and frequency in this district with more intense rainfall spells. It is also projected that in a warmer atmosphere, cyclones intensify and lead to heavier rainfall episodes. Therefore, occurrence of flash floods during the post monsoon season cannot be ruled out. This could have serious implications for more frequent and severe floods in Cuttack in future.

Application of Hazard Maps and Climate Change Studies in Disaster Management and City Planning

Multi-Hazard maps help city planners to do risk resilient urban planning and in taking proactive mitigation and adaptation measures. Based on frequency and impact of the hazard, measures need to be adopted which vary from simple to complex, and short term to long term. Some of the measures are cost intensive and need to be prioritized. However, protecting life is of utmost important for risk resilient planning followed by protecting assets (particularly critical and essential infrastructure) from damage. The hazard maps have the following direct applications in risk resilient city planning:

1. A composite hazard map will provide hotspots (high-hazard areas) in the city which guide city in planning its development
2. Hazard maps (whether they pertain to earthquake, flood, cyclone, or heat wave) will also guide in redefining building codes (design requirements) and demarcating development controls. Hazard specific specifications need to be integrated in the

building codes and the hazard zones should act as a guide to defining development zones for city planning. For instance, flood prone areas need to be earmarked for multipurpose flood facility centers, which can be used for recreational activities all year round and used as reservoirs during flooding. The storm water drains need to be designed taking the return period map into consideration (at least need to consider 5-year return period volume of storm water for drainage capacity). The building materials and design need to take into consideration wind speed, heat wave conditions, and earthquake hazard. Small design parameters with no additional investment can help make the building energy efficient and cyclone resilient.

3. The city master plan needs to consider hazard zones and climate change scenarios while defining the development zones and plans. Climate change projections provide variations in climate parameters that need to be considered while defining a forward-looking urban master plan for Cuttack. Simple overlay techniques in GIS, overlaying proposed land use with hazard zones, will give adequate information to design a risk resilient urban plan for the city.

4. Various return period hazard maps have different levels of application. While high investment activities need to take into consideration high return period events and need to design structures accordingly, low return period events, which are more frequent in nature, can be dealt through soft measures including awareness activities.

Estimated exposure values for aggregated and site specific exposures

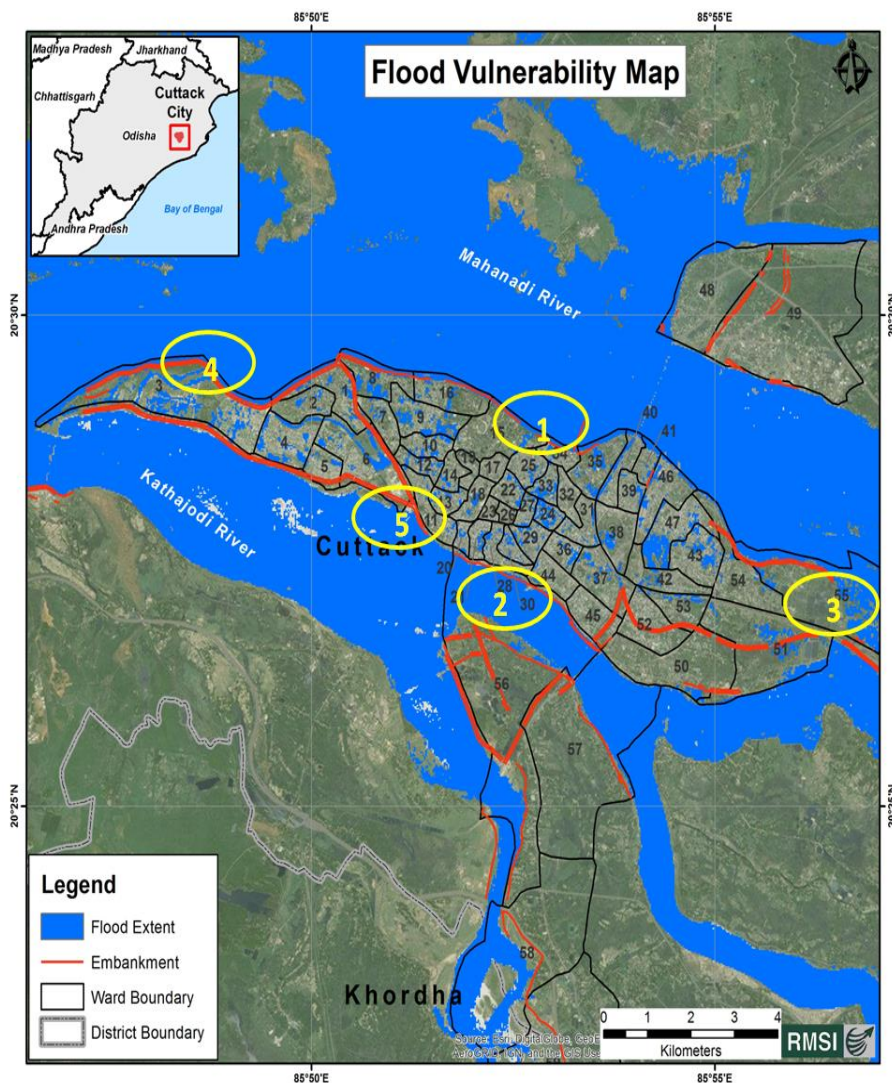
Sl. No.	Exposure Layer	Total Replacement Cost (INR Crores)
1	Residential	7,204.6
2	Commercial	2,284.7
3	Industrial	1,542.5
4	Educational institutions	791.7
5	Health facilities	344.4
6	Religious places	56.9
7	Police Stations	16.3
8	Fire Stations	1.2
9	Administrative Headquarter	1.6
10	Bridges	899.9
11	Railway bridges	400.7
12	Railway Lines	264.5
13	Roads	2,267.9
14	Potable Water	191.3
15	Waste Water	222.3

Sl. No.	Exposure Layer	Total Replacement Cost (INR Crores)
16	Communication System	93.4
17	Electric Power Network	394.2
	Grand Total	16,978

Ward-level distribution of population and buildings based on uses

Ward	Male Population	Female Population	Total Population	Residential	Commercial	Industrial	Educational Institutes	Health Facilities	Religious Places
1	11,244	11,655	22,899	4,455	0	0	29	23	50
2	2,496	2,182	4,678	1,028	0	0	7	5	11
3	3,494	3,054	6,549	1,439	0	0	9	7	16
4	3,994	3,491	7,484	1,644	0	0	11	8	18
5	4,913	5,104	10,016	2,085	0	0	14	11	23
6	6,316	6,562	12,878	2,680	669	0	18	14	30
7	5,310	5,889	11,199	2,322	0	0	15	12	26
8	5,487	4,633	10,120	2,020	0	0	13	10	23
9	5,606	5,609	11,216	2,390	14	0	16	12	27
10	7,400	7,031	14,431	2,713	102	0	18	14	30
11	7,816	7,184	15,000	2,836	619	0	19	14	32
12	6,762	6,288	13,050	2,783	0	0	18	14	31
13	6,124	5,247	11,370	2,209	54	0	14	11	25
14	6,619	5,181	11,800	2,199	0	0	14	11	24
15	7,517	7,185	14,703	2,966	492	0	19	15	33
16	5,217	5,390	10,608	2,317	0	0	15	12	26
17	5,235	5,434	10,669	2,169	390	0	14	11	24
18	5,601	4,729	10,330	1,965	1,074	0	13	10	22
19	7,584	6,211	13,795	2,501	0	0	16	13	28
20	3,203	2,319	5,522	944	511	0	6	5	11
21	4,042	3,737	7,779	1,460	1,017	0	10	7	16
22	7,679	5,760	13,439	2,504	499	0	16	13	28
23	5,705	4,283	9,987	1,656	328	3	11	8	18
24	3,608	2,739	6,347	1,243	183	0	8	6	14
25	6,750	6,490	13,240	3,363	1,075	0	17	13	28
26	9,003	8,608	17,612	1,864	149	0	22	17	37
27	5,412	4,108	9,520	2,550	151	0	12	9	21
28	6,129	6,229	12,359	2,265	65	0	15	11	25
29	6,544	6,229	12,773	2,357	1,551	0	15	12	26
30	4,653	4,416	9,069	1,882	213	0	12	10	21
31	5,936	5,688	11,624	2,420	1,405	0	16	12	27
32	5,716	5,444	11,161	2,097	1,116	1	14	11	23
33	6,206	5,798	12,004	2,462	787	0	16	12	27
34	5,851	5,495	11,346	2,248	798	0	15	11	25
35	5,371	6,516	11,886	1,971	189	0	13	10	22
36	4,523	4,293	8,815	1,884	1,020	0	12	10	21
37	6,389	5,883	12,272	2,408	1,232	0	16	12	27

Ward	Male Population	Female Population	Total Population	Residential	Commercial	Industrial	Educational Institutes	Health Facilities	Religious Places
38	4,300	3,762	8,063	2,058	2,150	4	13	10	23
39	5,548	4,974	10,521	2,223	103	0	15	11	25
40	4,049	3,752	7,800	1,608	566	0	11	8	18
41	5,568	5,257	10,824	2,197	102	0	14	11	24
42	5,480	6,173	11,653	2,176	461	68	14	11	24
43	4,797	4,286	9,083	1,966	1,001	0	13	10	22
44	4,986	4,550	9,536	2,268	975	0	15	12	25
45	5,973	5,479	11,452	2,310	877	0	15	12	26
46	5,814	5,120	10,934	2,390	1,873	0	16	12	27
47	8,417	7,928	16,344	3,575	1,128	0	23	18	40
48	6,165	5,792	11,957	2,566	8	39	17	13	29
49	6,993	6,318	13,311	2,900	3,031	2,028	19	15	32
50	7,289	6,299	13,588	3,009	871	364	20	15	34
51	6,140	5,613	11,753	2,406	1,607	0	16	12	27
52	6,883	6,344	13,227	3,053	575	8	20	15	34
53	4,673	4,125	8,798	2,006	88	0	13	10	22
54	5,929	5,688	11,618	2,642	308	14	17	13	29
55	5,833	5,646	11,479	2,324	0	3	15	12	25
56	7,311	6,791	14,101	2,632	3,762	12	17	13	29
57	5,886	5,388	11,274	2,126	3,261	9	14	11	24
58	2,622	2,477	5,099	940	322	0	6	5	10
59	3,492	3,665	7,157	1,316	2,139	67	9	7	15
Grand Total	341,603	317,521	659,122	132,990	40,916	2,621	870	672	1,480



Cuttack city is vulnerable to riverine flooding due to heavy discharge (due to heavy rain upstream) in Mahanadi River and can impact low lying area and some newly developed areas outside the embankment.

In addition to this, Cuttack city is also vulnerable to localized rain leading to waterlogging in selected locations.

The map shows simulated scenario of 48,000 cu mec discharges and vulnerable peripheral land area of the city and waterlogging inland areas due to localized rain of 337 mm.

The red lines are the existing embankments in and around the city. The embankments are in good conditions but has some area which are open and are the vulnerable pockets

The yellow circle 1, 2, 4 and 5 are the land areas outside embankment that can be affected due to riverine flood.

The yellow circle 3 and other blue shaded location within the city are vulnerable to inland flooding

Physical Vulnerability

The Cuttack city survey data shows that a variety of building materials are used. The buildings in this city are mostly low- to medium rise. Generally, these buildings are classified as residential, commercial, and mixed type. In the case of masonry buildings, all the buildings in the area are three stories or less.

In the case of RCC buildings, all the buildings in the city are below 8 stories. It was observed that the apparent quality of construction is good. Also, very few buildings have heavy overhangs.

To improve resilience to hazards, it is critical for the city to strictly follow the building codes and develop controls. The city needs to opt for decongesting the overcrowded city centre by regulating new permissions for construction and encouraging

construction on the outskirts by giving incentives. There is a possibility for vertical expansion in the city centre but these efforts need to strictly follow structural norms to ensure they are resilient to the hazards in the region.

Social vulnerability assessment

Population profiling and identifying vulnerable groups

The city has a population density of 7,823 per sq km. The city has an area of about 78 sq. km, which is higher than that of Bhubaneswar city.

The population constitutes about 21% in age groups <6 and >60 and 13% are SC and ST population. The average household size of Cuttack city is 4.7 people per household.

The city has 309 slums pockets (Cuttack Municipality, 2017²) spread across the city with a total population of 235,980 (Census of India, 2011) constituting 40% of the total population. Of the 309 slum pockets, 200 are authorized, 104 are unauthorized, and 5 are tenants (Cuttack Municipality, 2017). These pockets are small and dispersed across the city but a majority of them are in the central island (referred to as the Central Millennium City in the CDP document) which is the core city area. The distribution of slum locations in the city is shown in Figure . The growth of slums in the city is restrained by space and geographical conditions of the city. The slum population lives in poor structures even though many of these slums have electricity and water supply from the municipality. The household size of slum dwellings is smaller (average family size is 4 per household) compared to that of the city figure. Mostly, the slum dwellers are migrants from rural parts of Odisha and neighboring states and contribute a major share to the work force (mostly casual laborers) including street vendors, domestic support, casual workers, and laborers in industries.

² Cuttack Municipality, 2012, Cuttack Municipality Office.

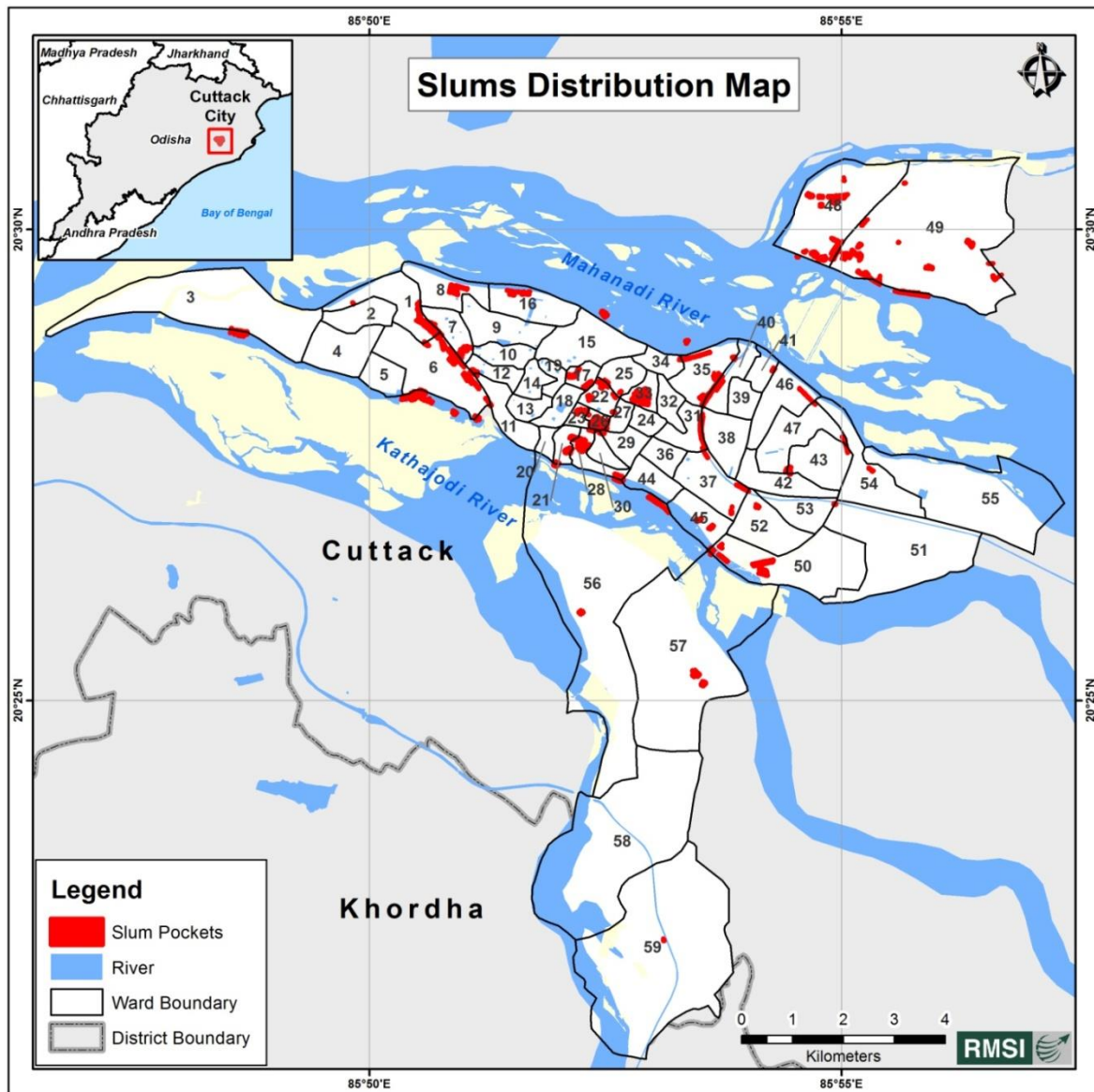


Figure :Distribution of slums in Cuttack city

Social Vulnerability Analysis

The ward level SoVI of Cuttack city is presented below . The social vulnerability is high specifically in wards, which have a high population density and high population of dependents.

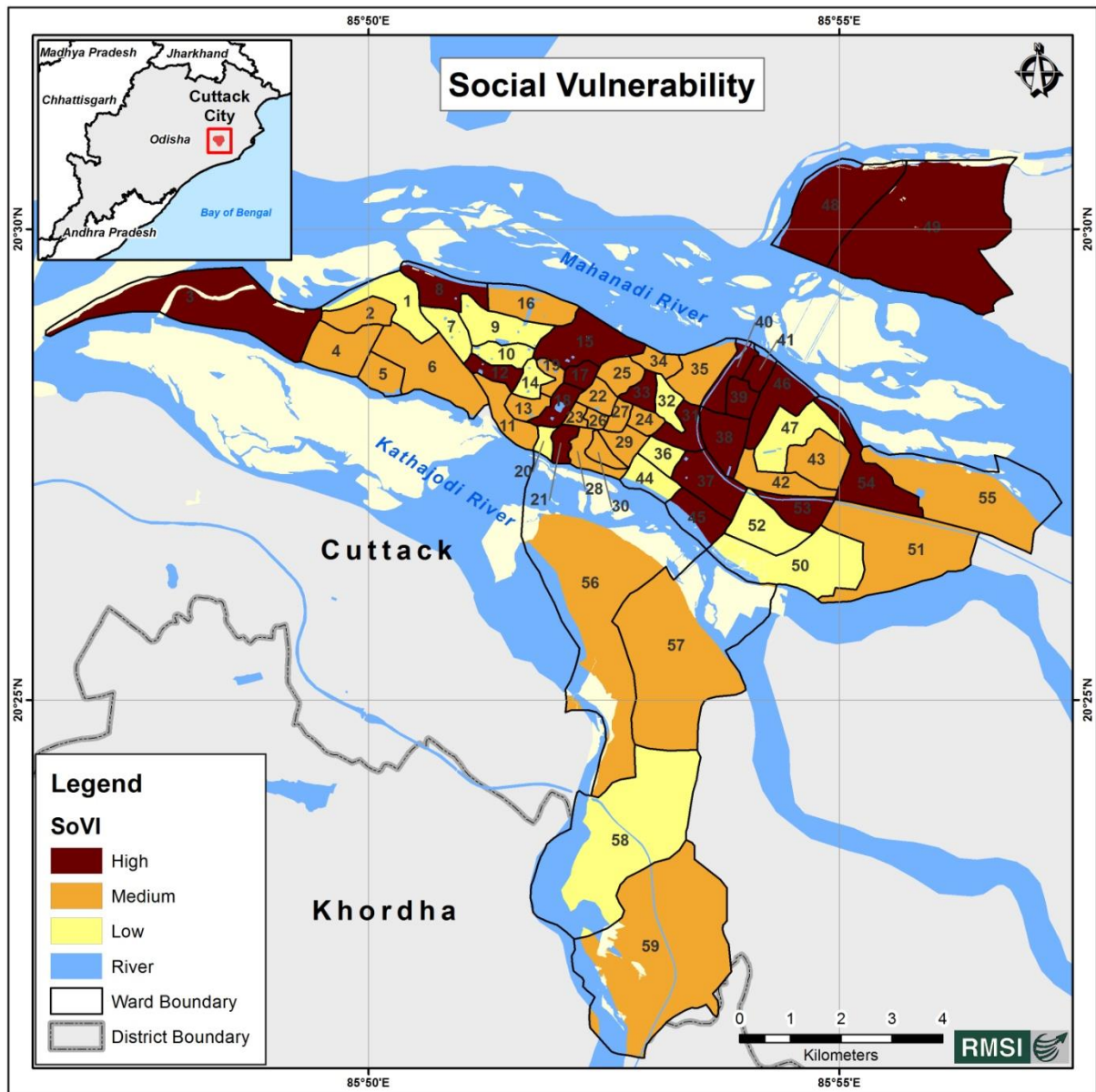


Figure : Social vulnerability index for Cuttack city

As per the household survey, majority of the households depend on casual work for their livelihood. Figure shows the composition of means of livelihood in the sample surveyed. As per the city administration one-third of the city population is street vendors, which is the main source of their livelihood.

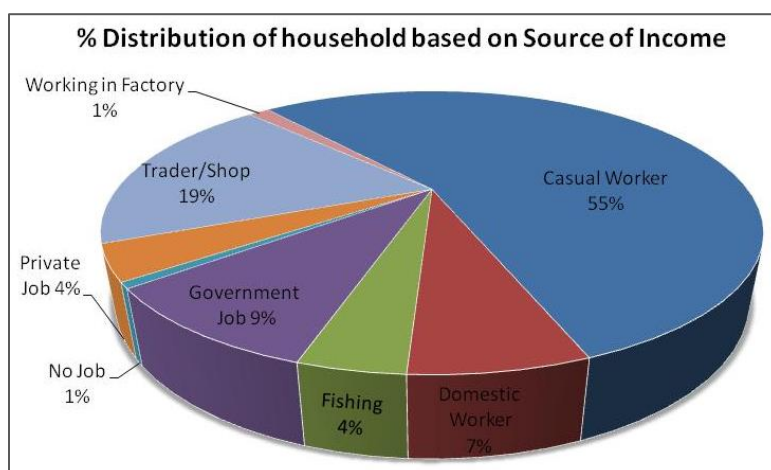


Figure: Source of income (livelihood) based on occupation, sample survey 2017

The sample also confirms that trade and trade related activities are the key source of livelihood. Casual workers and traders constitute the major share, followed by government jobs. About 50% are casual workers who have a monthly earning ranging between Rs 2,000-5,000, 29% are in the range of Rs 5,000-10,000 and the rest are above Rs. 10,000. Apart from these, those in government jobs and traders are the only groups that are earning about Rs 10,000 per month. Almost 70% of the households have only one income-earning member in the family.

Being an old city, majority of the city dwellers are living in ancestral houses or owned house (74%) and own land. Most of the slums are located on public land that has been encroached upon and the survey sample also has 23% of city dwellers living in public owned land.

The city has a reasonably good standard of basic service facilities – piped drinking water and electricity. However, most parts of the city have narrow roads, and poor drains and sewer systems. Under different developmental projects, the city is now extending safe drinking water and sewerage system across the city. However, the implementation of these projects is facing problems, including poor coordination and delays, leading to inconvenience for the people. The city has now coming up with good documentation of disease incidence data and the cases reported at government health centers are recorded manually and maintained as hard copies. Cases reported at private hospitals and clinics stay in isolation. Even though Cuttack city is also covered under the National Urban Health Mission (NUHM) and has

initiated several initiatives in the city (including outsourcing operation of an urban unit to a private agency), there is still gap / less initiative to systematically document and maintain a centralized database on disease incidence. It is important to understand the locations and time during the year when the high occurrence of water borne and vector borne diseases took place to allow for proactive measures to be taken ahead of time to reduce the impact. Based on the three years of disease data of CMC, the following inferences can be made.

Figure below shows the reported dengue and jaundice cases in the last four years in the city at city office. This data shows a decreasing trend. There are a couple of instances where some wards have a large number of reported cases; for instance in 2013 wards 21, 23, and 30 reported 110, 249, and 68 dengue cases respectively. In 2016, 147 cases were reported in ward 49. Similarly, in 2015, 33 and 34 cases of jaundice were reported in wards 23 and 25 respectively, 38 cases in ward 33 in 2015, and 97 cases in ward 8 in 2017. Interestingly, the city records do not have information on diarrhea, which is a common disease in the city.

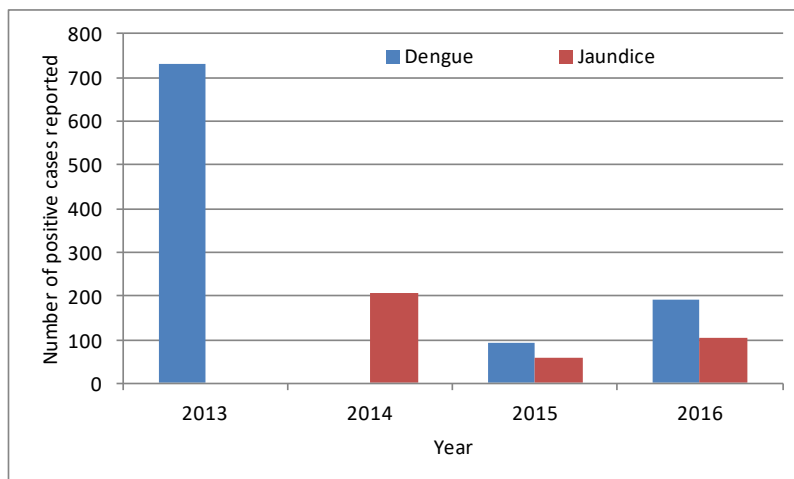


Figure: Reported cases of dengue and jaundice in Cuttack in last four years

Source: CMC, 2017

The household survey below shows that malaria cases are also reported in the city. Even though no trend can be mapped with 4 years of data, it should be noted that the city needs attention to reduce the impact of waterborne and vector borne diseases.

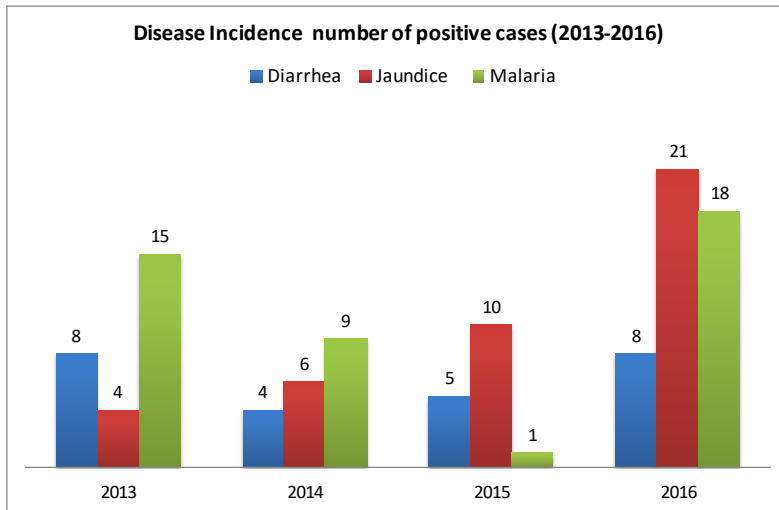
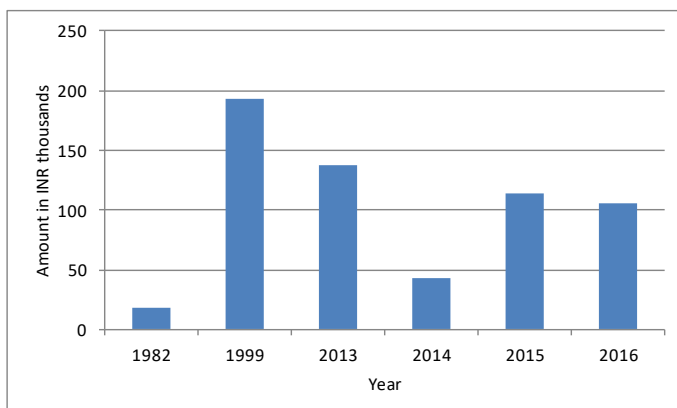


Figure: Disease incidence as per household survey

In terms of hazards, cyclones seem to affect the community more than the other hazards. Even though floods and water logging affect the city causing inconvenience and losses, the community is more concerned about the damages caused due to cyclones. All the 10 sample wards reported that they were impacted by cyclones while wards 4, 5, 9, 15, 16, and 46 reported impact due to floods. The economic losses due to cyclone damage to houses and assets are also high. The economic loss from cyclones was 20 times more than that for flood as per the respondents of the survey. The economic losses due to cyclones during the recent past summarized in **Error! Reference source not found.** show that the 1999 super cyclone affected the city most. Interestingly, cyclones have affected the city in the last 4 consecutive years. Like many other cities, there are pockets vulnerable to floods, including locations between the embankments and the river along the ring road, where communities are living.



Economic losses due to cyclones in the recent past as per the household survey

In terms of early warning and response, the city has good facilities including identified shelter locations.

Economic vulnerability assessment

Economic vulnerability can be directly linked to the livelihood aspect of the community. For livelihood impact assessment, data related to socio economic aspects, key occupations the community depends upon for livelihood, and the nature of hazards affecting the city were considered.

Cuttack's economy is heavily driven by its traditional trade related activities - textiles and handicrafts along with a wide array of industries ranging from steel, ferrous alloys and logistics to agriculture. The city is the second-largest hub for textiles in eastern India, after Raipur and is supposed to have the largest GDP among all the cities in Odisha.

As the city act as a hub for trade and commerce activities, impact of hazard can affect a larger economy as there will be business interruption. The city has poor infrastructure facilities even though is well-connected with rest of the state. The business operation of the city is unique with having production outside the state and doing distribution from the city. The reason for the city still holding the prominence in trade in the State is the brotherhood and the traditional traders don't want to relocate even there is better infrastructure facilities available in the adjacent area.

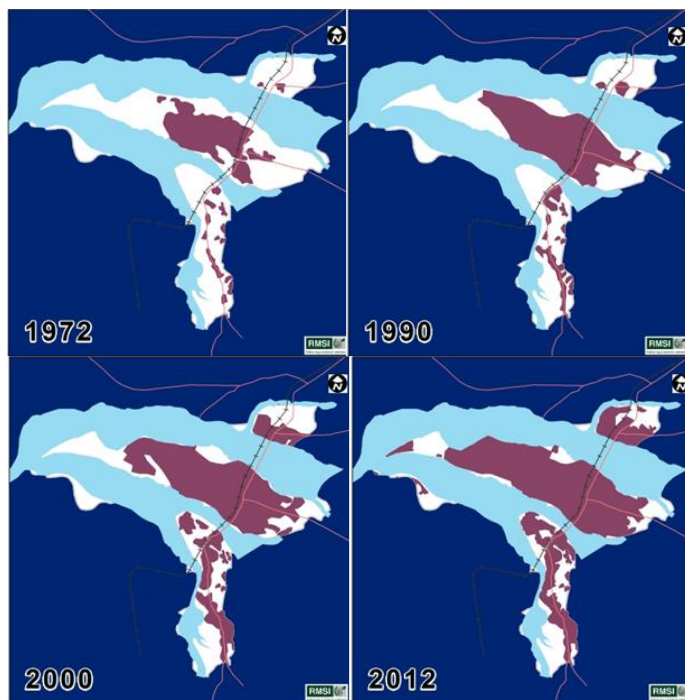
To improve the economic resilience of the city, the following need to be considered:

1. Encourage or enforce the digital drive and emphasize on e-commerce activities in the trade sector of the city
2. Improve infrastructure, particularly roads and buildings in the wards which have a concentration of trade activities
3. Give incentives to traders to start business activities outside the core city area and impose disincentives like increased floor taxes for trade activities in the core city area to regulate the density of shops in the core city area
4. Plan spatial growth considering the growth pockets of the city, particularly in the city outskirts

5. Good governance and improved service delivery, and influence in regional policy formulation can influence the growth of the city on the economic front. City governance should be responsive towards the business requirements of the economic sectors of the city.

Environmental vulnerability

The recent past has witnessed the city's expansion both in terms of vertical and horizontal growth, beyond its main island, especially towards the south and northeast directions. Traditionally, the masonry houses of the city are multi storied though the community still does not prefer to go for multi storied apartments. This has stimulated the horizontal growth of the city beyond the main island. The spatial growth trend of the built-up area of the city over the last 40 years captured from satellite images is presented in **Error! Reference source not found..**



Urban growth in Cuttack city over the last 40 years

The development, mainly residential development, is along the main roads – NH 5 towards Bhubaneswar, Cuttack-Baral road, and NH 5 towards Jajatpur. Interestingly, there is relatively less development towards the Cuttack-Paradip road. The built-up footprint of the city shows

that the main island reached saturation in year 2000 and the pace of growth has now spilled beyond this island. The 2012 built-up footprint shows the growth of the city extending towards the northeast and south beyond the main island.

Pockets of environmental vulnerability: The low-lying areas of the city, particularly the main island, are vulnerable to environmental and health issues due to overcrowding and choked drains that cause water logging and unhygienic

conditions. The poor environmental conditions often trigger epidemics particularly related to water-borne and vector borne diseases.

In addition to this, new residential development on the southern fringe of the city is mainly on reclaimed low-lying areas, which can cause water logging and urban flash floods unless proper drainage is planned.

RISK ASSESSMENT

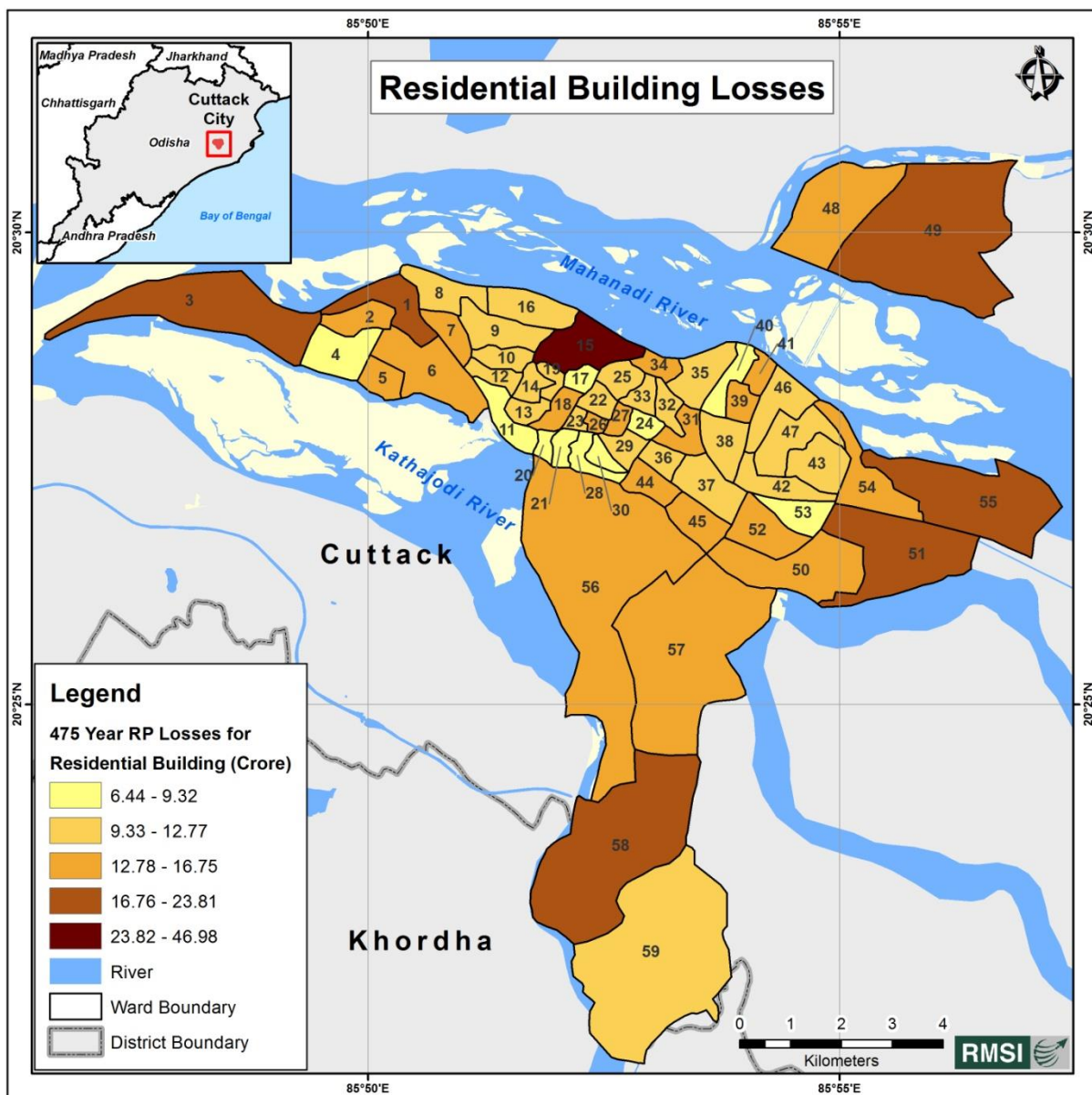
Earthquake

As per the Seismic Zoning Map of India (IS: 1893, 2002, 2014), Cuttack city is located in seismic zone-III. Cuttack and its surrounding regions lie in a Stable Continental Region (SCR) that is not seismically very active. However, minor to moderate earthquakes (not of damaging scale) have occurred in the past at different localities. In the recent past, the maximum magnitudes reported are around 4.5 to 5.3 on the Richter's scale and the maximum-recorded intensity in Cuttack city so far is about VI on the MSK Intensity scale. In spite of the moderate, non-damaging earthquakes observed so far in and near Cuttack, it cannot be confidently said that higher intensity earthquakes are unlikely in the future. Recently, on May 21, 2014, an earthquake of magnitude 6 occurred in the Bay of Bengal, which was severely felt in different parts of Cuttack city. However, there was no significant damage reported in the city. A comprehensive modeling approach was adopted for earthquake hazard and risk assessment (please refer to the earthquake hazard section in the Component 1, 2, and 3 report).

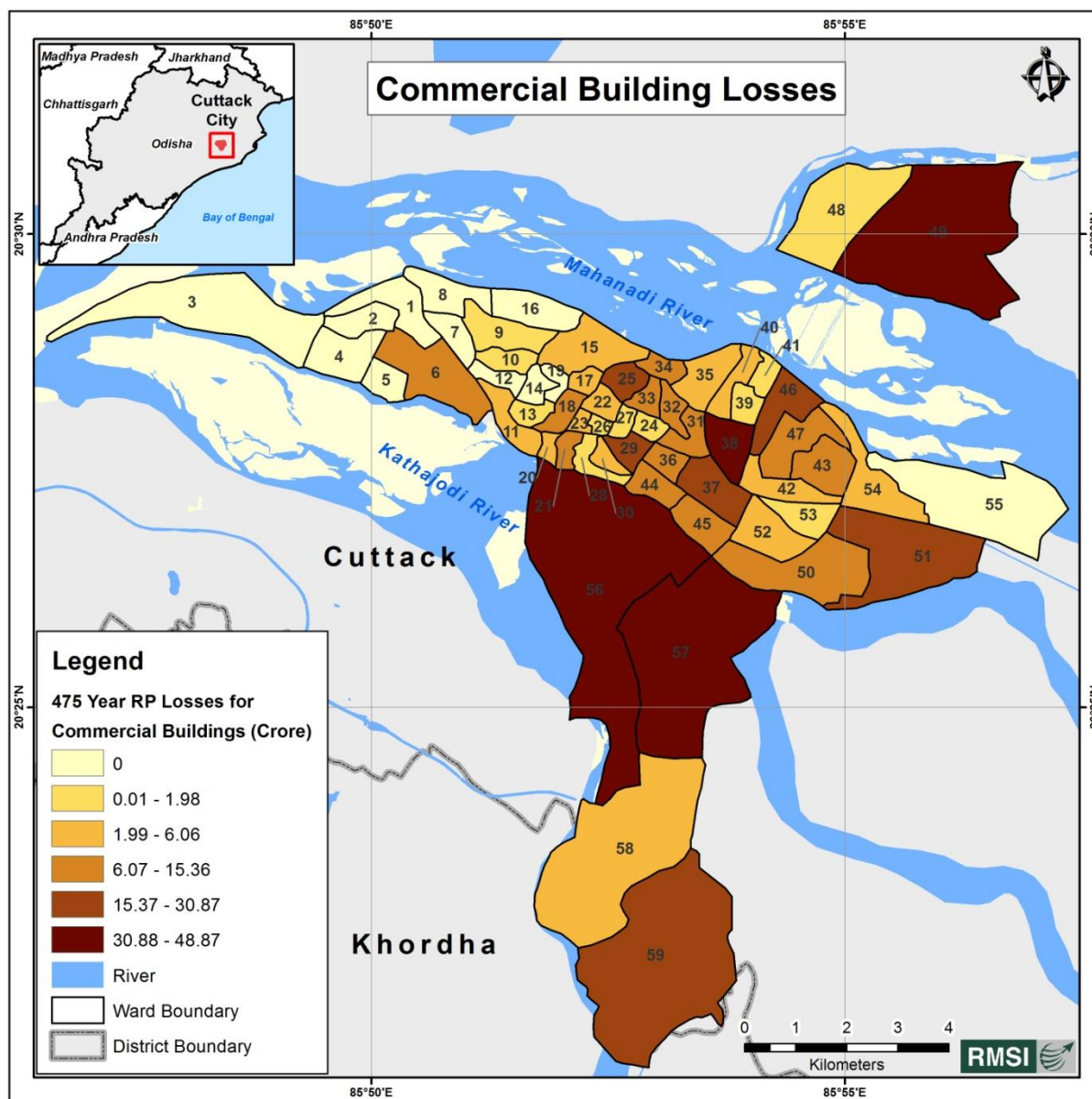
Table below provides estimates of PML for general occupancy (residential, industrial, and commercial) classes due to Earthquake hazard scenario of 475-years return period. Accordingly, losses are presented at ward-level for this scenario-event (**Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.** for residential, commercial, and industrial structures, respectively). The table shows that probable maximum losses are to the order of INR 785 crores (8% of total exposure value) for residential buildings, INR 513 crores (17% of total exposure value) for commercial buildings and INR 571 crores (24% of total exposure value) for industrial buildings.

Table: PML for the Earthquake Hazard in Cuttack city

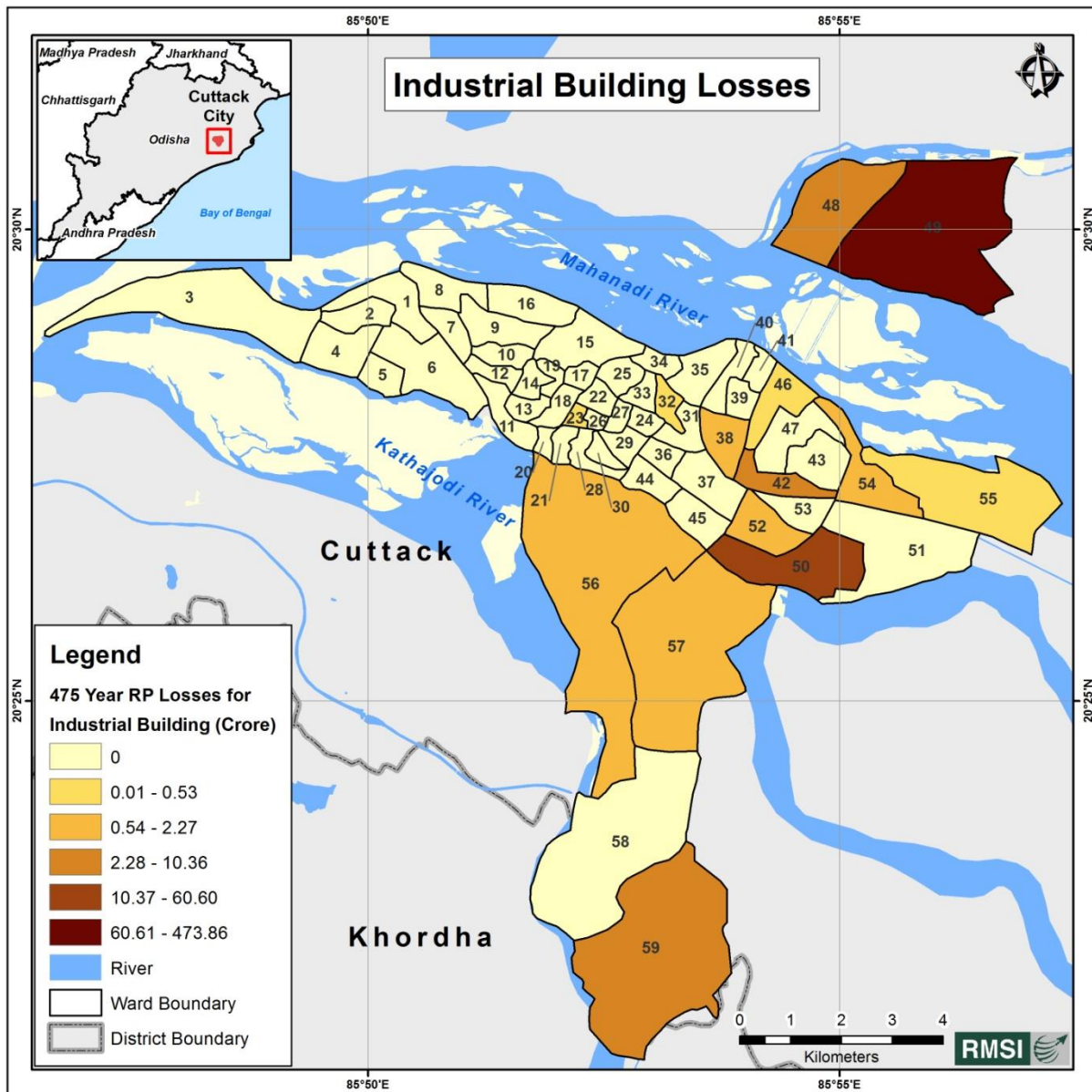
Return Period Years	Losses (INR crores)		
	Residential	Commercial	Industrial
475	785	513	571



Distribution of Structural Losses (PML) corresponding to 475-years return period hazard scenario event for residential buildings in Cuttack city



Distribution of Structural Losses (PML) corresponding to 475-years return period hazard scenario event for commercial buildings in Cuttack city



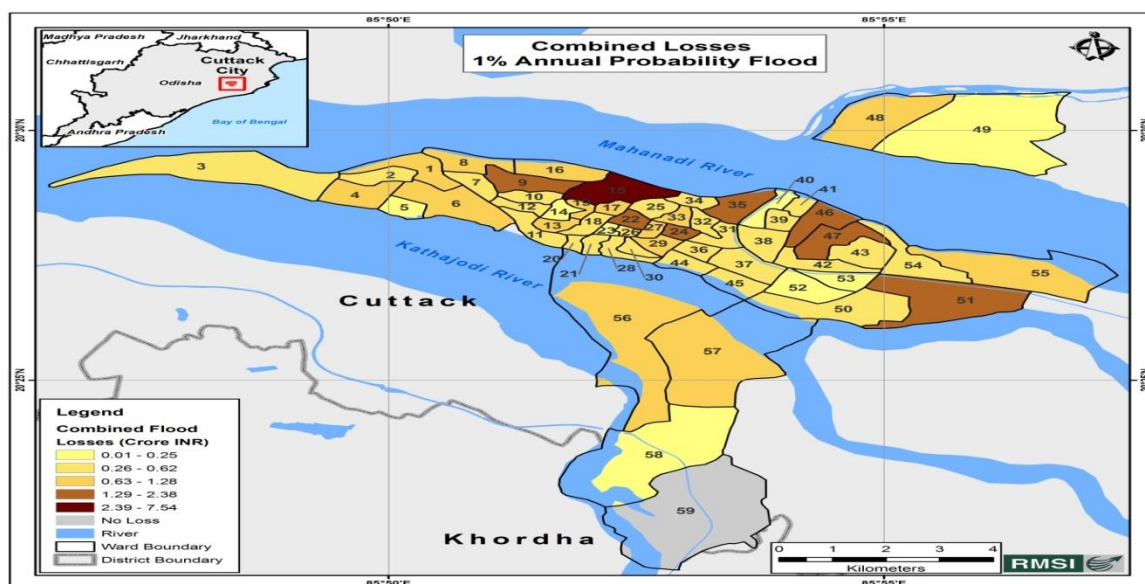
Distribution of Structural Losses (PML) corresponding to 475-years return period earthquake hazard scenario event for industrial buildings in Cuttack city

Estimation of projected losses to various sectors for the earthquake hazard for a 475-year return period hazard

Facility/Sectors	No. of facilities/ length	Losses corresponding to 475 Year period
		INR crores
Facilities		
Hospitals	672	32
Schools/Colleges	870	74
Places of Worship	1,480	5

Administrative Headquarters	1	-
Fire stations	3	-
Police Stations	17	-
Transport		
Road, km (National Highway)	41	4.47
Road, km (State Highway)	4	0.50
Road, km (Major Road)	80	5.98
Road, km (Minor Road)	3	0.09
Road, km (Link Road)	587	23.8
Railway Lines, km	42	No Loss
Bridges	26	73
Railway Station	4	4.35
Utility Networks		
Water Lines, km	383	1.25
Sewerage Line, km	445	1.34
Electricity System	-	18.15

Flood Risk Assessment:



Ward-wise distribution of estimated combined potential losses due to for 1% annual probability flood

After estimating the potential losses due to a number of probable flood events ranging from 50% annual probability of occurrence to 1% annual probability of occurrence, it

becomes essential to know the AAL that can occur during any year. AAL is the mean or average of the loss distribution curve that is averaged over many years.

Figure shows the map of spatial distribution of ward wise average annualized losses for Cuttack city. The AAL map shows that ward numbers 15 and 35 are most vulnerable as per the combined losses followed by ward number 9, 24, 46, 47, and 57. Combined potential losses are dominated mainly by residential and road losses.

Table provides a comparative distribution of various components contributing to the combined AAL and AAL as a percentage of the total corresponding value of exposure.

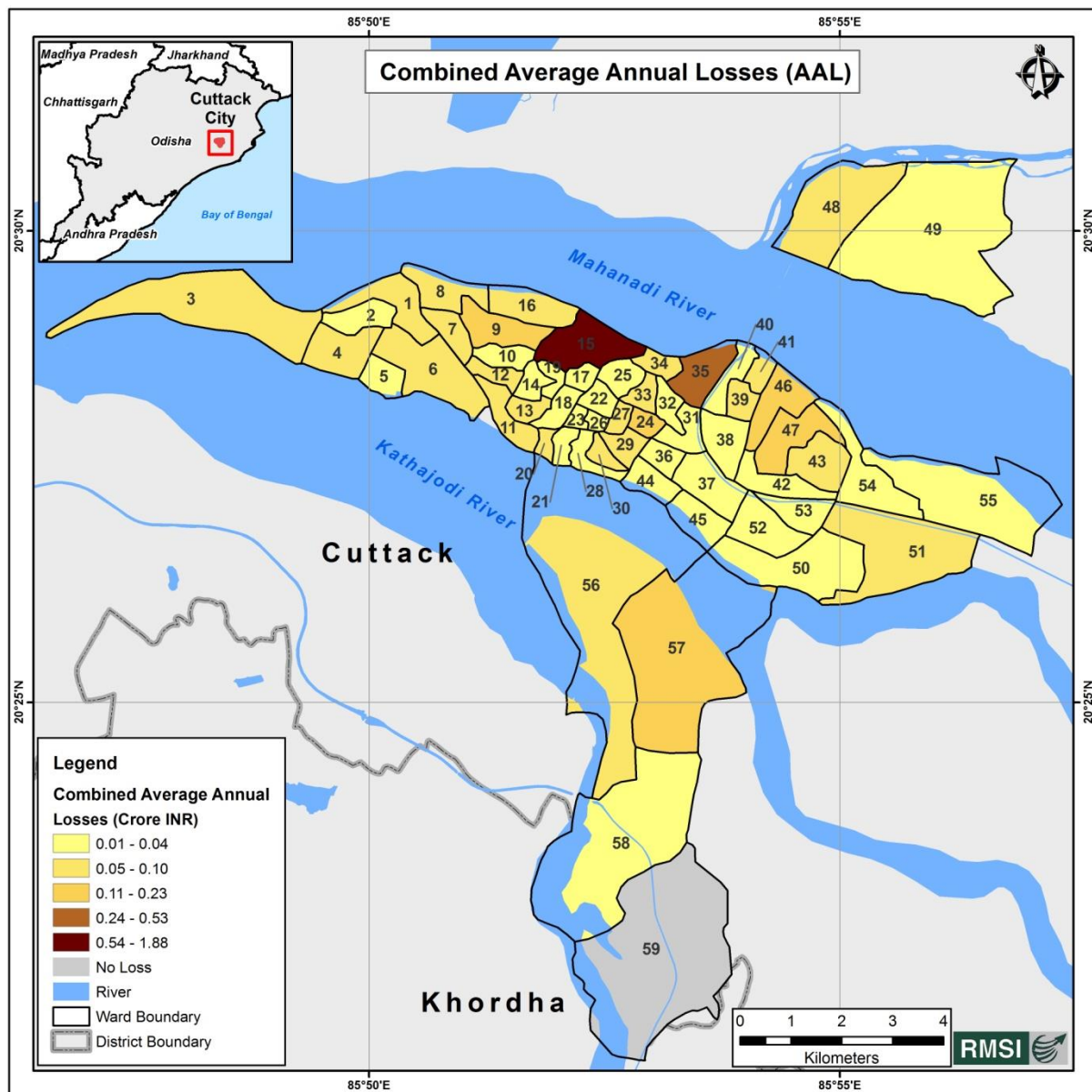
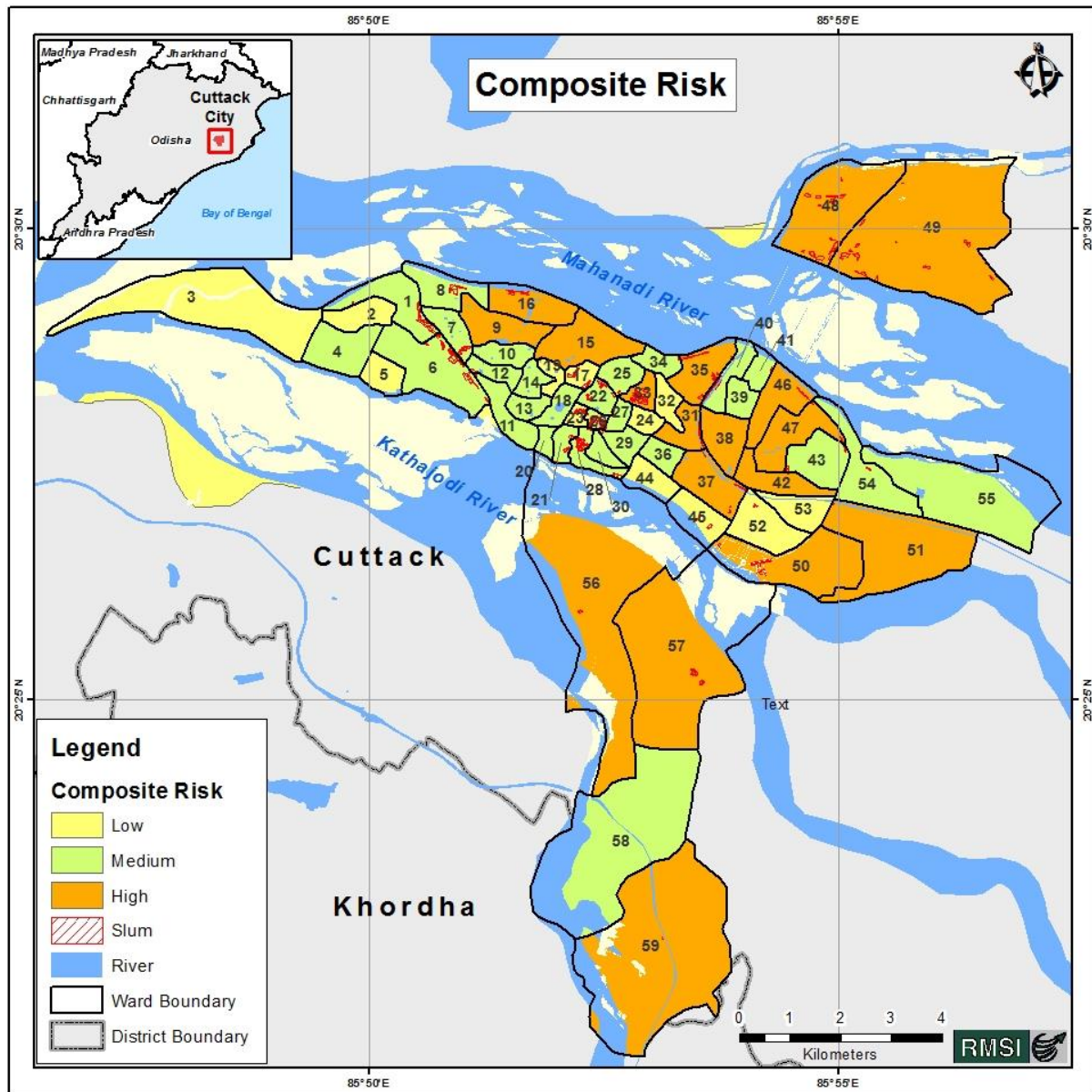


Figure Spatial distribution of ward wise average annualized losses for Cuttack city

Table: AALs corresponding to different exposure classes

Exposure Classes	AALs in INR crores	AAL as % of Total Exposure Value
Residential	3.50	0.049
Commercial	0.32	0.014
Industrial	0.01	0.000
Essential Facilities	0.26	0.021
Utilities	0.01	0.001
Transportation Infrastructures	1.06	0.027
Combined	5.15	0.030

RISK HOTSPOTS



About 40% slums pockets are in High Risk Zone

CHAPTER : V

5.Resource Inventory/Capacity Analysis

5.1 Resource available with ULBs

Basic Information

- Establishment of Cuttack Municipality : 4th June 1876
- Establishment of Cuttack Municipal Corporation : 15th August 1994
- Total No. of Wards : 59
- Area : 192.5 Sq.Km
- Population (As per 2011 Census) : 6,10,189

- Total No of Households : 1,30,653
- Identified Slums under CMC : 264
- No of Anaganwadi Centres : 261
- No of Anaganwadi Workers : 255
- No of ASHAs : 230
- No fo Health Workers : 55

1. Demography

- Population (As per 2011 Census) : 6,10,189
- Total No of Households : 1,30,653

Ward No	No of Households	Population	Ward No	No of Households	Population
1	2035	9956	31	2294	10761
2	1858	9030	32	2153	10332
3	2023	9587	33	2262	11113
4	2014	8818	34	2279	10504
5	2548	11374	35	1961	11004
6	2025	10950	36	1864	8161
7	2287	10368	37	2386	10931
8	2056	9369	38	1970	7464
9	2454	10383	39	2347	10253
10	2813	13360	40	1624	7221
11	2007	9574	41	2088	9508
12	2609	12081	42	2268	10788
13	2211	10526	43	2568	11208
14	2082	10924	44	2072	8505
15	2507	13611	45	2502	11355
16	2167	9820	46	2355	10122
17	2040	9877	47	2821	12332
18	1910	9563	48	2518	11069
19	2480	12771	49	2813	12323
20	1904	9655	50	2912	12579
21	1555	7450	51	2397	10880
22	2581	12441	52	3039	12245
23	1598	8767	53	1941	8145
24	1638	8498	54	2563	10755
25	2278	12257	55	2300	10627
26	2165	10310	56	1786	9206
27	2412	12185	57	1860	8819
28	2352	11441	58	2268	10186
29	2123	9065	59	1319	6626
30	2391	11156			

2. TOTAL ROAD (860.57 Km.)

- B.T. : 378.30 K.m.
- C.C. : 403.07 K.m.
- W.B.M. : 46.50 K.m.
- Moorum : 11.32 K.m.
- Earthen Surface : 21.38 K.m.

3. TOTAL LENGTH OF DRAIN (1,729 Km.)

- Surface Drain : 650 K.m.
- M.S.W.C. (I + II) : 22 K.m. (Main Storm Water Channel)
- B.S.W.C. Drain : 29 K.m. (Branch Storm Water Channel)
- Balance : Earthen Drain

4. Public Toilets/Community Toilets/Hybrid Toilets

- Public Toilets : 37 Nos.-Free
- Community Toilets : 12 Nos.-Free
- Hybrid Toilets : 20 Nos

5. WATER SUPPLY

	CMC	PH	Total
Tube wells	2804	567	3371
Stand posts	0	2028	2028
Pump Houses		198	198
Household covered under piped water scheme			59182

6. MEDICAL & DISPENSARIES**Allopathic : 11 Nos.**

Sl.no	Name of the UPHC	Name of the MO I/C	Name of the Pharmacist
1	Nayabazar UPHC	Dr. Arun Kumar Sahoo	Sri.Narayan Prasad Sahoo
2	Madhusudhan Das UPHC	Dr. Minati Kumari Majhi	Sri. Ajit KU. Routray
3	Brajarambha UPHC	Dr. Erun Naaz	Sri.Sanjtosh Ku. Behera
4	Manjulata UPHC	Dr. Nikita Mahapatra	Sri. Ratnakar Senapati
5	Bidanasi UPHC	Dr. Kalyananand Mohanty	Sri. Sujit Das
6	Tulasipur UPHC	Dr. Sujata Samant	R. Ahmad Khan
7	Thoria Sahi UPHC	Dr. Madhuri Panigrahi	Sri. Kapileswar Majhi
8	Jagatpur UPHC	Dr. Subash Chandra Samantray	Sri. Falguni Kumar Rath

9	Bidyadharpur, Baranga UPHC	Dr. Gyanendra Sahoo	Sri. Mukesh Ranjan Behera
10	Bamphakuda UPHC	Dr. Prahallad Charan Samal	Sri. Subasha Chandra Tripathy
11	Bidyadharpur, CRRI UPHC	Ramakanta Mohapatra	Sri. Minati Mishra

Homeopathic : 02 Nos.

Sl.	Name of the Medical/Dispensary	Name of the Doctor	No of Para Medical Staff attached
1.	Sartol Dispensary	DrPradeepta Ku Choudhury	Vacant
2.	Rajabagicha Dispensary	Dr Pradeepta Ku Choudhary	Sri Himansu Mohan Mishra

7. MANPOWER PLANNING FOR SURVEILLANCE AND P.H. ACTIVITIES

Sl. No.	Ward Nos.	Areas	Name of the MPHS (M)	Name of MPHWS (M) / Sr Helper
1	8, 9 & 10	Matha Sahi, Bauri Sahi, Hatua Sahi, Bangali Sahi, Bila Sahi, Stiwasat Panna, Sri Vihar Colony, Bauri Sahi Part	Sarata Moharana, MPHS	i) Prasanta Pradhan, MPHWS ii) Sarat Swain, MPHWS iii) Sarat Swain, MPHWS iv) Pradip Mallick, MPHWS v) Sunil Das, MPHWS vi) Krushna Ch. Mohanty, Sr. Helper vii) Ramala Muduli, Sr. Helper
2	33 & 34	Kesharpur, Uhasahi, thoriasahi, gamandia, friends colony. Nayaksahi, malhasahi, kathgolasahi, mangalabag, nuapatna, machhua bazaar, baniasahi,	Ashok Mohanty, MPHS	i) Sarat Mohapatra, MPHWS ii) Nisakar Sahoo, MPHWS iii) Subasish Singh, MPHWS iv) Basanta Jena, Sr. Helper v) Bhagirathi Behera, Sr. Helper
3	38, 39, 40 & 41	Jobra, railway station, revenshaw college, pilgrim road, malgodown beherasahi, das sashi, pareswarsahi, station bazaar, yunuspatna, nadikulasahi, old malgodown, chunabhati lane, fish market, municipal colony, malhasahi, rahemnanchhak, matiamangala,	Pravat Ku. Singh, MPHS	i) Krishna Ch. Sahoo, MPHWS ii) Sisir Phad Singh, MPHWS iii) Prasanna Biswal, MPHWS iv) Ganeswar Behera, MPHWS v) Durmulya Panda, Sr. Helper

8. ZONE WISE SUPERVISING OFFICERS OF CMC

Zone No.	Name of the Supervising Officer	Ward No.	Location	Zone No.	Name of the Supervising Officer	Ward No.	Location
1	Pradeep Kumar	1	Bidanasi (Part)	6	Pradeep Kumar	16	Deer Park area

		2	Bidanasi (Part)			21	Purighat Area
		4	CDA			29	Pithapur Area
		5	CDA sector 7			42	Chauliaganj
		7	Deula Sahi, Netaji Nagar, Idga, Dhoba Sahi, Shivaji Nagar			46	Sikharpur
		8	Chahata, Matha Sahi, Hatua Sahi, Bauri Sahi			47	Mohanadivihar
		17	Pattapola			54	Potapokhari
						55	CRR Bidhyadharpur
2	Lalitendu Nayak, J.E	6	CDA	7	Swagatika Mohanty	25	Mani Sahu Chhaka
		14	Rover's Street, Khatbin Sahi, Jaganath Ballava				
		18	Odia Bazar, Dargha Bazar				
		50	Nuapada, Press Colony	8	Dilip Sahoo	3	CDA & Bidyadharpur
						20	Bakhrabad
3	Santosh Dash	9	Sribhir Colony			26	Katahgada Sahi
		12	Kafla			27	Rousapatana
		23	Choudhury Bazar, Kadamrasool	9	Bipin Pradhan	22	Bepari Sahi
		43	Badambadi			33	Gamahadian
		44	Khan Nagar			36	Sankarpur
		45	Aparna Nagar			37	Chatrabazar
		10	Sidheswar Sahi			38	College Square
4	Sanjib Pradhan	11	Chandini Chouwkh	10	Gitarani Sahoo	39	Jobra
		13	Kali Gali, Dargi Sahi			41	Jobra
		15	Buxibazar			34	Machua Bazar
		19	Dewan Bazar, Sutahat			40	Jobra
		24	Saanta Sahi			51	Tinigharia
5	D.K.Pradhan, J.E.	31	Sagadia Sahi	11	M.K.De vata	53	Kalyani Nagar
		32	Ranihat			56	Kacharamal
		35	Medical Area			57	Kajidhia
		52	Dargha Patana			59	Phulnakhara
		58	Balikuda	12	Sasikanta Nayak	28	Bhagatpur
						30	Rajabagicha
						48	Jagatpur
						49	Jagatpur

Resilience Planning & Resources of Tube Well Maintenance & Repair:

Following teams would be deployed for repair & maintenance of Tube-well

(A) Mobile Unit-I,**Vehicle No. OR-05D 1917 (JEEP)****Name of the driver: Bijay Sahoo**

Sl. No.	Name of the Employee	Designation
1	Jatadhari Barik	Fitter
2	Basudev Das	Fitter Mistry
3	S. K. Akeb Alli	Tube well Mistry
4	Srinibas Samal	Pipe PH Helper
5	Brajendra Muduli	Pipe PH Misri
6	Purosottam Das	Tube well Mistry
7	Fakir Chandra Parida	Tube well Mistry

(B) Mobile Unit-II,**Vehicle No. OD 05 N 0522 (Pick Up Van)****Name of the driver: Jagannath Swain**

Sl. No.	Name of the Employee	Designation
1.	Satrughan Samal	Tube well Mistry
2.	Ananda Kishor Behera	Pipe PH Mistri
3	Basant Mishra	Tube well Mistry
4	Dillip Kumar Swain	Tube well Mistry
5	Surendra Mohanty	Tube well Mistry
6	Upendra Pal	Tube well Mistry
7	Sankar Mallick	Tube well Mistry
8	Rangadhar Sahoo	Pipe PH Misri

(C) Other – (Control room, P.H & water supply of Aahaar Kendra, SUH, CMC Office Building & others NRB etc)

Sl. No.	Name of the Employee	Designation
1.	Brundaban Parida	Plumber
2.	Babaji Charan Bhoi	Plumber
3	Rangadhar Sahoo	Pipe PH Misri

- ❖ Pipe P.H.Mistri, Pipe PH Helper & Plumber will assist the above team for repair & maintenance of tube well when there is P.H /water supply complain.

(C) Name and Designation of Officers I/C for maintenance of Tube well.

Sl. No.	Name of the Employee	Designation	Contact No.
1.	Lalita Mohan Das	E.E.-II	9437492244
2.	D. R. Tripathy	DEE.	9437602189
3.	Manoj Devata	AE	9937316505

Contact details of Corporator, DEE/AEE/JE & SI of CMC

Ward No.	Name of the Corporator	Contact No.	SI	Contact No.	JE/AE(MB)	Contact No.	AEE/AE	Contact No.
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1	CHITTA RANJANA DAS (2540140)	9937021009	Mr. Pratap Mohanty	9937446523	M.R.Samal	9437313280	D.R.Tripathy	9437602189
2	ITISHREE BEHERA	9040433429	Mr. Pratap Mohanty	9937446523	M.R.Samal	9437313280	D.R.Tripathy	9437602189
3	SEBATI MAJHI	8895578594	Mr. Sisupati Mallick	9437647183	Dilip Sahoo	9439645763	M.P.Mishra	9437602189
4	GIRIBALA BEHERA (2360474)	9437607120	Mr. Sisupati Mallick	9437647183	M.R.Samal	9437313280	D.R.Tripathy	9437602189
5	SUPRIYA ROUT (2504514)	9438535767	Mr. Sisupati Mallick	9437647183	M.R.Samal	9437313280	D.R.Tripathy	9437602189
6	SANJUKTA SAHU (2363853)	9777609261	Mr. Sisupati Mallick	9437647183	L.K.Nayak	9437340855	M.P.Mishra	8895879670
7	RANJITA BISWAL	9861766698	Mr. Pratap Mohanty	9937446523	M.R.Samal	9437313280	D.R.Tripathy	9437602189
8	NAMITA BARIK	8018768350	Mr. Pratap Mohanty	9937446523	M.R.Samal	9437340855	D.R.Tripathy	9437602189
9	BIKASH RANJAN BEHERA (2302821)	9437163821	Mr. Brajendra Mohanty	9437738306	Santosh Dash	9437306860	N.K.Pal	9437280663
10	GYANA RANJAN SWAIN	9338746230	Mr. Brajendra Mohanty	9437738306	Sanjib Pradhan	9861071750	M.P.Mishra	8895879670
11	BIJAYA DALEI	9437541939	Mr. Brajendra Mohanty	9437738306	Sanjib Pradhan	9861071750	M.P.Mishra	8895879670
12	SIBA PRASAD DALAI	9778386030	Mr. Brajendra Mohanty	9437738306	Santosh Dash	9437306860	N.K.Pal	9437280663
13	PADMA BHUYAN	9692654333	Mr. Bhagaban Lenka	9437225332	Sanjib Pradhan	9861071750	M.P.Mishra	8895879670
14	ANJUSHREE JENA	9861017068	Mr.Patitapabana Mohapatra	8895572141	L.K.Nayak	9437340855	M.P.Mishra	8895879670
15	USHARANI SAHU	9861869334	Mr.Patitapabana Mohapatra	8895572141	Sanjib Pradhan	9861071750	M.P.Mishra	8895879670
16	RAMJAN KHAN	9338058629	Mr.Patitapabana Mohapatra	8895572141	A.Mishra	9437306383	D.R.Tripathy	9437602189
17	A. SREEDEVI (2419953)	9437189335	Mr.Patitapabana Mohapatra	8895572141	M.R.Samal	9437313280	D.R.Tripathy	9437602189
18	ARUN KUMAR SETHI	9778092799	Mr.Pitambar Mallick	9937111590	L.K.Nayak	9437340855	M.P.Mishra	8895879670

19	CHARULATA SAHOO	9437273086	Mr. Brajendra Mohanty	9437738306	Sanjib Pradhan	9437340855	M.P.Mishra	8895879670
20	AJAYA SAHOO	9937542047	Mr.Pitambar Mallick	9937111590	Dilip Sahoo	9439645763	M.P.Mishra	8895879670
21			Mr.Trailokya Sahoo	9438724878	A.Mishra	9437306383	D.R.Tripathy	9437602189
22	ANITA NAYAK	9861170008	Mr.Rasananda Nath	9937171947	Swagita Mohanty	9437536017	N.K.Pal	9437280663
23	SK. SHAMIM ULLAH	9337216929	Mr. Bhagaban Lenka	9437225332	Santosh Dash	9437306860	N.K.Pal	9437280663
24	RANJAN KUMAR BISWAL	9437227149	Mr.Rasananda Nath	9937171947	Dhirendra Pradhan	9437068409	N.K.Pal	9437280663
25	PARUL JAISWAL	9040856512	Mr.Patitapabana Mohapatra	8895572141	Swagita Mohanty	9437536017	N.K.Pal	9437280663
26	KANCHAN DAS	9938137778	Mr. Bhagaban Lenka	9437225332	Dilip Sahoo	9439645763	M.P.Mishra	8895879670
27	ITISHREE DAS	9437272863	Mr. Satyabrata Satpathy	9437935310	Dilip Sahoo	9439645763	M.P.Mishra	8895879670
28	BAISALI BEHERA	9776514199	Mr.Trailokya Sahoo	9438724878	M.K.Devata	9937316505	D.R.Tripathy	9437602189
29	MANJULATA PRUSTY	9861181512	Mr. Satyabrata Satpathy	9437935310	A.Mishra	9437306383	D.R.Tripathy	9437602189
30	NAMITA DAS	9861273445	Mr. Satyabrata Satpathy	9437935310	M.K.Devata	9937316505	D.R.Tripathy	9437602189
31	BIJAY KUMAR SAHOO	9937074955	Asit Kumar Das	9938340048	Dhirendra Pradhan	9437068409	S.K.Behera	9938590021
32	TAPOI DEI @ SETHI	9438693755	Mr.Rasananda Nath	9937171947	Dhirendra Pradhan	9437068409	N.K.Pal	9437280663
33	MANOJ KUMAR SETHY	9861039500	Mr.Rasananda Nath	9937171947	Swagita Mohanty	9437536017	N.K.Pal	9437280663
34	NAMITA MANJARI SAHOO	9338349057	Mr. Sudhakar Das	9439665607	Gitarani Sahoo	9938392426	N.K.Pal	9437280663
35	DIPALIBALA BHUYAN (2413388)	9778199228	Mr. Asit Kumar Das	9938340048	Dhirendra Pradhan	9437068409	N.K.Pal	9437280663
36	AJAYA KUMAR BARIK (Dy. Mayor)2322699	9437024699	Mr. Saroj Kumar Nayak	9439361987	Bipin Pradhan	9937773345	M.P.Mishra	8895879670
37	DHARMANANDA PATRA	9437030485	Mr. Sudhakar Das	9439665607	Bipin Pradhan	9937773345	M.P.Mishra	8895879670

38	ANIL NILADRI	7735355824	Mr. Asit Kumar Das	9938340048	Bipin Pradhan	9937773345	M.P.Mishra	8895879670
39	SULOCHANA SETHY	9438114414	Mr. Asit Kumar Das	9938340048	Bipin Pradhan	9937773345	M.P.Mishra	8895879670
40	JAYADEV JENA	8895582922	Mr. Asit Kumar Das	9938340048	Gitarani Sahoo	9938392426	N.K.Pal	9437280663
41	HEMANTA KUMAR BEHERA	9861286401	Mr.Bijaya Ku. Patra	9439953376	Bipin Pradhan	9937773345	M.P.Mishra	8895879670
42	CHIRANJAYA SAHU	9437163460	Mr.Trailokya Sahoo	9438724878	A.Mishra	9437306383	N.K.Pal	9437280663
43	PRAMILA MOHANTY	7873728030	Mr. Saroj Kumar Nayak	9439361987	Santosh Dash	9437306860	N.K.Pal	9437280663
44	CHITRA KHUNTIA	9861085514	Mr.Maheswara Basa	9556217544	Santosh Dash	9437306860	N.K.Pal	9437280663
45	MEENAKSHEE BEHERA, MAYOR	9861231891	Mr. Satyabrata Satpathy	9437935310	Santosh Dash	9437306860	N.K.Pal	9437280663
46	PRALAYA BEURA	9438174886	Mr. Sanjaya Ku.Beura	9338845045	A.Mishra	9337272727	D.R.Tripathy	9437602189
47	KABITA KHANDAI	9238628011	Mr.Bijaya Ku. Patra	9439953376	A.Mishra	9437306383	D.R.Tripathy	9437602189
48	NIROD CHANDRA PANDA	9437512096	Mr.Bijaya Ku. Patra	9439953376	Sasikanta Nayak	9337272727	D.R.Tripathy	9437602189
49	DAYANIDHI NAYAK	9439495254	Mr.Bijaya Ku. Patra	9439953376	Sasikanta Nayak	9337272727	D.R.Tripathy	9437602189
50	DIPTY PRANGYA MOHANTY	9437922721	Mr.Maheswara Basa	9556217544	L.K.Nayak	9938392426	M.P.Mishra	8895879670
51	MAMATA BEHERA	9861939964	Mr.Maheswara Basa	9556217544	Gitarani Sahoo	9938392426	N.K.Pal	9437280663
52	HRUSIKESH PRADHAN	9437034404	Mr.Maheswara Basa	9556217544	Dhirendra Pradhan	9437068409	S.K.Behera	9938590021
53	PRADEEP KUMAR SAMANTARAY	9437226098	Mr.Maheswara Basa	9556217544	Gitarani Sahoo	9938392426	N.K.Pal	9437280663
54	SUREKHA SAMANTARAY	9937052053	Mr. Saroj Kumar Nayak	9439361987	A.Mishra	9437306383	D.R.Tripathy	9437602189
55	BAIDESWAR PANDA	9937349399	Mr. Saroj Kumar Nayak	9439361987	A.Mishra	9437306383	D.R.Tripathy	9437602189
56	SANJAYA KUMAR BARAL	9777952830	Monoranjan Mohanty		Gitarani Sahoo	9938392426	N.K.Pal	9437280663
57	LALIT SEKHAR NAYAK	9437314895	Monoranjan Mohanty		Gitarani Sahoo	9938392426	N.K.Pal	9437280663
58	RAJKUMARI SWAIN	9437036991	Monoranjan Mohanty		Dhirendra Pradhan	9437068409	N.K.Pal	9437280663

59	PRAMOD KUMAR MOHAPATRA	9861039746	Monoranjana Mohanty		Gitarani Sahoo	9938392426	N.K.Pal	9437280663
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Resilience Resource Planning for Monsoon:

Medical Arrangements:

SI	Name of the UPHC	Existing Ward	Words covered	Total Wards	Total Population Covered	Total No Slum Covered	Total Slum population covered	Total ANMs	Total No of ASHA
1	Bidanashi	1	1,2,4,5,6	5	59715	17	11286	5	13
2	Tulashipur	8	7,8,9,15,16	5	65808	22	9912	5	11
3	MS Das	10	10,11,12,13,14,19	6	69236	22	12718	6	28
4	Manjulata	45	28,29,30,31,36,37,45,44	8	81375	25	14282	8	27
5	Thoria sahi	33	24,25,26,27,32,33,34	7	75199	20	11135	7	19
6	Odiabazar	26	17,18,20,21,22,23	6	57753	20	9998	6	23
7	Brajarambha	39	35,38,39,40	4	35942	27	11987	4	11
8	Nayabazar	51	42,50,51,52,53	5	54637	24	10567	5	18
9	CRRI	55	43,47,54,55	4	44922	20	8014	4	14
10	Bidyadharpur- Baranga	3	3	1	9587	7	2567	1	10
11	Jagatpur	48	41,46,48,49	4	43022	28	11212	4	25
12	Bamphakuda	59	56,57,58,59	4	34837	29	12332	4	32

SUPERVISOR LIST-I		
56,57,58,59	Rasmita Mohanty	9853839048
42,43,47,51,54,55	Arundhati Tripathy	9853661929
39,40,41,33,34,35,	Jyotirekha Jena	9439619888
32,36,37,38,44,45,52	Madhulita Das	9437403704
46,48,49,53	Jyotsnarani Patnaik	9438411795

SUPERVISOR LIST-II		
1,2,3,4,5,6,7,8	Pravati Mishra	9861437213
9,10,11,12,13,14,15,16,	Banajabali Devi	9437604546
18,20,21,23,26,27,28,29,30	Bijayalaxmi Rout	9437269151

17,19,22,24,25,31	Jharananatha Sharma	9668824261
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Lists of School/Buildings for Sheltering of evacuees

Sl No.	District	ULB	Area	Name of High. Schools
1	Cuttack	Cuttack Municipal Corporation	Nuabazar	Nuabazar High School
2			Manisahu Chhak	Hadibandhu U Bidyapitha
3			Tulasipur	Orissa Police High School
4			Kazibazar	Bhaktamadhu Bidyapitha
5			Cuttack Mpty	Tulsipur High School
6			Cuttack Mpty	Revenshaw Girl's High School

Lists of NGOs as per NUHM

Sl.No	NGO Name	Name of Secretary	Name of Contact Persons
1	VARASHA	Rajendra Kumar Kuanar(9438330319)	Subash Chandra Nath (8984178821)
2	SAI	Pradeep Babu (9439618349)	Rosy (9853527605)
3	SUPRATIVA	Bikash Babu	Sasi Kanta Mohanty (8763356348)
4	USS	Amiya Bhusan Biswal	Malaya Sarangi (9437063821)
5	IMTS	Khirod Chandra Panigrahi (9737047774)	Sumanta babu (9437471756)
6	BANKI ANCHARIKA ADIBASI HARIJAN KALYAN PARISAD	Kanhu Charan Mahapatra (9853874046)	Barendra Behera (9776824106)

List of Medical Officers /Pharmacists:

Sl.no	Name of the UPHC	Name of the MO I/C	Name of the Pharmacist
1	Nayabazar UPHC	Dr. Arun Kumar Sahoo	Sri.Narayan Prasad Sahoo
2	Madhusudhan Das UPHC	Dr. Minati Kumari Majhi	Sri. Ajit KU. Routray

3	Brajarambha UPHC	Dr. Erun Naaz	Sri.Sanjtosh Ku. Behera
4	Manjulata UPHC	Dr. Nikita Mahapatra	Sri. Ratnakar Senapati
5	Bidanasi UPHC	Dr. Kalyananand Mohanty	Sri. Sujit Das
6	Tulasipur UPHC	Dr. Sujata Samant	R. Ahmad Khan
7	Thoria Sahi UPHC	Dr. Madhuri Panigrahi	Sri. Kapileswar Majhi
8	Jagatpur UPHC	Dr. Subash Chandra Samantray	Sri. Falguni Kumar Rath
9	Bidyadharpur, Baranga UPHC	Dr. Gyanendra Sahoo	Sri. Mukesh Ranjan Behera
10	Bamphakuda UPHC	Dr. Prahallad Charan Samal	Sri. Subasha Chandra Tripathy
11	Bidyadharpur, CRRI UPHC	Ramakanta Mohapatra	Sri. Minati Mishra

UPHC and Staff Position Health

Sl	Name of the UPHC	Existin g Ward	Observatio n Bed	MO		Pharmacist	
				Sanctone d	In Positio n	Sanctone d	In Positio n
1	Nayabazar , Matha Sahi	Ward-51	1	1	1	1	1
2	Tulashipur	Ward-08	0	1	1	1	1
3	Manjulata, Khan Nagar	Ward-45	1	1	1	1	1
4	Brajarambha, Zobra	Ward-39	1	1	1	1	1
5	Bidanashi	Ward-01	1	1	1	1	1
6	MS Das, Sidheswar Sahi	Ward-10	1	1	1	1	1
7	Thoria Sahi,	Ward-33	0	1	1	1	1
8	Bampkhakud a	Ward-59	1	1	1	1	1
9	Jagatpur, Nimpur	Ward-48	1	1	1	1	1
10	Bidyadharpur -CRRI	Ward-55	1	1	1	1	1
11	Bidyadharpur -Baranga	Ward-03	1	1	1	1	1

Other Evacuation & Shelter Points :

SI No	Ward No	Slum Name	Popu.n	Shelter For Evacuees
1	22	Makarbagh Sahi Dhobi Lane	150	Meria Bazar School
2	22	Makarbagh Telegu/Muslim Sahi	200	Meria Bazar School
3	22	Meria Bazar	100	Meria Bazar School
4	23	Telegu Basti Infront of Asha Aprtmnt	120	Biren Mitra School Kathagada Sahi
5	23/22	Tinikonja Bagicha	500	Biren Mitra School Kathagada
6	23	Kadam Rasool	500	Kadam Rasool School/ Community Centre
7	24	Samanta Sahi	100	Gamhandia School
8	25/22	Bepari Sahi	150	Bali Bhagat Schhol
9	25	Thoria Sahi Harijan Sahi	150	Thoria Sahi Girl's High School
10	25	Akhada Gali	150	Hadibandhu High School
11	25/22/23	Kesharpur	700	Kesharpur Madrasa
12	26	Tinigharia Jama Gali Jhola Sahi	100	Biren Mitra School
13	26	Hatipokhari	200	Biren Mitra School
14	26	Nima sahi Pana Sahi	500	Seminary School
15	27	Pithapur Pana Sahi	200	Pithapur School
16	27	Jhola sahi Bauri Sahi	100	Jhola Sahi School
17	28	Purighat Pana Sahi	250	Community Centre
18	28	Rajabagicha Sweeper Colony	500	Rajabagicha High School
19	28	Rajabagicha Puruna Hadi Sahi	200	Rajabagicha High School
20	29	Dolamundai Bauri Sahi	200	Babasagar Bidyapitha
21	29	Labour Colony Sweeper Sahi	200	Labour Colony U.P.School
22	29	Jhanjirmangala Harijan Sahi	100	Community Centre
23	29	Lunia Sahi Pana Sahi	150	Jhanjirmangala U.P.School & Community Centre
24	30	Sarbodaypur	250	Rajabagicha High School
25	30	Rajabagicha Kusunpur	250	Rajabagicha High School
26	32	Shikari Sahi	200	Ranihat Gopal Sahi

				School
27	33	Gamhandia	200	Gamhandia School

Deployment of High Discharge Wacker Neuson Pump sets

Sl.No.	Location	Number of Pump (@24 HP each)
1	Jobra Railway Crossing	3 No
2	Kamalakanta Vidyapitha, Sikharpur Korapokhari	2 No
3	Matrubhawan & Bisanbar	8 No
4	Near P.H . Colony, chatrabazar	2 No
5	Sivaji Nagar	1 No
6	Syamasundar Matha	1 No
7	Idga & Dhoba Sahi	1 No
8	Rajabagicha Police Colony	1 No
9	Satabdi Vihar	1 No
10	Sishu Bhawan	1 No
11	Brajarakbati	2 No

Pumps sets available with CMC

Make	TYPE OF PUMPSETS	No. of Pumps	Flow Rate litres/minute	Total discharge of Rain water litres per minute	TOTAL HP
Wacker Neuson Trailer Mounted Self-priming Centrifugal Pump (PT6LT)	Wacker Neuson High Discharge 24 HP Pump sets	24	5000	120000	576
Kirloskar Make Diesel Engine	65 HP Fixed Pumpsets	3	14000	42000	195

Kirloskar Diesel Engine	Make	50 HP Fixed Pumpsets	4	10800	43200	200
Kirloskar Diesel Engine	Make	32 HP Fixed Pumpsets	3	6912	20736	96
Kirloskar Diesel Engine	Make	20 HP Moveable Pumpsets	4	4320	17280	80
Kirloskar Diesel Engine	Make	16 HP Moveable Pumpsets	1	3456	3456	16
Kirloskar Diesel Engine	Make	15HP Moveable Pumpsets	3	3240	9720	45
Kirloskar Diesel Engine	Make	14HP Moveable Pump sets	20	3024	60480	280
Kirloskar Diesel Engine	Make	10HP Moveable Pump sets	50	2160	108000	500
Kirloskar Diesel Engine	Make	5 HP Moveable Pump sets	127	1080	137160	635
		SUB TOTAL	239			
Kirloskar Diesel Engine	Make	5 HP Moveable Pump sets (To be brought from Utkal Bipana Samiti,BBSR)	36	1080	38880	180
		TOTAL	275		600912	2803

List of Ward level JEs/AEs responsible for operation of Pumps

Ward No.	JE/AE (with MB)		DEE/AEE	
	Name	Mobile No.	Name	Mobile No.
1	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189
2	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189
3	Dillip Sahoo	9439645763	MahesPrasad Mishra	9777976700
4	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189
5	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189

6	Lalitendu Nayak	9437340855	MahesPrasad Mishra	9777976700
7	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189
8	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189
9	Santosh Das	9437306860	Nanda Kishore Pal	9437280663
10	SanjeebPradhan	9861071750	MahesPrasad Mishra	9777976700
11	SanjeebPradhan	9861071750	MahesPrasad Mishra	9777976700
12	Santosh Das	9437306860	Nanda Kishore Pal	9437280663
13	Dillip Sahoo	9439645763	MahesPrasad Mishra	9777976700
14	Lalitendu Nayak	9437340855	MahesPrasad Mishra	9777976700
15	SanjeebPradhan	9861071750	MahesPrasad Mishra	9777976700
16	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
17	Manas Ranjan Samal	9437313280	Dibya Ranjan Tripathy	9437602189
18	Lalitendu Nayak	9437340855	MahesPrasad Mishra	9777976700
19	SanjeebPradhan	9861071750	MahesPrasad Mishra	9777976700
20	Dillip Sahoo	9439645763	MahesPrasad Mishra	9777976700
21	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
22	Swagatika Mohanty	9437536017	Nanda Kishore Pal	9437280663
23	Santosh Das	9437306860	Nanda Kishore Pal	9437280663
24	Dhiren Kumar Pradhan	9437068409	Nanda Kishore Pal	9437280663
25	Bipin Bihari Pradhan	9937773345	Nanda Kishore Pal	9437280663
26	Dillip Sahoo	9439645763	MahesPrasad Mishra	9777976700
27	Dillip Sahoo	9439645763	MahesPrasad Mishra	9777976700
28	Manoj Kumar Debata	99373316505	Dibya Ranjan Tripathy	9437602189
29	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
30	Manoj Kumar Debata	99373316505	Dibya Ranjan Tripathy	9437602189
31	Dhiren Kumar Pradhan	9437068409	Nanda Kishore Pal	9437280663
32	Dhiren Kumar Pradhan	9437068409	Nanda Kishore Pal	9437280663
33	Bipin Bihari Pradhan	9937773345	Nanda Kishore Pal	9437280663

34	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
35	Dhiren Kumar Pradhan	9437068409	Nanda Kishore Pal	9437280663
36	Bipin Bihari Pradhan	9937773345	MahesPrasad Mishra	9777976700
37	Bipin Bihari Pradhan	9937773345	MahesPrasad Mishra	9777976700
38	Bipin Bihari Pradhan	9937773345	MahesPrasad Mishra	9777976700
39	Bipin Bihari Pradhan	9937773345	MahesPrasad Mishra	9777976700
40	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
41	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
42	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
43	Santosh Das	9437306860	Nanda Kishore Pal	9437280663
44	Santosh Das	9437306860	Nanda Kishore Pal	9437280663
45	Santosh Das	9437306860	Nanda Kishore Pal	9437280663
46	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
47	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
48	Sashikanta Nayak	9337272727	Dibya Ranjan Tripathy	9437602189
49	Sashikanta Nayak	9337272727	Dibya Ranjan Tripathy	9437602189
50	Lalitendu Nayak	9437340855	MahesPrasad Mishra	9777976700
51	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
52	Dhiren Kumar Pradhan	9437068409	Nanda Kishore Pal	9437280663
53	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
54	Aditya Narayan Mishra	9437306383	Dibya Ranjan Tripathy	9437602189
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56	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
57	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663
58	Dhiren Kumar Pradhan	9437068409	Nanda Kishore Pal	9437280663
59	Gitarani Sahoo	9938392426	Nanda Kishore Pal	9437280663

Hospitals adjacent to Major Industrial Establishment/ Chemical Storage Points.

Sl. No.	Name & Location of the Industry/ Factory/ Chemical Storage Points	Hazaardous Chemical used/ Quantity Handle.	Mode of Storage	Name and Location of the Hospital /Health Centre.	Gram Panchayat	Block/ Urban
1	M/s. SMV Beverages, At/ P.O- Jagatpur, Dist- Cuttack.	Ammonia 1000 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Jagatpur UPHC	Ward-49	CMC
2	M/s. Rams Assorted Cold Storage Limited.Telengapintha, Dist- Cuttack.	Ammonia 1670 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Telengapentha PHC -New	Ward-59	CMC
3	M/s. Health Food Products At/ P.O- Jagatpur, Dist- Cuttack.	Ammonia 300 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Jagatpur UPHC	Ward-49	CMC
4	M/s. Pragati Milk Product At/P.O- New I.E, Jagatpur, Cuttack.	Ammonia 600 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Jagatpur UPHC	Ward-49	CMC
5	M/s. Pragati Milk Product At/P.O- Nishintakoili, Cuttack.	Ammonia 400 Ltrs.	Horizontal Cylindrical Shell (receive tank)	Nischintakioli PHC	Nischintako ili	Nischin takoili
6	M/s. Co- Opeative Cold Storage, At/ P.O- Jagatpur, Cuttack.	Ammonia 500Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Jagatpur UPHC	Ward-49	CMC
7	M/s. Jaiguru Cold Storage At/P.O-Jagatpur, Cuttack.	Ammonia 500 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Jagatpur UPHC	Ward-49	CMC
8	M/s. Jagannnath Cold Storage At/P.O- Nischintakoili, Cuttack.	Ammonia 600 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Nischintakioli PHC	Nischintako ili	Nischin takoili
9	M/s. Shakti Freezing At/P.o- Salipur Dist- Cuttack.	Ammonia 400 Ltrs.	Horizontal Cylindrical Shell (receiver tank)	Salipur PHC	Salipur	Salipur
10	M/s. Suvochem Industries I.E, Jagatpur, Cuttack.	Chlorine Max. Storage - 8 tonners of capacity 900 ltrs each	Tonner	Jagatpur UPHC	Ward-49	CMC
11	M/s. CosBoard Industries I.E, Cuttack.	Chlorine Max. Storage 6 tonners or capacity 900 ltrs each	Tonner	Jagatpur UPHC	Ward-49	CMC

12	M/s. Rajashree Chlorochem I.E, Jagatpur, Cuttack.	Chlorine Max. Storage - 6 tonners of capacity 900 ltrs each.	Tonner	Jagatpur UPHC	Ward-49	CMC
13	M/s. Paradeep Oxygen, New, I.E, Jagatpur, Cuttack.	Acetylene 150No's of cylinder of capacity 5.5 cubic meter.	Cylinders	Jagatpur UPHC	Ward-49	CMC
14	M/s. Manishree Refractores Madhupatana Ind. State	Producer Gas.		Private Nursing Home, SCB, Medical College, City Hospital Cuttack	Ward-50	CMC
15	M/s. IMFA Ltd., (Unit-I) At/P.O- Choudwar, Cuttack	LDO, TRANSFORMER OIL, LIQUID OXYGEN		ESI-Hospital, Choudwar / UPHC	Ward No 17	Choudwar Municipality
16	M/s. IMFA Ltd.,(Unit-II) At/P.o- Choudwar, cuttack.	LDO,LIQUID OXYGEN, TRANFORMER OIL, CO		ESI-Hospital, Choudwar / UPHC	Ward No 17	Choudwar Municipality
17	M/s. IMFA Ltd., (Unit-III) At/P.O- Choudwar, Cuttack	LDO, HSD, TRANSFORMER OIL, CO,HCL		ESI-Hospital, Choudwar / UPHC	Ward No 17	Choudwar Municipality
18	M/s. Aarti Steels Ltd., At- Ghnatikhal, P.O- Mahakalbasta,	LDO,LIQUID OXYGEN, TRANFORMER OIL,		Berhampur PHC	Ghantikhol a	Athagarh
19	M/s. T.S Alloys Ltd., At- Anantapur, Cuttack.	LDO. TRANSFORMER OIL, HCL, LIQUID OXYGEN		Berhampur PHC	Anantpur	Athagarh
20	M/s. Bhubaneswar Power (P) Ltd.,. Anantapur, Cuttack.	LDO, TRANSFORMER OIL, HCL		Berhampur PHC	Anantpur	Athagarh

Schools and AWC adjacent of Major Industrial Establishments/ Chemical Storage Point

Sl. No.	Name & Location of the Industry/ Factory/ Chemical Storage Points	Name of School/ AWC.	Gram Panchayat	Block
1	M/s. SMV Beverages, At/ P.O- Jagatpur, Dist- Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
2	M/s. Rams Assorted Cold Storage Limited.Tellengapentha, Dist- Cuttack.	Tellengapentha AWC	Ward-59	CMC

3	M/s. Health Food Products At/ P.O- Jagatpur, Dist- Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
4	M/s. Pragati Milk Product At/P.O- New I.E, Jagatpur, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
5	M/s. Pragati Milk Product At/P.O- Nishintakoili, Cuttack.	Nischintakoili AWC	Nischintakoili	Nischintakoili
6	M/s. Co- Opeative Cold Storage, At/ P.O- Jagatpur, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
7	M/s. Jaiguru Cold Storage At/P.O-Jagatpur, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
8	M/s. Jagannnath Cold Storage At/P.O- Nischintakoili, Cuttack.	Nischintakoili AWC	Nischintakoili	Nischintakoili
9	M/s. Shakti Freezing At/P.o- Salipur, Cuttack. Dist- Cuttack.	Salipur AWC	Salipur	Salipur
10	M/s. Suvochem Industries I.E, Jagatpur, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
11	M/s. CosBoard Industries I.E, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
12	M/s. Rajashree Chlorochem I.E, Jagatpur, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
13	M/s. Paradeep Oxygen, New, I.E, Jagatpur, Cuttack.	Talabania AWC / Torala AWC – I & II	Ward-49	CMC
14	M/s. Manishree Refractories Madhupatana I State Cuttack	Madhupatana AWC	Ward-50	CMC
15	M/s. IMFA Ltd., (Unit-I) At/P.O- Choudwar, Cuttack		Ward No 17	Choudwar Municipality
16	M/s. IMFA Ltd.,(Unit-II) At/P.o- Choudwar, cuttack.		Ward No 17	Choudwar Municipality
17	M/s. IMFA Ltd., (Unit-III) At/P.O- Choudwar, Cuttack		Ward No 17	Choudwar Municipality
18	M/s. Aarti Steels Ltd., At- Ghnatikhal, P.O- Mahakalbasta, Cuttack.	Ghantikhola	Ghantikhola	Athagarh
19	M/s. T.S Alloys Ltd., At- Anantapur, Cuttack.	Anantpur AWC	Anantpur	Athagarh
20	M/s. Bhubaneswar Power (P) Ltd., At- Anantapur, Cuttack.	Anantpur AWC	Anantpur	Athagarh

3.3 Resource available with other Government agencies (Department wise/alphabetically)

a. Fire services

Sl.No.	Name of the Fire Station	Phone No.	Manpower available	Resource available

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AFO- Assistant Fire Officer, SO- Station Officer, LFM- Leading Fire Man, MFE- Motor Fire Engine

b. ODRAF - Resource available e with Orissa Disaster Rapid Action Force (ODRAF) units.

Sl. No.	Equipments	Quantity	ODRAF Unit				
			Cuttack	Jharsuguda	Koraput	Chhatrapur	Balasore
			4	1	1	1	1
2.	TATA Truck-(Troop Carrier)-6 Ton capacity	10 nos.	2	2	2	2	2
3	TATA Truck-(Troop carrier)	6 nos.	2	1	1	1	1
4	Generator 10 KVA	13 nos.	5	2	2	2	2
5	Concrete Cutting equipment	10 nos.	2	2	2	2	2
6	Power saw with portable power unit	5 nos.	1	1	1	1	1
7	Tree Pruner-cum-Chain saw	10 nos.	2	2	2	2	2
8	Water Filter Portable	8 nos.	4	1	1	1	1
9	Ramp-2 Ton capacity (fabricated)M.S.	20 nos.	10	3	3	2	2
10	Telescopic Aluminium Ladder	16 nos.	4	4	4	2	2
11	Life Jacket	20 nos.	8	3	3	3	3
12	Life Buoy	110 nos.	60	20	10	10	10
13	Chain Power Saw (Stihl 026 Model)	110 nos.	60	20	10	10	10
14	Chain Power saw (Petrol engine driven)	6 nos.	2	1	1	1	1
15	Tractor with trailer	6 nos.	2	1	1	1	1
16	Inflatable Tower lighting system with Generator	6 nos.	4	1	1		
17	Branch Cutting saw (Electric motor drive)	7 nos.	3	1	1	1	1

18	Branch Cutting saw (Petrol engine driven)	14 nos.	6	2	2	2	2
19	Commando search light	20 nos. 4 nos. Infrared	12 4 IR	2	2	2	2
20	Mahindra & Mahindr FJ-460-DP/4WD	1 nos.					
21	TATA SFC-407/31, AMBULANCE	3 nos	1	1	1		
22	G.I.Trunk	70 nos	40	10	8	6	6
23	Wire Ropes & Slings	12 sets	4	2	2	2	2
24	Lifting & Pulling Machine	4 nos	4				
25	Battery Chargers	11 nos	3	2	2	2	2
26	Small tools and Jack	12 sets	4	2	2	2	2
27	Nylon rope	600 kg	300	150	150		
28	Hydraulic Tipper	5 nos	1	1	1	1	1
29	Recovery Van/Wreckage Crane	5 nos.	1	1	1	1	1
30	Small rescue items like, rope, carabiner etc. submersible pump	2 sets	2				
31	Submersible pump	15 nos	3	3	3	3	3
32	Breathing apparatus	27 sets	7	5	5	5	5
33	Divine Equipments	12 sets	4	2	2	2	2
34	Diving Helmet	5 sets	1	1	1	1	1
35	Chain Sharpener	2 nos	2				
36	Combi tool	5 sets	1	1	1	1	1
37	Cutter	5 sets	1	1	1	1	1
38	Inflatable rubber dinghies with OBM	60	32	6	6	8	8
39	Hydraulic spreader	5 nos	1	1	1	1	1
40	Telescopic Ram Jack with	5 sets	1	1	1	1	1

	extension						
41	Fork lift 3 ton capacity	6 nos	2	1	1	1	1
42	RCC cutting chain saw	5 nos	1	1	1	1	1
43	Gas mask with chemical cartridge	65 sets	25	10	10	10	10
44	Pay loader-cum-excavator	5 nos	1	1	1	1	1
45	Air compressor	3 nos	11	1	1		
46	125 KVA truck mounted generator	5 nos	1	1	1	1	1
47	Single phase welding transformer with accessories	5 sets	1	1	1	1	1
48	Reciprocating pump-cum-vehicle washer	5 sets	1	1	1	1	1
49	Air compressor with Tyre-inflator with accessories	5 sets	1	1	1	1	1
50	Wooden stand for OBM	60 nos	20	10	10	10	10
51	Fire extinguishers	48 nos	16nos	8	8	8	8
52	Stretchers	10	2	2	2	2	
53	Patient carrying trolley	10	2	2	2	2	
54	Gas cutting sets	5 sets	1	1	1	1	
55	M.F.R. Kits	7 sets	2	1	1	2	
56	Collapsed Structure Search and rescue (CSSR) kit	5 sets	1	1	1	1	
57	Flexi tents	10 nos	2	2	2	2	
58	Poly propylene YV treated tarpaulin	50 nos	10	10	10	10	10

CHAPTER : VI

Preparedness Plan

City Awareness Committee

Members of the City Awareness Committee

Sl.No.	Functionaries	Designation
1	Additional Commissioner	Chairman
2	Dy. Commissioner & Nodal Officer	Member Convener
3	SC Chairperson Culture & Education	Member
4	District Emergency Officer, Cuttack	Member
5	SIO	Member
6	CHO	Member
7.	CE	Member
8.	DEO	Member
9.	DY Commissioner License	Member
10.	District Information & Public Relation Officer, Cuttack.	Member
11.	HOD, Geog Ravenshaw	Member
12.	Finance Officer	Member
13.	Secretary	Member

Initiatives taken up

a. Land use and zoning regulation

b. Comprehensive development Plan

Climate Risk Management in Urban areas through Disaster Preparedness and Mitigation

- I. Preparation of City Disaster Management Plan
- II. Preparation of Hazard Risk Vulnerability Assessment of Cuttack City
- III. Study on Early Warning System of Cuttack City
- IV. Training of Ward Volunteers on Search & Rescue and First Aid
- V. Training of Anganwadi Workers on First Aid.
- VI. Training of Civil Defence Volunteers on CSSR, Advanced Search and Rescue & Crowd Management.
- VII. Preparation of Ward Disaster Management.

e.Capacity building plans

Cuttack Municipal Corporation (CMC) is planning to build the capacity in Disaster management in different levels like:

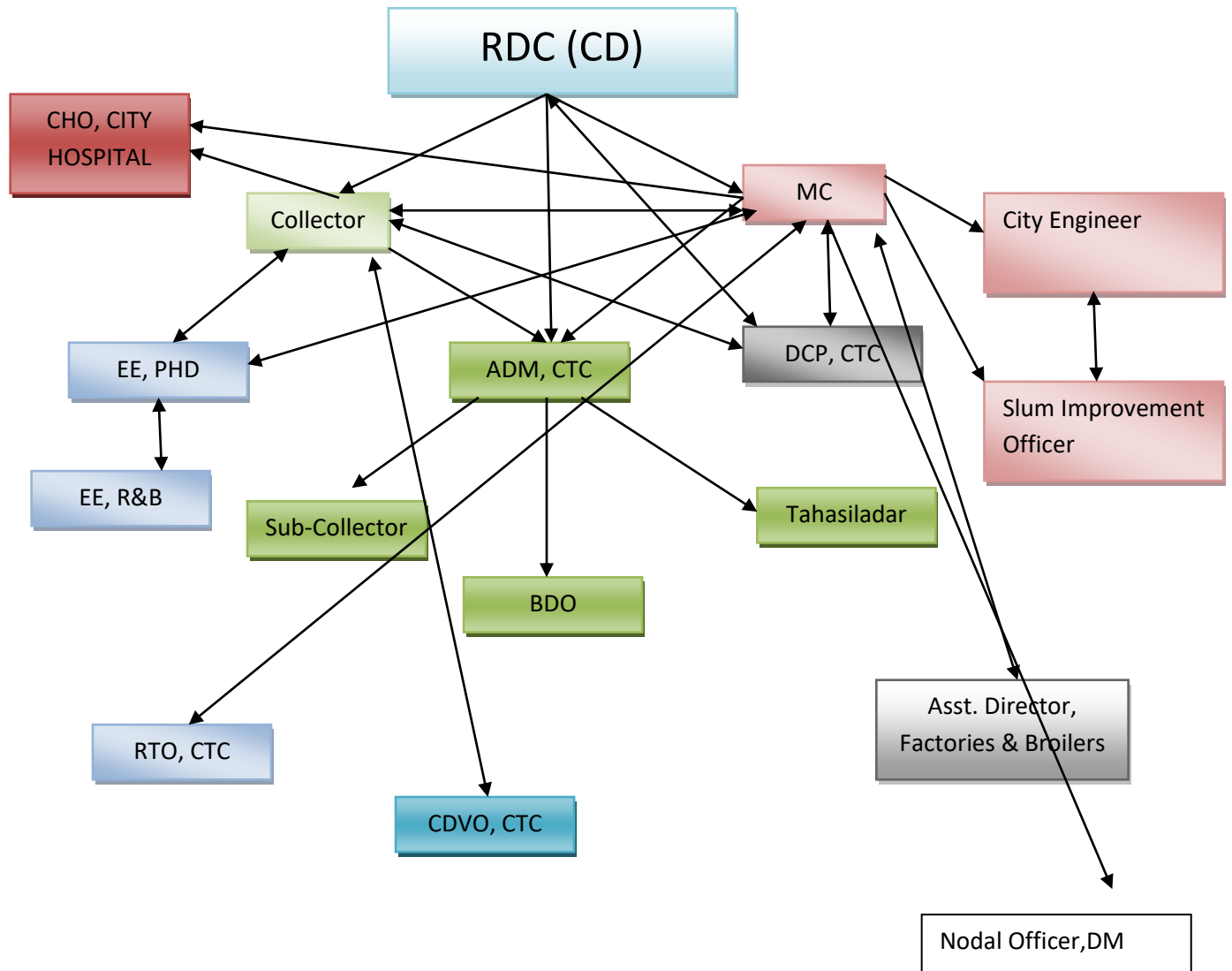
- i. Individual
- ii. Community level

- iii. CBOs/NGOs/CSOs level
- iv. Officials level (Line department officer, engineers, architect & planner)
- v. Implementation level (Community Organizers, Supervisors, AWWs, ASHA & etc.)
- vi. PRIs/ ULBs representatives.

CHAPTER : VII

Response Plan

Institutional Set up



INSTITUTIONAL FRAMEWORK

List of key agencies currently involved in the process of issuing early warning and coordinating response before and during the events, their roles and current functioning based on the available plans and conducted interviews are described below.

India Meteorological Department (IMD)

IMD receives information on rainfall and temperature from its 213 rain gauge stations, 37 automated weather stations and 117 automated rain gauge stations. These stations send their information to the national center in Pune to process the data and provide both regional and local weather information.

IMD currently provides now-cast information in the form of satellite imagery, model based on five days forecast for rainfall and temperature (maximum and minimum), and one day forecast for thunderstorm and wind. This forecast is provided two times in a day – morning and noon. During the monsoon months, in addition to the above forecasts, the centre also provides the catchment level rainfall, synoptic situation results, quantitative precipitation summary and heavy rainfall warning.

Central Water Commission (CWC)

CWC state office is situated in Bhubaneswar, provides inflow information during monsoon. This information is used by the Department of Water Resources to predict the possible reservoir levels, and is currently aiding them to manage the outflow from all dams within the state. The information provided is based on models that were developed at the time of construction of respective dams within the state. There is realization within the department that this forecast information will have to be improved taking into account the current situation, where there is evidence of change in the high flood levels due to sedimentation.

In event of possible flood or dam release/ overflow, CWC disseminates its forecast to select government departments that include Special Relief Commission, Officer (Engineer) In-Charge Flood Control Cell Water Resource Department, Revenue Control Room, Sub Collector and Irrigation Department.

Odisha State Disaster Management Authority (OSDMA)

The Government of Odisha set up Odisha State Disaster Mitigation Authority (OSDMA), as an autonomous organization in the intermediate aftermath of the super cyclone of 1999. It was registered under the Societies Registration Act, as a non-profit making and charitable institution for the interest of the people of Odisha, with its headquarters at Bhubaneswar and jurisdiction over the whole state.

OSDMA has the mandate of taking up the mitigation, relief, restoration, reconstruction activities and of coordinating with bilateral and multi-lateral agencies post event. The agency, during peacetime, is involved in developing technical documents related to disaster management and also in providing training to government and other stakeholders.

The State Emergency Operations Centre (SEOC) coordinates with OSDMA and provides support to other disaster management agencies (city and state). It is currently operational 24X7. This centre, under the revenue department, acts more as a coordinating authority in the event of a major disaster.

The OSDMA and SEOC have their mandate to function post disaster. They too disseminate warning information about extreme events to key nodal agencies at district/state levels.

The Collector/District Magistrate (DM), Cuttack is the head of the district disaster management cell. The DM is in-charge of disseminating warning and coordination disaster events that scale beyond the Cuttack city boundary.

OSDMA is currently supporting all key departments in their preparation of disaster management plan. This is expected to provide key information about the functioning and planning of the respective departments, and may help both the DM and Municipal Commissioner in coordinating with the departments before an extreme event and contain the disaster.

Flood Control Cell, Water Resource Department

Flood control cell within the Water Resource Department (WRD) is the nodal agency for analyzing the situation across all river basins in Odisha during the monsoon and at the time of cyclones. The flood control cell is functional 24x7 during the monsoon period and provides a daily bulletin on the flood and flood-like situation across the state. This bulletin uses the information provided by the IMD to make forecast on the reservoir level and possible flood situation.

Integrated Disease Surveillance Programme (IDSP) Unit, Department of Health and Family Welfare

The Department of Health and Family Welfare monitors the health situation across the state for signs of epidemic. The department is also the nodal agency and houses the state surveillance unit of Integrated Disease Surveillance Programme (IDSP) across the state. The IDSP monitors key diseases through active and passive surveillance. The active or the syndromic surveillance is currently done by health workers surveying door-to-door and reporting disease incidences periodically (weekly). Passive surveillance is carried out through evidence of diseases recorded and reported by doctors from Capital

Hospital. While the surveillance methodology is robust (in districts), the information currently collected for the city is little to take timely action. Also, reporting of cases (passive surveillance) is currently not being done by private hospitals. Currently, the reporting is only done by Capital Hospital, which is a government hospital. The use of technology by field level health workers is limited to paper-based forms, which are collated weekly, which make it difficult to take timely action. Nevertheless, there exists strong coordination of the department with the Health Department, Municipal Corporation, to initiate actions such as spraying and fumigation at the first sign of outbreak of vector-borne diseases. The information collected by this department is currently disseminated to the Health Department, Municipal Corporation, and the national center, IDSP.

District Collector Office

District collector office of Cuttack district plays a very crucial role in early warning to city. It has a District Emergency Operation Center (DEOC) in its premises, which is headed by Deputy Collector (Emergency), Cuttack District. DEOC is well equipped with basic equipment's for disaster management. This office also prepared District Disaster Management (DM) plan and it is updated for year 2016-17.

Chief District Medical Office (CDMO)

CDMO, Cuttack, is responsible for public health issues in entire district including health advisories. The CDMO, with support from various health agencies, coordinates, direct and integrate city level response including activation of medical personnel, supplies and equipment, contain outbreak of epidemics and coordinate with CMC in their activities.

3.3.1 Response Planning

The Municipal Commissioner will be the supervising authority for all types of response activities during a disaster. The Commissioner will be assisted by other officers as per specific orders issued from time to time. The different departments will assist the CMC for effective management of disasters.

3.4 Administrative Set up of ULB

3.4.1 City Control Room

The Control Room will function round the clock and will maintain a regular specifically to register the complaints, viz. water logging, choking of drains, fallen trees, road culvert damages. The Deputy Municipal Commissioner will check the City Control Room complaint register every day. The Ward Officers and J.Es of concerned will move around their respective area on regular intervals and report cases immediately.

Construction and maintenance of secondary and Tertiary drains are one of the major obligatory functions of the Cuttack Municipal Corporation (CMC). De-

silting of drains is being undertaken by the Sanitation wing of CMC led by the City Health Officer.

Section 293 – Power of Municipal Commissioner to close, demolish, alter or remake any private drain in the public interest;

Section 294 – Buildings etc. not to be constructed over any drain

Section 295 – Municipal Commissioner may enforce drainage of un-drained premises situated within hundred feet of Corporation drain.

EWS Framework for Tropical Cyclone:

System Intensity	Damage Expected	Suggested Action
Low Pressure Area (Not exceeding 17 kts or less than 31 kmph)	--	--
Depression (17–27 kts or 31–51 kmph)	--	--
Deep Depression (28–33 kts or 52–61 kmph)	Minor damage to loose and unsecured structures	Fishermen advised not to venture into the open seas
Cyclonic Storm (34–47 kts or 62–87 kmph)	Damage to thatched huts. Breaking of tree branches	Total suspension of fishing operations
Severe Cyclonic Storm (48–63 kts or 88–117 kmph)	Extensive damage to thatched roofs and huts. Minor damage to power and communication lines due to uprooting of large avenue trees. Flooding of escape routes	Total suspension of fishing operations. Coastal hutment dwellers to be moved to safer places. People in the affected areas to remain indoors
Very Severe Cyclonic Storm (64–90 kts or 118–167 kmph)	Extensive damage to kutcha houses. Partial disruption of power and communication lines. Minor disruption of road and rail traffic. Potential threat from flying debris. Flooding of escape routes	Total suspension of fishing operations. Mobilize evacuation from coastal areas. Judicious regulation of rail and road traffic. People in affected areas to remain indoors

Very Severe Cyclonic Storm (91–119 kts or 168–221 kmph)	Extensive damage to kutcha houses. Some damage to old buildings. Large-scale disruption of power and communication lines. Disruption of rail and road traffic due to extensive flooding. Potential threat from flying debris	Total suspension of fishing operations. Extensive evacuation from coastal areas. Diversion or suspension of rail and road traffic. People in affected areas to remain indoors
Super Cyclone (120 kts or more, or 222 kmph or more)	Extensive structural damage to residential and industrial buildings. Total disruption of communication and power supply. Extensive damage to bridges causing large-scale disruption of rail and road traffic. Large-scale flooding and inundation of sea water. Air full of flying debris	Total suspension of fishing operations. Large-scale evacuation of coastal population. Total suspension of rail and road traffic in vulnerable areas. People in the affected areas to remain indoors
<i>Reference/Source: Forecasters Guide, India Meteorological Department, 2008</i>		

Table: Damage expected & actions from low pressure area to super cyclonic storm

Geophysical Hazard

Cuttack is comparatively safe from geophysical hazards. Historically, Odisha has experienced very few moderate earthquakes. Some events with magnitudes in excess of 5.0 have originated in the Bay of Bengal off the coast of the state. Several faults have been identified in the region and some have shown evidence of movement during the Holocene epoch. The Brahmani Fault in the vicinity of Bonaigarh is among them. The Mahanadi also flows through a graben structure. Several deep-seated faults are situated beneath the Mahanadi Delta. However, it is important to mention that proximity to faults does not necessarily translate into a higher hazard as compared to areas located further away, as damage from earthquakes depends on numerous factors such as subsurface geology as well as adherence to the building codes.

The vulnerability atlas of India published by Building Materials & Technology Promotion Council (BMTPC) of Govt. India, and Code of Practice (IS 1893:2002, Part 1) for Earthquake Resistant Design has divided India into four zones depending on the earthquake vulnerability of the area i.e. Zone- II, III, IV, and V. Zone II is Low Damage Risk Zone, Zone-III is Moderate Damage Risk Zone, Zone – IV is High Damage Risk Zone and Zone-V is Very High Damage Risk Zone.

The seismic hazard map of India was also updated in 2000 by the Bureau of Indian Standards (BIS). There are no major changes in the zones in Odisha with the exception of the merging of Zones I and II in the 1984 BIS map. Districts that lie in the Mahanadi river valley lie in Zone III, and within Odisha this zone stretches from Jharsuguda along the border with Chhattisgarh in a south-easterly direction towards the urban centers of Bhubaneswar and Cuttack on the Mahanadi Delta. Cuttack District lies in the Zone III.

Since the earthquake database in India is still incomplete, especially with regards to earthquakes prior to the historical period (before 1800 A.D.), these zones offer a rough guide of the earthquake hazard in any particular region and need to be regularly updated.

Hydro-Meteorological Hazards

The Bay of Bengal segment of the North Indian Ocean cyclone basin is highly prone to cyclonic events; however Arabian Sea is one of the least intense global cyclone basins, dominated by the monsoon and relatively infrequent severe cyclonic storms. State like Orissa, are the more cyclone and storm surge hazard prone states in western India, because of its location (along the Tropic of Cancer), its flat coastal topography, high tidal range and 480 km long coast line.

Odisha is always vulnerable to cyclones in April- May and September-November. Once every few decades a super cyclone strikes Odisha. Recent Super Cyclone that hit Odisha in the last Century were in 1942, 1971 and 1999. The Super Cyclone of 1999 killed about 10,000 and traumatized millions who survived its wrath. Over 15 million people were affected. Throughout India's massive coastline, there are 250 cyclone-warning sets, of which 34 are in Odisha, covering 480 Km of coastline.

Cyclone Phailin

The Very Severe Cyclonic Storm (VSCS) Phailin originated from a remnant cyclonic circulation from the South China Sea.

The VSCS Phailin crossed Odisha and the adjoining north Andhra Pradesh coast near Gopalpur (Odisha) around 2230 hours IST on October 12, 2013 with a sustained maximum surface wind speed of 200-210 kmph gusting up to 220 kmph. It caused very heavy rainfall over Odisha leading to floods and strong gale winds causing large scale structural damage and storm surges triggering widespread coastal inundation over Odisha.

The maximum rainfall occurred over the northeast sector of the system centre at the time of landfall. A maximum 24-hour cumulative rainfall of 38 cm has been reported over Banki in Cuttack district of Odisha.

In Cuttack, rivers such as the Mahanadi, and its many tributaries and branches flowing through the city expose vast areas to floods. Damages are caused due to floods mainly in the Mahanadi, the Kathjori, and the Kuakhai. These rivers have a common delta where flood waters intermingle, and when in spate simultaneously, wreak considerable havoc. This problem becomes even more acute when floods coincide with high tide. Cuttack city is highly prone to floods which causes heavy loss to lives and property.

During every monsoon some of the areas such as Kazi Bazaar, Rover's Street, Stewertpatna, Mehendipur, Mansinghpatna, Professorpara, Gamhadia, Mahmadia Bazaar, Sutahat, Bidanasi, Deula Sahi, Roxy lane, Jhola Sahi and Khatbin Sahi Badambadi, Kesharpur, Raja Bagicha and Sheikh Bazar water logged.

One of the main reason in Cuttack city for flooding is its location, shape and the overbank flowing of water due to heavy rainfall at the upper end and catchment areas of the Mahanadi river. It depends upon the amount of water collected at the river course, the carrying capacity of the river, the river run off to the ocean at the mouth and the flow dynamics-morphological setting system. All the tributaries of Mahanadi rivers after flowing in the varied terrain attain their old stage in the coastal region of flat and low relief nature. They fall in the Bay of Bengal forming network of distributaries and varieties of landforms. Mahanadi river having vast catchment add huge amount of sediments to be deposited in the coastal basin to form the arcuate delta. Mahanadi and its distributaries most often cause flood in the low-level landforms like delta, peneplains and natural levees along with the adjacent areas of the entire river courses.

Heat Wave is defined as a condition of increased atmospheric temperature that leads to physiological stress, which sometimes can claim human life. Quantitatively Heat Wave can be defined as any increase from the normal temperature (i.e. 40° C). Again, depending on the upper deviation from the normal temperature it can be Moderate Heat Wave (40+5 or 6° C) or Severe Heat Wave (40+ 7° C or more). If the maximum temperature of any place continues to be 45° C for consecutive two days, it is called as a Heat Wave condition. Physiologically human body can tolerate environmental temperature till 37° C. Whenever the environmental temperature increases above 37° C, the human body starts gaining heat from the atmosphere. In the case of humidity being high along with high temperature, a person can suffer from heat stress disorders even with the temperature at 37° or 38° C. Higher daily peak temperatures and longer more intense. Heat Waves are becoming increasingly frequent globally due to climate change. Extreme heat events already have a significant impact in India. In the year 1998, the State of Odisha faced an unprecedented Heat Wave situation, as a result of which 2042 persons lost their lives. Though extensive awareness campaigns have largely reduced the number of casualties during post 1998 period, still a good number of casualties are being reported each year.

3.4.2 Logistic support

For cleaning of choked drains due to heavy rains and dewatering of areas where water logging may occur, the arrangement is

Available five numbers of 5 HP dewatering diesel pumps and four excavators could be put to service.

The Chief coordinating official for the movement of these units will be Executive Engineer-II with the help of J.E.(Mech.). The five pump operators/drivers and the drivers of excavators will also be in readiness all the time.

Works Distribution

1. The Additional Municipal Commissioner will be in overall charge and will keep the Municipal Commissioner informed on all fronts.
2. The Deputy Commissioner (Slum) along with his team of Community organizers will visit concerned slum areas and report.
3. The City Health Officer will keep the conservancy staff in readiness with tractor unit, adequate bleaching power and halogen tablets.

4. The Chief Municipal Medical Officer, CMC Hospital will handle all health emergency cases with support of Capital Hospital.

3.5 Linkage with the District Administration and other agencies

The City Disaster Management Committee (CDMC) headed by the Revenue Divisional Commissioner (Central Division) is the apex body to monitor the overall disaster preparedness activities. This corroborates with the suggestion of National Institute of Urban Affairs to include management of natural and technological disasters in the Model Municipal Law. CMC and the District Administration worked closely to provide succor to the people affected in the slum fire in Ward No.25 in October 2007. The Municipal Commissioner heads all preparedness and response activities within the corporation area. ADM, Cuttack is working closely with Cuttack Municipal Corporation in the regular activities. To bring the district administration and city administration close together the Revenue Divisional Commissioner (Central Division) is the commanding authority and he is the Chairman of City Disaster Management Committee.

Members of the City Disaster Management Committee

Sl.No.	Functionaries	Designation	Name	Contact Number
1	Mayor	Chairman	Smt. Meenakashee Behera	
2	Commissioner	Member	Sri Bikash Chandra Mohapatra	
3	Dy. Mayor	Member	Sri Ajay Barik	
4	Planning Member CDA	Member		
5	Addiotional Commissioners	Member	Sri Ramesh Chandra Sai	
6	Dy. Commissioner & Nodal Officer	Member Convener	Smt Sarita Dhanwar	
7	CHO	Member		
8	CE	Member		
9	SIO	Member	Smt. Nirupama Swain	
10.	Finance Officer	Member		
11.	ACP Traffic	Member		
12.	SC Chairpersons Health	Member	Sri Ranjan Kumar Biswal	
13.	SC Chairpersons	Member	Sri Ajay Kumar Barik	

	Finance			
14.	SC Chairpersons Grievance		Smt. Chitra khuntia	
15.	SC Chairpersons Planning	Member	Sri Manoj Kumar Sethy	
16.	Cuttack Purbanchal Shanti Committee	Member	Sri Prafulla Kumar Sahu	
17.	Cuttack Mahanagar Shanti Committee	Member	Sri Bhikari Das	
18.	NIHARD	Member		
19.	HoD Geography Ravenshaw University	Member	Dr. Preetirekha Das Pattnaik	
20.	Project Engineer Swerage Board	Member		
21.	District Emergency Officer,Cuttack	Member		
22.	Deputy Commissioner of Police Cuttack	Member		
23.	Fire Officer,Cuttack	Member		

3.6 Emergency Support Function (ESF)

High Power Committee of Govt. of India (Gol) has suggested 14 “Emergency Support Functions (ESF)”. Based on the recommendation of Gol and through multi-stakeholder consultation, the ESF teams identified by Cuttack Municipal Corporation are as follows.

3.6.1 Communication

This team will be led by the Deputy Commissioner of Police (DCP), Cuttack with support from Manager (Communication), OSDMA, Fire Officer, BSNL, All India Radio, India Met. Dept., Central Water Commission, Doordarshan, 120 TA Infantry Battalion, Bharat Scouts & Guides & Dy. Controller, Civil Defence, Role and responsibilities of this team will be as follows.

- Coordination of activities in the city in consultation with Cuttack Municipal Corporation (CMC) to assure the provision of telecommunication support
- Coordinate the requirement of temporary telecommunication in the effected areas
- Provide human services under the communication

3.6.2 Public Health

This team will be led by the Chief Medical Officer, City Hospital Cuttack with support from CDMO, Cuttack, CMMO, CMC Hospital, CMO, Railways

Hospital, Hr. Secretary, Indian Red Cross Society and St. Johns Ambulance. Role and responsibilities of this team will be as follows.

- Coordinate, direct and integrate city level response
- Direct activation of medical personnel, supplies and equipment
- Coordinate the evacuation of patients
- Provide human services under the dept. of health & family welfare in coordination with CMC
- To prepare and keep ready Mobile Hospitals
- Check stocks of equipment and drugs

3.6.3 Sanitation

This team will be led by the City Health Officer, Cuttack Municipal Corporation with support from J.E. (Mech.) CMC, CDA & R&B, Sub-Divisional Veterinary Officer, Div. Forest Officer, ODRAF, People for Animals and NGOs. Role and responsibilities of this team will be as follows.

- Extensive drain desilting
- Routes might be blocked with carcasses / fallen trees
- Checking contamination of water & food
- Restoration of sanitation facilities
- Cleaning of disaster affected sites

3.6.4 Power

This team will be led by the General Manager, CESU, Cuttack with support from Orissa Power Trans. Corp. Ltd., ODRAF, Chief Executive, OREDA and A.E. (Elect), CMC. Role and responsibilities of this team will be as follows.

3.6.5 Transportation

This team will be led by the Regional Transport Officer, Cuttack with support from Chief Safety Officer, East Coast Railways and General Manager, Airport authority of India, Role and responsibilities of this team will be as follows

- Overall coordination of the transportation capacity in the city
- Restoration of roads
- Coordinate and implement emergency related response and recovery functions, search and rescue and damage assessment

3.6.6 Search & Rescue

This team will be led by the Asst. Fire Officer, Cuttack with support, Office of DCP, ODRAF, 120 TA Infantry Battalion, NCC, Dy. Controller, Civil Defence,

St. John Ambulance, Bharat Scouts & Guides and NYK. Role and responsibilities of this team will be as follows.

- Establish, maintain and manage city level search and rescue response system
- Coordinate search and rescue logistics during field operations
- Provide status reports of SAR updates throughout the affected areas

3.6.7 Donation

This team will be led by the Municipal Commissioner, CMC with support from office of SRC, ADM, Cuttack, Tahasildar, Cuttack, Indian Red Cross Society, Resident Representative, C.I.I, Rotary Club and Central Market Association. Role and responsibilities of this team for coordination of following donation sectors.

- General public (Citizens)
- Corporate sector
- INGOs/NGOs, Civic Associations (Clubs etc)
- International Community
- District administration/State government

3.6.8 Relief Supplies

This team will be led by the Municipal Commissioner, CMC with support from ADM, Cuttack, Tahasildar, Cuttack, Asst. Civil Supply Off., Cuttack, CDPO (Urban), Cuttack, NCC, Dy. Controller, Civil Defence and Bharat Scouts & Guides. Role and responsibilities of this team will be as follows.

- Coordinate activities involved with the emergency provisions
- Temporary shelters
- Emergency mass feeding
- Bulk distribution
- To provide logistical and resource support to CMC and local entities
- Operate a Disaster Welfare Information (DWI) system to collect, receive and report the status of victims and assist family reunification; and coordinate bulk distribution of emergency relief supplies.

3.6.9 Drinking Water & Water Supply

This team will be led by the Chief Engineer (PHD), Cuttack with support from J.E(Mech.) CMC and CDA. Role and responsibilities of this team will be as follows.

- Procurement of clean drinking water
- Transportation of water with minimum wastage
- Special care for women with infants and pregnant women
- Ensure that sewer pipes and drainage are kept separate from drinking water facilities

3.6.10 Shelter

This team will be led by the DI of Schools, Cuttack with support from CI of Schools, Cuttack, ODRAF, 120 TA Infantry Battalion and Indian Red Cross Society.

Role and responsibilities of this team will be as follows.

- Provide adequate and appropriate shelter to all population
- Quick assessment and identifying the area for the establishment of the relief camps.
- Identifying the population which can be provided with support in their own place and need not be shifted/relocated
- Locate relief camps close to open traffic and transport links

3.6.11 Public Works & Engineering

This team will be led by the City Engineer, CMC with support from R&B, CDA, NHAI, CPWD, East Coast Railways and REDA. Role and responsibilities of this team will be as follows.

- Pre-positioning assessment teams
- Emergency clearing of debris to enable inspection/survey
- Coordinate road clearing activities to assist local relief work
- Begin clearing of roads
- Assemble casual labour
- Provide a working team carrying emergency tool kits depending on the nature of disaster, essential equipment e.g. Towing vehicles Earth moving equipments, cranes
- Construct temporary roads
- Keep national and other main highways clear from debris etc.

3.6.12 Information Dissemination & Awareness

This team will be led by the Municipal Commissioner, CMC with support from Director, Indian Meteorological Dept., Cuttack, All India Radio,

Doordarshan, DIPRO, Cuttack, CMC, Office of DCP, Tahsil office, Cuttack, DI of Schools, Cuttack, CDPO (Urban), Cuttack, Capital Hospital, CMC Hospital, NCC and Bharat Scouts & Guides. Role and responsibilities of this team will be as follows.

- Collect, process and disseminate information about an actual or potential disaster situation to facilitate the overall activities of all responders in providing assistance to an affected area
- Apply GIS to speed other facilities of relief and search and rescue
- Enable CMC to establish contact with the state authorities
- Coordinate planning procedures between city, district and the state
- Documentation of all procedures at appropriate levels
- Provide ready formats for all reporting procedures as a standby

3.6.13 Media management

This team will be led by the DIPRO, Cuttack with support from All India Radio and Doordarshan. Role and responsibilities of this team will be as follows

- Provide and collect reliable information on the status of the disaster and disaster victims for effective coordination of relief work at state level
- Not to intrude on the privacy of individuals and families while collecting information
- Coordinate with EOC at the airport and railways for required information for state, national and international relief workers
- Acquire accurate scientific information from the Indian Meteorological Dept. and Dept. of Science & Technology
- Coordinate with all electronic media networks to send news flashes
- Support donation
- Respect the socio-cultural and emotional state of the disaster victims

3.6.14 Help Lines

This team will be led by the Municipal Commissioner, CMC with support from ADM, Cuttack, Office of SRC, OSDMA, Office of D.M., Cuttack, Office of DCP, Bhubaneswar, BSNL, Sub Collector, Cuttack, Tahasildar, Cuttack, Fire Officer, Cuttack, CESU, Cuttack, PHD, Cuttack, Sub Div. Veterinary Officer, Cuttack, Indian Red Cross Society, Cuttack, Capital Hospital, Cuttack and CMC Hospital, Cuttack. Role and responsibilities of this team will be as follows.

- Coordinate, collect process report and display essential elements of information and to facilitate support for planning efforts in response operations
- Coordinate pre-planned and event specific aerial reconnaissance operations to assess the overall disaster situation
- Pre-positioning assessment teams headed by the City/District/State coordinating officers and deployment of other advance elements
- Emergency clearing of debris to enable reconnaissance of the damaged areas and passage of emergency personnel and equipment for life saving, property protection and health and safety.

3.7 Incident Response System and Standard Operating procedures

The Commissioner, CMC is the official Incident Commander (IC) to activate the command system and to control and coordinate the resources required at the site of disaster. The IRS is a set of Emergency Management tools consisting the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

In the Cuttack City IC function is commanded by the Commissioner (Cuttack Municipal Corporation) for planning, directing, organizing, co-ordinating, communicating, and delegating roles and responsibilities to the City Emergency Managers and to inform timely to the Head Quarter.

Functions of IRS

- To create and integrate communication flow during emergency period
- To manage incident scene, and report through integrated and co-ordinated command plan
- To facilitate procedures and protocols according to ESF Departments within City as well as State and Central Government.
- To put the communication system in place to receive, record, acknowledge incoming and outgoing information of any form during the disaster
- To manage resources as per their availability such as– distribution of relief material with ESF agencies required during emergency etc

- Monitoring functional areas during and post disaster phase

3.8 Sharing of responsibility

3.8.1 Municipal Commissioner, CMC

- Proper functioning of control room to be monitored with assistance from Deputy Municipal Commissioner
- Information will be flowing from all sources to the Control room; updated information needs to be received from ward level
- Coordination with the office of the ADM, District Collector and SRC-cum-MD, OSDMA
- Storage of food (Baby food , dry food) in vulnerable pockets to be monitored
- Arrangements for keeping drainage clearance with assistance from City Engineer
- Relief measures organization

3.8.2 Deputy Commissioner of Police

- There will be communication problem as well as law & order tasks in the affected areas, routes might be blocked with carcasses/fallen trees & there could be traffic jam on the roads
- Coordinate the requirement of temporary telecommunication support
- Assistance of ODRAF, Army and Civil Defence may be required

3.8.3 Chief Medical Officer, City Hospital

- Possible outbreak of epidemic or medical emergency as secondary disaster;
- Restoration of disrupted of labs and hospital
- Requirement of adequate drugs and medical accessories
- Possible need for psychological counseling for victims

3.8.4 City Health Officer, CMC

- Extensive drain desilting
- Routes might be blocked with carcasses/fallen trees
- Checking contamination of water & food
- Restoration of sanitation facilities;
- Cleaning of disaster affected sites

3.8.5 Chief Engineer (PHED), CTC

- Available water may be unfit for drinking; Existing water storage bodies might have been damaged and rendered not usable
- Alternative need (poly packs) of water to assist victims in rescue operation
- People need to be informed of emergency supply of water
- Tankers & containers to be acquired for distribution of water
- Sources of possible potable water sources to be identified
- Drinking water to be distributed to temporary shelters and hospitals

3.8.6 Regional Transport Officer, CTC

- Restoration of transportation facilities
- Overall coordination of the transportation capacity in the city
- Coordinate and implement emergency related response and recovery functions, search and rescue and damage assessment

3.8.7 DI of Schools, CTC

- Arrange adequate and appropriate shelter for affected population
- Quick assessment & identifying area for the establishment of relief camps
- Identifying the population which can be provided with support in their own place and need note shifted/relocated
- Locate relief camps close to open traffic and transport links

3.8.8 General Manager, CESU, CTC

- Provide & coordinate support until CMC is prepared to handle all power related problems
- Identify requirements of external equipments
- Assess damage for state-level assistance
- Chief Engineer, CMC
- Coordinate road clearing & restoration activities with R&B, NHAI, CPWO, CDA to assist local relief work
- Pre-positioning assessment teams
- Assemble casual labour, Emergency clearing of debris to enable inspection/survey; construct temporary roads
- Facilitate the working team carrying emergency tool kits depending on the nature of disaster, essential equipment e.g. Towing vehicles, Earth moving equipments, cranes;

- Keep national and other main highways clear from debris etc.

3.9 GO - NGO coordination

Participation of the community is crucial in Disaster Management. However, preparing the community for appropriate response within a limited time and motivating it for adopting long-term mitigation measures would require a much sustained, intimate and a flexible approach. This is a challenge which can be effectively addressed through involvement of NGOs and CBOs (Community Based Organizations) due to their close linkages with the community, their outreach and flexibility in procedural matters.

3.10 Interagency Coordination

Cuttack Municipal Corporation would organize meeting on regular basis with NGOs International NGOs and aid agencies like Indian Red Cross Society, Orissa State Branch, Saint John Ambulance, Civil Defence , Bus Owners Association, Truck Owners Association, CDVO(Veterinary Control Room), Police Control Room, CDMO/CMO Control Room, Agriculture Control Room, Water Resource (Irrigation) Control Room and the control rooms of R& B, RD, PHED, Fire Prevention Officer, Electricity, ODRAF, Civil Supply, H&UD Dept for better coordination & in time response to any disastrous situation in the city.

CHAPTER : VIII

Reconstruction and Rehabilitation

Damage Assessment Procedures and formats

Assessment of damage to the public infrastructures will be taken by the concerned Line Departments as per the specifications laid down by the government of India (Ministry of Home Affairs) and Special Relief Commissioner. Extent of damage to private properties will be assessed by the Tahasildar through field level officers. Disbursement of assistance in case of death, house damage, agriculture, etc. will be made by the Collectors through Cuttack Municipal Corporation as per CRF norms and procedures laid down in Orissa Relief Code. Assistance in case of injury, loss of limb, damage of livelihood assets of urban artisans, death of small and big domestic animals

will be disbursed by the line departments/ Collectors as per Govt. instructions and CRF norms.

People's entitlements as per Orissa Relief Code and SDRF & NDRF Norms

3.10.1 Assistance out of Calamity Relief Fund is available in case of occurrence of any of the following disasters as notified by the Government of India.

- | | |
|----------------|------------------|
| 1. Avalanche | 7. Flood |
| 2. Cloud Burst | 8. Hailstorm |
| 3. Cyclone | 9. Landslide |
| 4. Drought | 10. Pest Attack` |
| 5. Earthquake | 11. Tsunami |
| 6. Fire | 12.Heat
Wave |
| | 13.Lightning |

3.10.2 Food Assistance is available in following three forms

- (a) Emergent assistance
- (b) Ad hoc food assistance, or
- (c) Food assistance on cards

(a) **Emergent Assistance** is sanctioned for people marooned/evacuated during a disaster in the form of rice, Chuda, Muddhi, Gur, Salt, Kerosene, Match boxes including cooked food and clothing. It can be sanctioned by different authorities as shown below

- Collector- up to 3 days
- RDC up to 7 days including 3 days sanctioned by Collector
- SRC- up to 15 days including 7 days sanctioned by RDC

(b) **Ad Hoc Food Assistance** is sanctioned by the Collector upto a period of 15 days when post-disaster distress conditions persist in favour of following categories.

- Persons attending the sick or infant children who cannot go out and earn their livelihood.
- Able-bodied persons but temporarily rendered weak due to want of food, malnutrition or as result of illness.
- People deprived of cooking their food due to inundation.

(c) **Food assistance on card** can be sanctioned to prevent starvation any time anywhere when households face starvation in favour of the following categories of persons.

- Mentally challenged /crippled / invalid/ blind persons
- Advanced age or physical infirmity
- Helpless widows
- Persons attending sick or infant children
- Able-bodied persons weak due to want of food, malnutrition or illness.

It can be sanctioned by different authorities as shown below. The assistance is disbursed by the local BDO.

- Sarpanch - up to 10 days
- Chairperson/Mayor of ULBs- up to 10 days (in case of urban areas)
- BDO - up to 30 days
- Sub-Collector - up to 45 days
- Collector - up to 120 days

Free Kitchen: to people who are temporarily accommodated due to evacuation (Item no-16 of CRF).It is treated different from sanction of emergent relief.

Scale of assistance:

- Uncooked rice of 1 kg per adult
- Uncooked rice of 500 gm per child(below 12 years of age)
- Cooked food equivalent to Rs. 30/- per adult and Rs.25/- per child

3.10.3 Ex-gratia in case of death due to disasters notified

- Inform SRC within 24 hours with details
- Initiate case record for sanction of ex-gratia
- Ex-gratia assistance will be sanctioned by the concerned Collector of the district where the death occurred due to calamity.
- The Collector of the district to which the victim belong should give the list of next of kin in whose favour the ex-gratia will be sanctioned, to the Collector sanctioning the ex-gratia amount
- The sanctioning authority will send the amount through Bank draft to the concerned Collector to which district the victim belong for disbursement.
- All payment should be made in shape of DD / AC payee cheque only
- Disbursement within 48 hours from available cash
- Maintain a register showing details.
- Rs.1,50,000/- per deceased and no age and income bar
- Scale same for any no. of persons of a family
- Not applicable to foreign citizen dieing in India due to a disaster notified

- Not applicable to Indian citizen dieing due to a notified calamity outside India
- In case of a government employee /relief worker who loses his/ her life, while engaged in rescue and relief operations, in the aftermath of a notified calamity or during preparedness activities like mock drill etc. his /her family would be paid @ Rs.1.50 lakh per deceased.

Ex-Gratia where dead bodies not recovered

- A case of unnatural death to be registered in local police station
- Detailed enquiry by Tahashildar with report of local Sarpanch in the case record
- Obsequies by family members according to the prevailing customs
- The next of kin (NOK) to file an affidavit on any date not earlier than three months from the date of presumed death
- In case the contrary is proved, the payment would be recovered as arrears of land revenue

3.10.4 Ex-gratia payment for loss of a limb or eye

- Disability is between 40% and 80% – Rs.43,500/-
- Disability is more than 80 % - Rs.62,000/-
- Disability is to be duly certified by a Government doctor or doctor from a panel approved by the Government
- Grievous injury requiring hospitalization for more than one week- Rs.9,300/-
- Grievous injury requiring hospitalization for less than one week- Rs.3,100/-

3.10.5 House Building Assistance

- Preparation of village wise list after inquiry by designated authorities/panel with digital photo.
- Approval of list by Collector and disbursement within 15 days.
- Disbursement by designated officers in AC payee cheques.

Assistance admissible:

- | | | |
|---|---|-------------|
| • Fully damaged/destroyed Pucca house | - | Rs.35,000/- |
| • Fully damaged/destroyed kutcha house | - | Rs.10,000/- |
| • Severely damaged Pucca house | - | Rs.6,300/- |
| • Severely damaged kutcha house | - | Rs.3,200/- |
| • Partially damaged Pucca / kutcha house other than hut | - | Rs.1,900/- |
| • Huts damaged/destroyed | - | Rs.2,500/- |

- Fully damaged houses- Where the house is beyond repair and needs to be reconstructed.
- Partially damaged houses -Where the damage is minimum of 15%.
- Severely damaged houses- Where the damage is between partially and fully.
- Hut means temporary, make shift unit, inferior to Kutcha house, made of thatch, mud, plastic sheets etc traditionally seen and recognized and known as Hut by the State/District Authorities
- No House Building Assistance in case of Houses on objectionable Govt. land damaged due to fire accident

3.10.6 Other Materials and Utensils for Fully Damaged Houses

- Rs.1,400/- for utensils per household
- Rs.1,300/- for clothing per household

3.10.7 Assistance to small and marginal farmers

- Desilting of agricultural land (where thickness of sand/silt deposit is more than 3") - Rs.8,100/- per hectare
- Removal of debris on agricultural land in hilly areas- Rs.6,000/-
- Desilting/restoration / repair of fish farm (subject to the condition that no other assistance /subsidy has been availed of by /is eligible to the beneficiary under any other government scheme) - Rs.6,000/- per hectare
- Loss of substantial portion of land caused by landslide, avalanche or change of course of rivers (assistance will be given to only those small and marginal farmers whose ownership of the land lost is legitimate as per the revenue records)- Rs.25,000/- per hectare

3.10.8 Agriculture input subsidy where crop loss was 50% and above

For agricultural crops, horticulture and annual plantation crops

- Rs.3,000/- per hectare in rain fed areas
- Rs.6,000/- per hectare for areas under assured irrigation
- No input subsidy will be payable for agricultural land remaining unsown or fallow.
- Assistance payable to any small farmer with tiny holding may not be less than Rs.250/-

For perennial crops

- Rs.8,000/- per hectare for all types perennial crops
- No input subsidy will be payable for agricultural land remaining unsown or fallow
- Assistance payable to any small farmer with tiny holding may not be less than Rs.500/-

3.10.9 Input subsidy to farmers other than small and marginal farmers:

Assistance may be provided where the crop loss is 50 % and above, subject to a ceiling of 1 ha per farmer and up to 2 ha per farmer in case of successive calamities irrespective of the size of his holding being large.

- Rs.2,000/ per hectare in rain fed areas
- Rs.4,000/- per hectare for areas under assured irrigation
- Rs.6,000/- per hectare for all types perennial crops
- No input subsidy will be payable for agricultural land remaining unsown or fallow

3.10.10 Assistance to small and marginal sericulture farmers

- Rs.3,200/ per hectare for Eri, Mulberry and Tussar
- Rs.4,000/ per hectare Muga

3.10.11 Animal Husbandry: Assistance to small and marginal farmers

- (I) Replacement of draught animals, milch animals or animals used for haulage

Milch Animals		Draught Animals	
Buffalo/ cow/camel / yak etc	@ Rs.16,400/-	Buffalo/ horse /bullock etc	@ Rs.15,000/-
Sheep/ goat	@ Rs.1,650/-	Calf/donkey/pony	@ Rs.10,000/-

(The assistance may be restricted for the actual loss of economically productive animals and will be subject to a ceiling of 1 large milch animal or 4 small milch animals or 1 draught animal or 2 small draught animals per household irrespective of whether a family has lost a large number of animals)

Poultry

Poultry @ Rs.37/- per bird subject to a ceiling of assistance of Rs.400/- per beneficiary household.

The death of the poultry bird should be on account of the notified natural calamity.

Relief under these norms is not eligible if the assistance is available from any other Government scheme.

- (II) Provision of fodder / feed

- Large animals-Rs.32/- per day
- Small animals-Rs.16/- per day

3.10.12 Assistance to Fishermen

For repair/replacement of boats, nets damaged or lost.

- Repair of partially damaged traditional crafts (all types) plus net-Rs.3,000/-
- Replacement of fully damaged traditional crafts(all types) plus net-Rs.7,500/-
- Such traditional crafts are to be registered with the state government
- Extent of damage (partial or full) to be determined /certified by a competent authority designated by the state government.
- This assistance will not be available if the beneficiary is eligible or has availed of any subsidy/assistance, for the instant calamity, under any other government scheme.

Input subsidy for fish seed farm

- Rs.6,000/- per hectare
- This assistance will not be provided if the beneficiary is eligible or has availed of any subsidy/assistance, for the instant calamity, under any other government scheme except the one time subsidy provided under the scheme of Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture)

3.10.13 Assistance to artisans in handicrafts/handloom sectors by way of subsidy for repair /replacement of damaged equipment

For traditional Crafts (Handicrafts)

- Replacement of damaged tools/equipment-Rs.3,000/-per artisan
- Damage/replacement to be duly certified by Competent Authority designated by the State Government
- Loss of raw material /goods in process / finished goods- Rs.3,000/-per artisan
- Damage/loss to be certified by Competent Authority designated by the State Government

For Handloom Weaver

- Repair /replacement of loom equipment and accessories-Rs.1,000/- per loom
- Replacement of looms-Rs.2,000/- per loom
- Purchase of yarn and other materials like dyes and chemicals and finished stocks-Rs.2,000/-
- Damage/replacement to be certified by Competent Authority designated by the State Government

3.10.14 Hire Charges of Boats

- For Big Boat capacity 30 Qtl. & above with 5 labourers and one boat man – Rs.1,000/- per day.

- For Boat capacity 20 Qtl. or more with 3 labourers and one boat man – Rs.700/- per day.
- For Boat capacity 10 Qtl. or more with 1 labourer and one boat man – Rs.500/- per day.
- Power boat (5 HP) - Rs.1,200.-
- Power boat (10HP)- Rs.2,000/-
- Power boat (25 HP)- Rs.3,500/-

3.11 Reconstruction Guidelines

Restoration and reconstruction of public infrastructures and private properties will be taken as per CRF norms in a time bound manner.

3.12 Rehabilitation Guidelines

Rehabilitation of the affected people would be taken as per CRF norms in a time bound manner.

3.13 Documentation and lessons learnt

The entire process of Disaster management will be documented through video still photography and in black & white form. Lessons learnt will be documented and shared with all stakeholders for better management of future disasters.

3.14 Administration of Relief:

Administration of food assistance during crisis period will be the responsibility of City administration. Food assistance will be provided to the affected people for desired number of days as per detailed guidelines laid down in the Orissa Relief Code. Guidelines on minimum quality standards are laid down by the Government. Municipal Commissioner will identify inaccessible pockets and areas likely to be cut off and ensure pre-storage of adequate food stuff and other essential commodities in inaccessible/ strategic places. The PDS centers are used for storage and distribution centres during crisis period. At the State level SRC coordinates with Food Supplies and Consumer Welfare Department, FCI, OMFED, Fisheries and Animal Resources Development Department and other State Governments to establish a State-wide network of supply chain.

CHAPTER : IX

4 Mitigation Plan

The risk mitigation plan (also sometimes referred to as a risk response plan) communicates how specific risks will be dealt with and the action steps that are required to carry them out. It gives team members a clear sense of the actions that they are expected to take and provides management with an understanding of what actions are being taken on their behalf to ameliorate project risk.

The plan is frequently applied in the project management software as a series of tasks in addition to those that were on the original activity list. The risk mitigation plan may also identify specific triggers, which are events that spur action based on the escalating proximity of a given risk. As risks become imminent, the risk mitigation plan identifies what actions should occur and who is responsible for implementing those actions.

The risk mitigation plan is a list of specific actions being taken to deal with specific risks. It often lists the names of the individuals responsible for carrying out those actions, as well. Ideally, it is an evolutionary document, capturing information on the outcomes of the risk strategies for future reference.

4.1 Short terms mitigation plans

The following activities would be taken in the city for mitigation of urban risk

- Detailed Damage Assessment Format & Protocol
- Setting up of Retrofitting Clinics for technical guidance
- Demonstration Repair & Strengthening of Typical Buildings
- Confidence Building Measures
- Special Schedule of specifications & Rates for Earthquake strengthening Measures
- Monitoring of costs of ongoing Repair & Strengthening Efforts
- Benchmarking with other Earthquake Rehabilitation Programmes
- Community-centered Programme
- Institutional Arrangements for State Support to Private & NGO initiatives
- Definition of Unit of Relief & Reconstruction Assistance

4.2 Long term Mitigation Measures

- Survey of Dominant House Types & Identification of Vulnerable Features
- Mitigation Interventions in Vulnerable Urban Areas
- Updating of Survey of India Maps for Vulnerable Areas
- Modification & Strengthening of Municipal Bye-Laws
- Computerised Vulnerability Database

4.3 Medium term Mitigation Measures

- Building Reconstruction
- Micro Zonation
- Repair & Strengthening of Government and Public Buildings
- Training of Local Engineers & Contractors
- Training and Certification Programme for Masons & Carpenters
- Demonstration Tests of Scale-Models of Vulnerable & Strengthened Buildings
- Development of a Disaster Management & Mitigation Policy
- Preparation of city level Maintenance Manuals

4.4 Convergence with developmental plans

The city administration would take different convergence programme with other line departments making them aware about the hazard proneness of the city to integrate the disaster management activities in their plan and programme. Departments like H&UD department (SUDA, CDA, Orissa State Housing Board), Health (NRHM, CDMO, CMO), Women & Child (ICDS, Mission Shakti) Works Department, R&B, PHED, Sewerage Board, Rail Way, District Administration, School & Mass Education would be contacted and regular meeting would be conducted.

1. Disaster Safety tips

a) Earthquake

Earthquake usually gives no warning time at all.

Before Earthquake

Now is the time to formulate a safety plan for yourself and your family. If you wait until the earth starts shake, it may be too late. Consider the following safety measures.

Always keep these, viz.- bottled drinking water , non perishable food , first aid kit , shoe torch-light and batteries – in a designated place:

Teach family members how to turn off electricity, gas etc.

Identify places in the house that can provide cover during an earthquake.

It may be easier to make long distance calls during an earthquake. Identify an out - of -town relative or friend as your family's emergency contact. If the family members get separated after earthquake and are not able to contact each other, they should contact the designated relative / friend. The address and phone number of the contact person / relative should be with all the family members.

Safe guard your house. Use earthquake resistant construction practice while building a house.

Consider retrofitting your house with earthquake safety measures; Reinforcing the foundation and frame could make your house quake resistant. You may contact a reputable contractor and follow building code.

Kutcha buildings can also be retrofitted and strengthened.

During Earthquake

Earthquake gives no warning at all. Sometimes, a loud rumbling sound might signal its arrivals a few second ahead of time. Those few seconds could give you a chance to move to a safer location. Here are some tips for keeping safe during quake.

Take cover. Go under a table or other sturdy furniture; kneel, sit, or stay close to the floor. Hold on to furniture leg for balance. Be prepared to move if your covers moves.

If no sturdy cover nearby, kneel or sit close to the floor next to structurally sound interior wall. Please keep your hands on the floor for balance.

Don't stand on the door way, violent motion could cause doors to slam and cause serious injuries. You may also be hit by flying objectives.

Move away from windows, mirrors, bookcases and other unsecured heavy objects.

If you are in bed, stay there and cover yourself with pillows and blankets.

Do not run outside if you are inside. Never use the lift.

If you are living in a Kutcha house, the best things to do is to move an open area where there are no trees, electric or telephone wires.

If outdoors

Move into the open, away from buildings, streetlights and utility wires. Once in the open stay there until the shaking stops.

If your home is badly damaged, you will have to leave, collect water, food, medicine, other essential items and important documents before leaving.

Avoid places where there are loose electrical wires and do not touch metal objects that are in touch with the loose wires.

Do not re-enter damaged buildings and stay away from badly damaged structures.

If in a moving vehicle

Move to clear area away from buildings, trees, overpasses, or utility wires stops and stay in the vehicle. Once the shaking has stopped, proceed with caution. Avoid bridge and ramps that might have been damaged by the quake.

After the quake

Here are few things to keep in mind after an earthquake. The caution you display in the aftermath can be essential for your personal safety.

Wear shoes/chappals to protect your feet from debris.

After the first tremor, be prepared for aftershocks. Though less intense, aftershocks cause additional damages and may bring down weakened structures. Aftershocks can occur in the first hours, days

+6, weeks or even month after the quake.

Check for fire hazards and use torch lights instead of candles or lanterns.

If the building you live in is in a shape after the earthquake, stay inside and listen for radio advises. If you are not certain about the damage to your building, evacuate carefully. Do not touch downed power lines.

Help injured or trapped persons. Give first aid where appropriate. Do not move seriously injured persons unless they are in immediate danger of further injury. In such cases, call for help.

Remember to help your neighbours who may require special assistance –infants, the elderly and people with disability.

Listen to a battery operated radio for latest emergency information

Stay out of damaged buildings.

Return home only when authorities say it is safe. Clean up spilled medicines, bleaches or gasoline or other flammable liquids immediately. Leave the area if you smell gas or fumes from other chemicals. Open closet and cupboard doors cautiously.

If you smell gas or hear hissing noise, open windows and quickly leave the building. Turn off the switch and top of the gas cylinder.

Look for electrical damages – if you see sparks, broken wires or if you smell burning of amber, turn off electricity at the main fuse box. If you have to step in water to get to the fuse box, call an electrician first for advice.

Check sewage and water line damage. If you suspect sewage lines are damaged, avoid using the toilets. If water pipes are damaged, avoid using water from the tap.

Use the telephone only for emergency calls. SMS is the best alternative medium to establish contact.

In case family members separated from one another during an earthquake (a real possibility during the day when adult are at work and children are at school), develop a plan for reuniting after the disaster. Ask an out of state /district relative or friend to serve as the “family contact”. Make sure everyone in the family knows the name, address and telephone number(s) of contact person(s).

b) Cyclone

Do's	Don'ts
Listen to the Radio/TV / Public address system for advance information and advice	Do not go outside during a lull in the storm
Allow considerable margin for safety	Be away from fallen power lines, damaged bridges and structure
A cyclone may change direction, speed or intensive within a few hours, so stay tuned to radio / TV for updated information	Do not go for sight seeing

Close large windows to prevent from shattering.	
Move to the nearest shelter or vacate the areas as ordered by the appropriate Government agency	
Stay indoors and take shelter in the stringest part of the house /society.	
Open windows from the sheltered side of the house if the roof begins to lift	
Find shelter if you are caught out in the open	
If you have to evacuate, do not return until advised.	

c) Heat wave

Do's	Don'ts
Listen to the Radio/TV / Public address system for advance information and advice	Avoid standing under direct sun.
Finish the work in the morning or leave it to the evening	Avoid Long drives.
Drink sufficient water and take food	
Keep your head away from the direct heat; Use Clothes, Cap, Umbrella or Glasses.	
Keep/stock water with you.	
Wear light dress.	

d) Fire accident

HIGH-RISE FIRES

- Calmly leave the apartment, closing the door behind you. Remember the keys
- Pull the fire alarm near the closest exit, if available, or raise an alarm by warning others.
- Leave the building by the stairs
- Never take the elevator during fire

If the exit is blocked by smoke or fire:

- Leave the door closed but do not lock it.
- To keep the smoke out, put a wet towel in the space at the bottom of the door

- Call the emergency fire service number and tell them your apartment number and let them know you are trapped by smoke and fire. It is important that you listen and do what they tell you.
- Stay calm and wait for someone to rescue you.
- If there is no smoke in the hallway, leave and close the door. Go directly to the stairs to leave. Never use the elevator.

If smoke is in your apartment

- Stay low to the floor under the smoke
- Call the Fire Emergency Number which should be pasted near your telephone along with police and other emergency services and let them know that you are trapped by smoke.
- If you have a balcony and there is no fire below it, go out.
- If there is no fire below, go to the window and open it. Stay near the open window.
- Hang a bed sheet, towel or blanket out of the window to let people know that you are there and need help
- Be calm and wait for someone to rescue you.

KITCHEN FIRES

It is important to know what kind of stove or cooking oven you have in your home – gas, electric, and kerosene or where firewood is used. The stove is the No.1 cause of fire hazards in your kitchen and can cause fires, which may destroy the entire house, especially in rural areas where there are thatched roof or other inflammable materials like straw kept near the kitchen. For electric and gas stoves ensure that the switch or the gas valve is switched off/turned off immediately after the cooking is over. An electric burner remains hot and until it cools off, it can be very dangerous. The oven using wood can be dangerous because burning embers remain. When lighting the fire on a wooden fuel oven, keep a cover on the top while lighting the oven so that sparks do not fly to the thatched roof. After the cooking is over, ensure that the remaining fire is extinguished off by sprinkling water if no adult remains in the kitchen after the cooking. Do not keep any inflammable article like kerosene near the kitchen fire.

Important Do's in the kitchen:

- Do have an adult always present when cooking is going on the kitchen. Children should not be allowed alone.
- Do keep hair tied back and do not wear synthetic clothes when you are cooking
- Do make sure that the curtains on the window near the stove are tied back and will not blow on to the flame or burner.

- Do check to make sure that the gas burner is turned off immediately if the fire is not ignited and also switched off immediately after cooking
- Do turn panhandles to the centre of the stove and put them out of touch of the children in the house. Do ensure that the floor is always dry so that you do not slip and fall on the fire.
- Do keep matches out of the reach of children.

Important Don'ts:

- Don't put towels, or dishrags near a stove burner
- Don't wear loose fitting clothes when you cook and don't reach across the top of the stove when you are cooking
- Don't put things in the cabinets or shelves above the stove. Young children may try to reach them and accidentally start the burners, start a fire, catch on fire
- Don't store spray cans or cans carrying inflammable items near the stove
- Don't let small children near an open oven door. They can be burnt by the heat or by falling onto the door or into the oven.
- Don't lean against the stove to keep warm.
- Don't use towels as potholders. They may catch on fire
- Don't overload an electrical outlet with several appliances or extension cords. The cords or plugs may overheat and cause a fire.
- Don't use water to put out a grease fire. ONLY use baking soda, salt, or a tight lid. Always keep a box of baking soda near the stove.
- Don't use radios or other small appliances (mixers, blenders) near the sink.

COMMON TIPS:

- Do keep the phone number of the Fire Service near the telephone and ensure that everyone in the family knows the number
- Do keep matches and lighters away from children
- Do sleep with your bed room closed to prevent the spread of fire
- You should never run if your clothes are on fire and that you should "STOP-DROP-ROLL".

e) Flood

Do's	Don'ts
Listen to the Radio/TV/Public Address System for advance information & advice	Do not enter flood waters on foot if you can avoid it
Disconnect all electrical appliances and move all valuable personal and household goods and clothing out of reach of floodwater, if you are warned or if you suspect that flood waters may reach the house.	Never wander around a flooded area
Move vehicles and movable goods to the highest ground nearby.	Do not allow children to play in or near flood waters

Turn off electricity, gas if you have to leave the house	Do not drive into water or unknown under current
Lock all outside doors and windows if you have to leave the house	Do not consume food or drink water affected by floodwater
If you have to evacuate, do not return until advised	

f) Lightning & Thunderstorm

Lightning claims quite a few lives and injures many every year. Take these precautions during thunder-storms

- Consult an electrician for advice or lightening conductors required for your house.

If caught outdoors

- If you hear thunder 10 seconds after a lightning flash, it is only about three kilometers away. The shorter the time, the closer the lightning, so find shelter urgently
- Seek shelter in a hardtop (metal-bodied) vehicle or solid building but avoid small open structures or fabric tents.
- Never take shelter under a small group of (or single) trees
- If far from any shelter, crouch (low, feet together), preferably in a hollow, remove metal objects from head/body. Do not lie down flat but avoid being the highest object.
- If your hair stands on end or you hear 'buzzing' from nearby rocks, fences etc. move immediately. At night, a blue glow may show if an object is about to be struck.
- Do not fly kites during thunderstorms
- Do not handle fishing rods, umbrellas or metal rods etc.
- Stay away from metal poles, fences, clotheslines etc.
- Do not ride bicycles or travel on open vehicles.
- If driving slow down or park away from trees, power lines, stay inside metal bodied (hard top) vehicles or in a pucca building but do not touch any metal sections.
- If in water, leave the water immediately
- If in water, leave the water immediately.
- If on a boat, go ashore to a shelter as soon as possible.
- Be sure the mast and stays of the boat are adequately secured.

If you are indoors:

- Before the storm arrives, disconnect external aerial and power leads to radios and television sets. Disconnect computer modems and power leads.
- Draw all curtains and keep clear of windows, electrical appliances, pipes and other metal fixtures (e.g. do not use the bath, shower, hand basin or other electric equipments).

- Avoid the use of fixed telephones. In emergencies, make brief calls (do not touch any metal, brick or concrete) and do not stand bare foot on concrete or tiled floors.

Annexures:

Telephone Numbers

Ward No	NAME OF THE CORPORATOR	TEL No
1	CHITTA RANJANA DAS	9937021009
2	ITISHREE BEHERA	9040433429
3	SEBATI MAJHI	8895578594
4	GIRIBALA BEHERA	9437607120
5	SUPRIYA ROUT	9438535767
6	SANJUKTA SAHU	9777609261
7	RANJITA BISWAL	9861766698
8	NAMITA BARIK	9937111476
9	BIKASH RANJAN BEHERA	9437163821
10	GYANA RANJAN SWAIN	9338746230
11	BIJAYA DALEI	9437541939
12	SIBA PRASAD DALAI	9778386030
13	PADMA BHUYAN	9692654333
14	ANJUSHREE JENA	9861017068
15	USHARANI SAHU	9861869334
16	RAMJAN KHAN	9338058629
17	A. SREEDEVI	9437189335
18	ARUN KUMAR SETHI	9778092799
19	CHARULATA SAHOO	9437273086
20	AJAYA SAHOO	9937542047
21	GOURI DAS	9861248308
22	ANITA NAYAK	9861170008
23	SK. SHAMIM ULLAH	9337416929
24	RANJAN KUMAR BISWAL	9437227149
25	PARUL JAISWAL	9040856512
26	KANCHAN DAS	9938137778
27	ITISHREE DAS (9861329448)	9437272863
28	BAISALI BEHERA	9776514199
29	MANJULATA PRUSTY	9861181512
30	NAMITA DAS	9861273445
31	BIJAY KUMAR SAHOO	9937074955
32	TAPOI DEI @ SETHI	9438693755
33	MANOJ KUMAR SETHY	9861039500
34	NAMITA MANJARI SAHOO	8895392481
35	DIPALIBALA BHUYAN	9778199228
36	AJAYA KUMAR BARIK (Dy. Mayor)	9437024699

37	DHARMANANDA PATRA	9437030485
38	ANIL NILADRI	7735355824
39	SULOCHANA SETHY	9438114414
40	JAYADEV JENA	8895582922
41	HEMANTA KUMAR BEHERA	9861286401
42	CHIRANJAYA SAHOO	9437163460
43	PRAMILA MOHANTY	9437228159
44	CHITRA KHUNTIA	9861085514
45	MEENAKSHEE BEHERA (MAYOR)	7735633893
46	PRALAYA BEURA	9438174886
47	KABITA KHANDAI	9238628011
48	NIROD CHANDRA PANDA	9437512096
49	DAYANIDHI NAYAK	9439495254
50	DIPTY PRANGYA MOHANTY	9437922721
51	MAMATA BEHERA	9861939964
52	HRUSIKESH PRADHAN	9437034404
53	PRADEEP KUMAR SAMANTARAY	9437226098
54	SUREKHA SAMANTARAY	9937052053
55	BAIDESWAR PANDA	9937349399
56	SANJAYA KUMAR BARAL	9777952830
57	LALIT SEKHAR NAYAK	9437314895
58	RAJKUMARI SWAIN	9437036991
59	PRAMOD KUMAR MOHAPATRA	9861039746

WARD NO.	NAME OF THE TAX COLLECTOR	CONTACT NO
1	KRUSHNA CHANDRA ADHIKARI	9777649094
2	KRUSHNA CHANDRA ADHIKARI	9777649094
3	HIMANSU SEKHAR SAHOO	9853152129
4	HIMANSU SEKHAR SAHOO	9853152129
5	KRUSHNA CHANDRA ADHIKARI	9777649094
6	KRUSHNA CHANDRA ADHIKARI	9777649094
7	KRUSHNA CHANDRA ADHIKARI	9777649094
8	BABULIDHARA NAYAK	9861278667
9	BABULIDHARA NAYAK	9861278667
	RABINDRA KUMAR PATTNAIK	9937175383
10	NIRMAL CHANDRA DAS	9853122999
11	BIBHUTI BHUSAN PARIDA	9853534253
	SUKANTA PRADHAN	9238687604
12	NIRMAL CHANDRA DAS	9853122999
	BIBHUTI BHUSAN PARIDA	9853534253
13	BISWARANJAN RAY	9438614902
14	KISHORE CHANDRA MALLICK	8763423627

15	SK JAHAR ALI	9437547173
	RABINDRA KUMAR PATTNAIK	9937175383
16	RABINDRA KUMAR PATTNAIK	9937175383
17	SK JAHAR ALI	9437547173
18	BIMBADHAR NAYAK	9776786078
19	BIRANCHI NARAYANA BEHERA	9861351733
20	SUKANTA PRADHAN	9238687604
21	SUKANTA PRADHAN	9238687604
	BIMBADHAR NAYAK	9776786078
22	BIRANCHI NARAYANA BEHERA	9861351733
	BABULIDHARA NAYAK	9861278667
23	BIRANCHI NARAYANA BEHERA	9861351733
24	BABULIDHARA NAYAK	9861278667
25	KEDAR NATH TARAI	9938468951
26	TAPAS KUMAR SINHA	9338402507
	SUKANTA PRADHAN	9238687604
27	BABULIDHARA NAYAK	9861278667
	TAPAS KUMAR SINHA	9338402507
	PRAFULLA CHANDRA BEHERA	9937535908
28	TAPAS KUMAR SINHA	9338402507
29	PRAFULLA CHANDRA BEHERA	9937535908
30	TAPAS KUMAR SINHA	9338402507
	PRAFULLA CHANDRA BEHERA	9937535908
31	SUBASH CHANDRA DAS	9439373432
32	SUBASH CHANDRA DAS	9439373432
	NIHAR RANJAN MOHANTY	9853286705
33	NIHAR RANJAN MOHANTY	9853286705
	RABINARAYAN DASH	9937555789
34	RABINARAYAN DASH	9937555789
35	SANTOSH CHANDRA PATTNAIK	9439621006
36	PRAFULLA CHANDRA MOHANTY	9937364591
37	PRAFULLA CHANDRA MOHANTY	9937364591
38	PRAFULLA CHANDRA MOHANTY	9937364591
39	PRAFULLA CHANDRA MOHANTY	9937364591
	SUBASH CHANDRA DAS	9439373432
40	PRAVAS RANJAN BARIK	7504444495
	SUBASH CHANDRA DAS	9439373432
41	PRAVAS RANJAN BARIK	7504444495
42	SUDHANSU SEKHAR DAS	9338505055
43	SUDHANSU SEKHAR DAS	9338505055

44	RAJ KISHORE MANGAL	9853148855
45	RAJ KISHORE MANGAL	9853148855
46	BIBHUTI BHUSAN SWAIN	9861284949
47	BIBHUTI BHUSAN SWAIN	9861284949
	SUDHANSU SEKHAR DAS	9338505055
48	HAREKRUSHNA BHUTIA	9938875738
49	HAREKRUSHNA BHUTIA	9938875738
50	BABAJI CHARAN ROUT	9658160207
	PRABODHA KUMAR BARAL	9437442350
51	BABAJI CHARAN ROUT	9658160207
52	PRABODHA KUMAR BARAL	9437442350
53	PRABODHA KUMAR BARAL	9437442350
54	PRABHAT KUMAR PRADHAN	9238569755
55	PRABHAT KUMAR PRADHAN	9238569755
56	KAPIL JENA	9556090589
57	KAPIL JENA	9556090589
58	KAPIL JENA	9556090589
59	KAPIL JENA	9556090589

PHARMACIST	SANTOSH KUMAR BEHERA	9438279992
SANITARY INSPECTOR	ASIT DAS (34, 35, 38, 39, 40)	9938340048
SANITARY INSPECTOR	BHAGABAN LENKA (13, 23, 26)	9437225332
SANITARY INSPECTOR	BIJAY KU PATRA (41, 43, 46, 47)	9439953376
SANITARY INSPECTOR	BRAJENDRA MOHANTY (9, 10, 11, 12)	9437738306
SANITARY INSPECTOR	M BASA (44, 50, 51, 52, 53)	9556217544
SANITARY INSPECTOR	P MOHAPATRA (14, 15, 16, 25)	8895572141
SANITARY INSPECTOR	PITAMBAR MALLIK (17, 18, 19, 20)	9937111590
SANITARY INSPECTOR	PRATAP MOHANTY (1, 2, 7, 8)	9937446523
SANITARY INSPECTOR	RASANAND NATH (22, 24, 32, 33)	9937171947
SANITARY INSPECTOR	SANJAY KU BEURA (48, 49)	9338845045

SANITARY INSPECTOR	SAROJ NAYAK (31, 36, 37, 54, 55)	9439369187
SANITARY INSPECTOR	SATYABRATA SATPATHY (27, 29, 30, 45)	9437935310
SANITARY INSPECTOR	SISUPATI MALLIK (3, 4, 5, 6)	9437647183
SANITARY INSPECTOR	SUDHAKAR DAS (56, 57, 58, 59)	9439665607
SANITARY INSPECTOR	TRAILOKYA SAHOO (21, 28,42)	9438724878
FILARIA INSPECTOR	SIVAJI PARIDA	9437142608
FILARIA INSPECTOR	BASANTA KU JENA	9937764487
FILARIA INSPECTOR	BIJAY KU JENA	9437142609
FILARIA INSPECTOR	SARADA NAYAK	8895016692

PUJA Committees

Parbati Das	President, Deulasahi Puja Committee	9337382807
Dharmesh Nayak	President, Police Colony Puja Committee	9338033823
Ajay Ku Mishra	Secretary, Police Colony Puja Committee	9861104328
Malaya Dutta	President Deulasahi Sarbajanani Puja Committee	9040690162
Asish Mazumdar	Secretary, Sarbajanani Puja Committee	9853230515
Hemanta Ku Mohaty	President Srivihar Colony Puja Committee	9556692179
Biswajit Pattnaik	Secretary Srivihar Colony Puja Committee	9437284191
Amar Saha	President, Tulasipur Bangalisahi Puja Committee	9338143215
Kamal Pal	Secretary, Tulasipur Bangalisahi Puja Committee	9178375282
Chandra Sekhar Patra	President, Panchamukhi Hanuman Chhak Puja Committee	9937033706
Bhagaban Chand	President, Bidanasi Durga Puja Committee	9439741555
Tukuna Bebera	Secretary, Bidanasi Durga Puja Committee	9337265692
Subas Behera	President, Bidanasi Puja Committee	9338267232
Pravakar Sasmal	Secretary, Bidanasi Puja Committee	9692175265
Sarat Ku Rath	President, Chahata Nagar Puja Committee	9437965259
Ashok KU Nayak	Secretary, Chahata Nagar Puja Committee	9861035214
Gopalkrushna Mohanty	President, Sector-6 Puja Committee	8658708660
Nisakar Das	Secretary, Sector-6 Puja Committee	9437103184
Bimal Prasad Mishra	President, Sector-7 Puja Committee	
Dillip KU Das	Secretary, Sector-7 Puja Committee	9861968767
Sambhunath Sethy	President, Sector-8 Puja Committee	9937192283

Nityananda		
Beuria	Secretary, Sector-8 Puja Committee	9861136155
Nibas Ch Mishra	President, Sector-9, Puja Committee	9861016295
Bijay Ku Ojha	Secretary, Sector-9 Puja Committee	9439828007
Rajani Ballav Das	President, Sector-10 Puja Committee	9437271551
Arun Ku Padhi	Secretary, Sector-10 Puja Committee	7205844694
Akhay KU Deo	President, Sector-11 Puja Committee	9437019131
Maitrijit Mohanty	Secretary, Sector-11 Puja Committee	9437228467
Akhay Ku Das	President, Sector-11 Adarsa Nagar Puja Committee	

MEDIA

MEDIUM	MEDIA	ORG.	NAME	CONTACT
EMEDIA	E-MEDIA	OTV	DIPES MOHAPATRA	9338353330
EMEDIA	E-MEDIA	OTV	MATRUDUTTA MOHANTY	9777588954
EMEDIA	E-MEDIA	OTV	BIBHUTI SAHOO	9337295152
EMEDIA	E-MEDIA	OTV	MANAS MISHRA	9437282129
EMEDIA	E-MEDIA	OTV	ALOK DASH	9338669846
EMEDIA	E-MEDIA	ETV	TAPAN SWAIN	9338111323
EMEDIA	E-MEDIA	ETV	MANOJ JENA	9337271317
EMEDIA	E-MEDIA	ETV	MANAS PANDA	9437227028
EMEDIA	E-MEDIA	STV	BARSHA MADAM	9776229450
EMEDIA	E-MEDIA	KANAKA	D P KHUNTIA	9338203215
EMEDIA	E-MEDIA	NAXATRA	D R SARANGI	9853217199
EMEDIA	E-MEDIA	NAXATRA	RPASANTA SWAIN	9437276625
EMEDIA	E-MEDIA	NAXATRA	DEBI PRASANNA MOHANTY	
EMEDIA	E-MEDIA	DOOR DARSAN	BHARAT MOHARANA	
EMEDIA	E-MEDIA	DOOR DARSAN	ABHAYA KU MOHNATY	
EMEDIA	E-MEDIA	PTC/AIR	SATYA RAY	
EMEDIA	E-MEDIA	KAMYAB	PRAFULLA SATAPATHY	
EMEDIA	E-MEDIA	KAMYAB	BANINANDAN DAS	
ODIA	PRINT	SAMAJ	AMLAN BADAN PATTNAIK	9778049779
ODIA	PRINT	SAMAJ	SURENDRA PALEI	9861068441
ODIA	PRINT	SAMAJ	SUDHANSU BABU	9438842596
ODIA	PRINT	SAMAJ	SIDHARTHA BABU	7735731701
ODIA	PRINT	SAMBAD	ASIS BABU	8895166990
ODIA	PRINT	SAMBAD	SUBRAT BABU	9439612522
ODIA	PRINT	SAMBAD	MANAS BABU	9437227028
ODIA	PRINT	SAMBAD	RABI NARAYAN DASH	9937504627
ODIA	PRINT	SAMBAD	GADADHAR PANDA	9438274122
ODIA	PRINT	SAMBAD	KRISHNA BABU	9437366229
ODIA	PRINT	PRAMEYA		9437094185
ODIA	PRINT	KHABAR	BHAKTI BHUSAN MOHANTY	9338101083
ODIA	PRINT	SAMAYA	PRAFULLA MOHANTY	9439062978
ODIA	PRINT	SAMAYA	MAHES DAS	9437610435
ODIA	PRINT	DHARITRI	KANHU DALEI	9861160150
ODIA	PRINT	PRAJATANTRA	GOUTAM MOHAPATRA	9337267192

ODIA	PRINT	PRAGATIBADI	PRADIP KUMAR SAHOO	9937008985
ODIA	PRINT	NYAYABATI	BABAJI SAHOO	9437900457
ODIA	PRINT	ANUPAM BHARAT	SURESH DAS	9937166302
ODIA	PRINT	KHOLADWAR	KIRTI RANJAN BISWAL	9338105441
ODIA	PRINT	DHWANI PRATIDWANI	LILIMA BISWAL	
ODIA	PRINT	UTKAL MAIL	AJAYA KUMAR DASH	9861439990
ODIA	PRINT	KRANTI DHARA	BIBHUTI BHUSAN JENA	
ODIA	PRINT	SURYA PRAVA	BICHITRA NANDA SETHI	9437376157
ODIA	PRINT	SAMBAD KALIKA	ALOK NAYAK	9337890363
ODIA	PRINT	MATRUBHASA	BIBHUTI DASH	9437208890
ODIA	PRINT	AMA Khabar	JAIUDIN SARIF	9337332179
ODIA	PRINT	AMARIKATHA	DAMBARU BEHERA	9853348954
ODIA	PRINT	AMARIKATHA	TAPAN MOHANTY	9853215030
ODIA	PRINT	SUBMARG	DEBU CHATERJEE	9238526581
ODIA	PRINT	BARTMAN SAMACHAR	AJIBUR REHMAN	
ODIA	PRINT	BIKASH BARTA	BISESWAR DEY	
ODIA	PRINT	BIKASH BARTA	RAHUL DEY	0671-2301401
ODIA	PRINT	ODISHA BHASKAR	AMARESH SAHOO	9861087063
ODIA	PRINT	DINALIPI	SURESH SWAIN	9438387374
ODIA	PRINT	ORISSA EXPRESS	PRAMOD BEHERA	9438254550
ODIA	PRINT	PARYABEKHYAKA	AJAYA KU PALAI	9778423298
ODIA	PRINT	PRABHA	JAYANTA KU BALA	0671-2307806
ODIA	PRINT	ARAMBHA	GAYATRI BISWAL	9861696758
ODIA	PRINT	KALINGA MAIL	RABINDRA PADHI	9238877038
ODIA	PRINT	TRIRANGA	AKSHAYA RANJAN DAS	9338432636
ENGLISH	PRINT	ORISSA TODAY	SAROJ PATTNAIK	
ENGLISH	PRINT	TIMES OF INDIA	BINITA JAISWAL	9437310457
ENGLISH	PRINT	THE HINDU	PRADEEP DAS	9438411622
ENGLISH	PRINT	THE TELEGRAPH	L N PATTNAIK	9437008719
ENGLISH	PRINT	NEW INDIAN EXPRESS	S N AGRAGAMI	9238003528
ENGLISH	PRINT	THE PIONEER	SUMAN MOHANTY	9238502681
ENGLISH	PRINT	ORISSA TIMES	PRABIR SARKAR	9338431919
ENGLISH	PRINT	KALINGA BHARATI	JAYANTA KU DAS	9437082325
ENGLISH	PRINT	EPA	LALIT KU DASH	9338213390
ENGLISH	PRINT	TELEGRAM	LAL MOHAN PATTNAIK	9338057437

Slum Improvement Cell

	Slum Improvement Officer		2312663	9437197650
	Statically Asst.	Saroj Kumar Barik		9937028365
	Junior Asst. cum H.A	Santosh Ku. Barik,		9337166006
	Community Organizer (Sr)	Umesh Ch. Sahoo		8895425807
	Community Organizer	MahaswetaMohapatra		9938306040

	Do	Sudipta Mohanty		9439495171
	Do	Saswati Swain		9692612264
	Do	Sunita Sahoo		9778813110
	Do	Mamata Rout		7205169814
	Do	Swarna P. Mangaraj		9861493393
	Do	Laxmipriya Jena		9937869257
	Do	Pranjnya Mishra		9853253263
	Do	Mandakini Sethy		9778502695
	Do	Basanti Panda		9861381242
	Do	Swarna M. Pradhan		9776474400
	Do	Swagatika P. Lenka		8763372655
	Do	Rajashree Mohanty		9439799539
	Do	Arghya P. Mohanty		9937710538
	Do	Sabana Begum		7377430823
	Do	Sangita P. Lenka		8763980986
	Do	Tapaswini Nath		9692102010
	Do	Ranjan Ku. Behera		9937772250
	Do	Subhra P. Mishra		9439642490
	Do	Rasmita Nanda		9237598870
	Do	Sunita Mohapatra		8984804682
	Do	Biswamaitri Mishra		7894958080
	Do	Jahnabi Nanda		9778641442
	Do	Suchismita Satapathy		7894378981
	Do	Saghamitra Rout		9861516463
	Do	Sunanda Prusty		8338998725
	Smt. Jyotsna Ray	CDPO-I		9777631670
		CDPO-II		9853160695
Finance Section				
	Finance Officer	Ramakanta Nanda		9438296128
	Accountant	Sushil Kumar Kar		9583211184
	Bibhuti Bhusan Sahoo	MIS Programmer		9439650350
	Susil Ku. Rout	Computer Operator S.I.O. Section		9437282227
	Prakash Panda	Commissioner's Office		9437277457
	Pravat Behera	Engineering Wing		9861277278
	Manoj Sahoo,	Engineering Wing		9861491787
	Rabindra Sahoo,	Engineering Wing		9778496367
	Ranjan Sahoo	Mayor Office		9776007220
	Tapan Panda	Health Section		9777064371
	Prana K. Bhoi,	Establishment Section		9556357855
	Anuj Nayak	Health Section		9090446055
	Basanta Behera,	Account Section		9853503696
	Prahallad Behera	Account Section		9437489222
Cuttack Development Authority				
		Vice Chairman, CDA	2312299	

		Secretary, CDA	2315594	
		Planning Member	2312325	
CESU				
		S.E.		
		Executive Engineer, City Distribution-1		9437011302
		Executive Engineer, City Distribution-2		9338063401
		Cuttack Electrical Division, Jobra		

Annexure-3

List of Sanitary Inspectors & F.I, M.I

SL No	Name Of the Sanity Inspectors	Design.	Phone No.	C M C Ward	Private Ward	Additional Charge
1	Mr.Rasananda Nath	SI	Ph.9937171947	22,24	32,33	H.Q & P.H. Work
2	Mr. Saroj Kumar Nayak	SI	Ph.9439369187 Ph.9090907919	31	36,54, 55	
3	Mr.Trailokya Sahoo	SI	Ph.9438724878	21,28	42	Vehicle I/c
4	Mr. Bhagaban Lenka	SI	Ph.9437225332	13,23	26	Squard AMC & Deweeding
5	Mr.Maheswara Basa	SI	Ph.9556217544	44	50,51,52, 53	Dog Squard
6	Mr. Asit Kumar Das	SI	Ph. 9938340048	35	38, 39, 40	SCB Mch.
7	Mr.Pitambar Mallick	SI	Ph. 9937111590	18	17,20	
8	Mr. Patitapabana Mohapatra	SI	Ph. 8895572141	14,15,25	16	
9	Mr. Brajendra Mohanty	SI	Ph. 9437738306	9,11,19	10,12	High Court & Sishubhawan
10	Mr. Satyabrata Satpathy	SI	Ph.9437935310	27	29, 30, 45	Crematorium
11	Mr. Pratap Mohanty	SI	Ph.9937446523	8	1, 2, 7	
12	Mr.Bijaya Ku. Patra	SI	Ph. 9439953376	-	41, 43, 46, 47	
13	Mr. Sudhakar Das	SI	Ph. 9439665607	34	37	
14	Mr. Sisupati Mallick	SI	Ph. 9437647183	-	3, 4, 5, 6	
15	Mr. Sanjaya Ku.Beura	SI	Ph. 9338845045	-	48, 49	
16	Mr. Manoranjan Mohanty	SI	Ph. 9439333453		56,57,58, 59	
17	Mr. Sibaji Parida	FI	Ph. 9437142608	1 to 17		
18	Mr. Babuli Dandpat	FI	Ph. 9437268297	18 to 30		
19	Mr. Basant Ku. Jena	MI	Ph. 9937764487	31 to 39,42,43,48,49		
20	Mr. Bijay Ku. Jena	FI	Ph. 9437142609	40,41,44 to 47,50 - 59		

WARDWISE DISTRIBUTION OF ANGANWADI WORKERS(AWW) WITH THEIR CONTACT NO.S
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Sl. No.	Ward No.	Population	Name of the Center	Name of the Facilitator (AWW)
1	1	4834	Bidanasi Municipal High School Bidanasi	Ranjita Parida 9937783744
2		5122	Seba Sikhya Niketan, Bidanasi	Manorama Jena 8018656542
3	2	4649	Seba Sikhya Niketan , Bidanasi	Sujata Das 9583276589
4		4381	Godabarisha Santha Sanskrit Vidyalaya, Bidanasi	Mitarani Behera 9583883603
5	3	4481	Bidyadharpur Primary School, Bidyadharpur	Minarva Rout 9861307938
6		5106	Rath Sahoo Pry School, Sec-13, CDA	Sasmita Rout 9338187562
7	4	4470	Saraswati Sisu Vidyamandir, Sec-9, CDA	Jyotshnamayee Panigrahi 9237006367
8		4348	Little Angel Manteswari Primary School, CDA, Sec-11	Sarojini Murmu 9658277196
9	5	3665	Markat Nagar Pry. School-Sec-7, CDA	Chhita Hembrum 97772675569
10		3625	Urban Resource Centre- Sec-7, CDA	Chameli Mohanty 8093142995
11		4084	Durga Mandap, Sec-7, CDA	Puspalata Nayak 9937611773
12	6	3527	DAV School, Sec-7, CDA	Sarojini Barik 9778509472
13		3983	Markat Nagar Pry. School, Sec-6, CDA	Ranjitabala Mantri 9338681552
14		3440	Executive Engineering Office, CDA, Sec-6	Sumitra Swain 9853794231
15	7	3807	Police Colony High School, Tulasipur	Pinki Behera9437540257
16		3263	Police Colony Pry. School, Tulasipur	Kamala Nayak (Helper)

				8763598350
17		3298	Deula Sahi UGME School, Refugee Colony	Afifun Nisha 9861609147
18	8	4795	Tulasipur Nodal UGME School, Matha Sahi	Sukanti Sahoo 9556352937
19		4574	Tulasipur Nodal UGME School, Matha Sahi	Bimala Dei 8984661668
20	9	3588	Sanat Nalini Girls High School, Shelter Chhak	Kamini Kumari Das 9337432205
21		3287	Bapuji Sikhya Niketan, Shelter Chhak	Kumudini Das 9337312618
22		3508	Raghunath Jew High School, Deula sahi	Menaka Swain 9668691681
23	10	4212	Mansinghpatna High School, Mansinghpatna	Pravasini Nanda 9439748097
24		4790	Ramgarh Pry. School, Ramgarh	Jyotshnarani Singh 6713201001
25		7358	Mansinghpatna Pry. School, Mansinghpatna	Madhusmita Parida 9337434332
26	11	5075	Chandin Chowk Pry School, Chandin Chowk	Rasmita Singh 9337389797
27		4499	Anathashram Pry. School, Chandin Chowk	Jyotshna Singh 955690972
28	12	3895	Mansinghpatna High School, Mansinghpatna	Sanjukta Behera 9338338840
29		4086	Dagarpada UGME School, Dagarpada	Pravashree Behera 9090443073
30		4100	Jagannath Pathagar, Club House , Alisabazar	Kausari Begum 9583179092
31	13	3630	Lalbag Pry. School, Chandin Chowk	Sandyarani Singh 9861681398
32		3525	Govt. Girls High School, Kazibazar	Dhaneswari Majhi 7377359082

33		3373	Mehendipur UGME School, Mehendipur	Sanjita Khatun 7539035110
34	14	3069	Lalamatha UGME School, Sekhbazar	Sabita Sahoo 9090170824
35		3369	Bhakta Madhu Bidyapitha, Kazibazar	Hamida Khatun 7539025110
36		4486	Urdu Training School, Buxibazar	Chhenurani Chaterjee 9439271338
37	15	4926	Reserve Police Line Pry School, Buxibazar	N.Rajshree 7873701085
38		4443	Mission Pry School, KVK Road	Sanjukta Behera 8658809828
39		4242	Cantonment Pry. School, Cantonment Road	Manik Hembrum 9238508451
40	16	5052	Tulasipur Govt. Hish School, Gorakabar	Mamata Das 9439485581
41		4768	Gorakabar Pry School, Gorakabar	Saudamini Das9437440820
42	17	4770	Gandhi Bidyapitha, Mamudi Sahi, Pattapole Chhak	Janaki Pal 9861557153
43		5107	Kalinga Telugu School , Pattapole Chhak	Debaki Singh 7205855130
44	18	4704	P.M. Academy, Tinikonja Bagicha	Bhagyabati Behera 9090656827
45		4859	Sutahat UGME School, Sutahat	Prabhati Pal 9692229684
46	19	4908	Andhra Balakbalika Pry School, Buxibazar	Sasmita Behera 9776764560
47		4308	Odia Bazar Muslim Girls Pry. School, Odia bazaar	Harapriya Singh 9439796787
48		3555	Halima Urdu Pry. School, Buxibazar	Asharani Samal 9238964435
49	20	4780	Practicing Girls High School, RNT	Minati Behera 8018300377

			Colony	
50		3844	Bakharabad Pry. School, Bakharabad	Gitanjali Nayak 9777883209
51	21	4236	Municipal Model High School, Choudhury Bazar	Urmila Singh 8984075380
52		3766	Matha Pry. School , Matha Sahi	Manorama Mishra 9861072769
53	22	4534	Meria Bazar Pry. School, Meria Bazar	Anita Samal 9438842691
54		4035	Sayed Seminary High School, Seminary Chhak	Puspa Managaraj 9861653350
55		3872	Sayed Seminary Pry. School, Seminary Chhak	Suprava Roul 8895062130
56	23	4767	Dagagha Bazar Pry School, Kathagada Sahi	Swapnarani Singh 7205172553
57		4479	Kadamrasool Urdu Pry. School, Kadam Rasool	Rukmani Dei 8908407644
58	24	4441	Haripur Pry. School, Haripur	Pravasini Das 9861413035
59		4057	Samanta Sahi Anganwadi Centre, Samantsahi	Sanjibani Mulia 9861431144
60	25	4608	Mahamaya U.P School, Kesharpur	Bandana Sahoo 9853454466
61		3797	Bastari Thakur Pry.School, Badhei Sahi	Subarnalata Sahoo 9938641690
62		3852	Balibhagat Pry. School, Bepari Sahi	Archana Behera 9658148894
63	26	3835	Jhola Sahi Pry. School, Jhola Sahi	Sailabala Nayak 9658628909
64		3271	Nima Sahi, Jhola Sahi Pry. School, Nima Sahi	Pramila Behera 9583343277
65		3204	Darghabazar Pry. School, Darghabazar	Farzana Begum 8260199271

66	27	4179	Rausapatna Pry. School, Rausapatna	Anita Paramanik 9338549213
67		4434	Nima Shai, Jhola Sahi Pry. School, Nima Sahi	Rajashree Mohapatra9337742282
68		3572	Rausa Patna Pry.School, Old Rausapatna	Nagin Sen 9853005447
69	28	4018	Nrusinghanath Matha, Telenga Bazar	Subhashree Routray 7381690262
70		3621	Rajabagicha UP School, Rajabagicha	Sukanti Mohanty 9853853282
71		3802	Ramakrushna Cottage , Bangali Sahi	Basanti Mohapatra 9337686760
72	29	4693	Pithapur Pry School, Pithapur	Bindurani Jena 9861518880
73		7372	Labour Colony UGME School, Rajabagicha	Swopnanjali Tripathy 9439368924
74	30	4151	Rajabagicha Pry. School, Rajabagicha	Arati Samal 7735243897
75		3668	Rajabagicha Police Pry. School , Rajabagicha	Basantakumari Biswal 9938331850
76		3337	Bamphi Sahi UGME School, Bamphi Sahi	Sanjukta Mohanty 9439938692
77	31	5351	Mali Sahi Pry. School, Mali Sahi	Saudamini Nayak 9861693555
78		5410	Ranihat High School, Ranihat	Alam R. Begum 9853874060
79	32	5249	Beleswar Pry. School, Ranihat	Pravati Behera 9776113120
80		5083	Secondary Board High School, B.K.Road	Snehalata Behera 9778850434
81	33	4373	Municipal Girls High School, Thoria Sahi	Dukhini Sahoo 9777795704
82		3211	Keshapur Urdu Pry.School, Kesharpur	Chandana Sahoo 9776430100
83		3529	Gamadhia Pry. School, Gamhadia	Sabita Sahu 9853292389

84	34	5566	Nilakantha Pry. School, Kathagola	Yosthnarani Kahali 9853081526
85		4938	Mata Saraswati Devi Pry. School, Nuapatna	Baijayanti Samal 9938384719
86	35	3544	OSEB ME School, Near BOSE, Mangalabag	Anusaya Dalai 8763259222
87		4023	BOSE Eng. College, Medical Campus	Rasmirekha Sahoo 9337742555
88		3437	Ranihat High School, Ranihat	Gitarani Pradhan 9040778201
89	36	4245	Balabhadrapur UGME School, Balabhadrapur	Snehalata Dei 9853156030
90		3906	Chhatra Bazar High School, Sankarpur	Sabita Kumari Das 9337777092
91	37	4065	Bisinabar Pry. School, Bisinabar	Kakali Mitra 9337269158
92		4101	Dhia Sahi Pry. School, Sankarpur Dhia Sahi	Sanghamitra Mohanty 9938244322
93		3195	Sankarpur Nodal Pry. School, Sankarpur	Namita Swain 8658800882
94	38	3602	Rly. M.E School, Station Bazar	Suchitra Barik 9668179575
95		3862	Revenshaw University, College Square	Laxmipriya Lenka 9556721455
96	39	5151	Budhimangala Bidyapitha, Near Bijaya Hotel, College Square	Jhilli Behera 9777156572
97		5102	Muradkhan Pantna Primary School, Muradkhan Pantna	Manasi Patra 7381161405
98	40	3908	Saraswati Sisu Bidyamandir, College Square	Sandhya Mohanty 9692029477
99		3313	Jobra Urdu Pry. School, Jobra	Annapurna Dalai 9777080144

100	41	4791	Jobra Municipal High School, Jobra	Minati Behera 9668803952
101		4717	Muradkhan Patna Harijan Pry. School, Jobra	Tehera Begum 9861401073
102	42	4207	Gunadola Pry. School, Matha Sahi, Chauliaganj	Mina Sahoo 8908385591
103		3383	Chauliaganj U.P School, Dhoba Shai, Chauliaganj	Laxmipriya Sahoo 9778251201
104		3198	Govt. Girls High School , Chauliaganj Thatari sahi	Sobhabati Sahoo 9692121730
105	43	4232	Biju Pattnaik Memorail Hall, Aprana Nagar	Gitarani Sarangi 9237039981
106		3717	Mahila Sameet Community Centre, Sidheswar Chhak, Aprana Nagar	Annapurna Mohanty 9439797537
107		3259	Sitadevi Joglekar Pry. School, Aprana Nagar	Manashi Chahataray 9090837784
108	44	4372	Badambadi New Colony High School, Badambadi	Ambika Sethy 9556589923
109		3703	Badambadi Spl. Pry. School, Badambadi	Ashajita Behera 9438234383
110	45	3833	Utkalmani Smaraki Bidyapitha, Khannagar	Anamika Behera 9556507762
111		4073	Bighneswar Club, Ring Road, Khannagar	Sifiya Begum 9338338768
112		3449	Nayachowk Pry. School, Nayachowk	Anjali Behera 9439467333
113	46	5181	Kamalakanta Bidyapitha, Ring Road, Sikharpur	Jhilli Swain 9853464547

114		4941	Sikharpur Pry. School (Rly Gate School), Sikharpur	Kalpna Mohanty 9178682389
115	47	4537	Mahanadi Vihar UGME School , Mahanadi Vihar	Rina Dalai 9337284668
116		4439	Bahuti Pry. School , Aparna Nagar	Pratima Das 7873145814
117		3356	6th OSAP High School OMP Chhak, OMP Chhak	Premalata Sahoo 9178620097
118	48	3834	Bubampur Pry. School, Bhuabampur	Sajukta Das 9337270024
119		3477	Saraswati Bidyamandir, Jagatpur	Swarnalata Das 9937589600
120		3758	Jagatpur Pry. School, Jagatpur	Sandhyarani Mohanty 9338467223
121	49	4490	Nankar Pry. School, Nankar, Jagatpur	Pranati Das 9692773452
122		4209	Tarol UGME School, Tarol, Jagatpur	Sangita Sahoo 9692099800
123		3624	Immamnagar Nodal UP School, Immamnagar	Tilottama Sethy 9853087781
124	50	4266	Madhusudan Pry. School, Labour Colony, Nuapada	Pranati Mohapatra 9778681925
125		3763	Nuapada Pry. School, Nuapada	Lalita Das 8763476020
126		4550	Khannagar High School, Govt. Press Chhak, Khannagar	Jharana Mallick 8763088607
127	51	3738	Poparada Pry. School, Poparada	Chandrika Swain 8280128162
128		3563	Tinigharia Pry. School , Tinigharia	Sakuntala Das 7205704340
129		3579	Nuapada Pry. School, Nuapada	Damayanti Das 8763811469
130	52	4504	Rajendra Nagar Pry. School, Rajendra Nagar	Bijaylaxmi Sethy 9439100957

131		3982	Kazidiha Pry. School, Kazidiha	Sabita Das 9437951805
132		3759	Maa Mangala Community Centre, Rajendra Nagar	Pravashini Das 9238859496
133	53	4235	Satsangh Nodal UP School, Kalyani Nagar	Kanchan Sahoo 9776971023
134		3910	Anganwadi Centre, Andarpur	Manju Swain 9937120279
135	54	3081	Gandhipali Pry. School , Gandipalli	Minaskhi Rout 9938640319
136		4054	Nehru Ucha Bidyapitha, Nehrupalli	Sakuntala Nayak 9937625072
137		3621	Sadar Block Pry.School , Potapokhari	Sarada Pati 9853262844
138	55	3188	Kahneipur Pry. School, Kahneipur	Manadakini Panda 9439707356
139		3516	Bidyadharpur Pry.School, Bidyadharpur	Snehalata Moharana 9439082856
140		3923	CRRI High School, CRRI. Bidyadharpur	Hemamanjari Moharana 9861625278
141	56	5196	Subhadrapur Pry. School, Subhadrapur	Sandhyarani Barik 9438748108
142		4010	Acharya Harihar Bidyapitha, Uttamapur	Saraswati Samal 9853576424
143	57	4460	Gopalpur Prathamika Bidyalaya, Gopalpur	Dhirabala Nayak 9937040692
144		4359	Maa Tarinee Bidyapitha, Gopalpur	Kiranbala Swain 8895460918
145	58	3543	Bhanapur High School, Bhanapur	Binati Moharana8908591524
146		3150	Pratap Nagari Pry. School, Dhakulei, Pratap Nagari	Kanakalata Jena 8260921672
147		3493	Nuagarh Kuda Sahi, Pry. School, Nuagarh Kuda	Jayanti Mohanty 9337474293

			Sahi	
148	59	3152	Gandhi Smruti Bidyapitha, Telenga Pentha	Sabitri Behera 9178152365
149		3474	Kacharamala Pry. School, Lakheswara	Smitanjali Nayak 9040029540

Annexure-5

Wardwise Name of Tax Collectors with Contact No.s

WARD NO.	NAME OF THE TAX COLLECTOR	CONTACT NO
1	Krushna Chandra Adhikari	9777649094
2	Krushna Chandra Adhikari	9777649094
3	Himansu Sekhar Sahoo	9853152129
4	Himansu Sekhar Sahoo	9853152129
5	Krushna Chandra Adhikari	9777649094
6	Krushna Chandra Adhikari	9777649094
7	Krushna Chandra Adhikari	9777649094
8	Babulidhara Nayak	9861278667
9	Babulidhara Nayak	9861278667
	Rabindra Kumar Pattnaik	9937175383
10	Nirmal Chandra Das	9853122999
11	Bibhuti Bhusan Parida	9853534253
	Sukanta Pradhan	9238687604
12	Nirmal Chandra Das	9853122999
	Bibhuti Bhusan Parida	9853534253
13	Biswaranjan Ray	9438614902
14	Kishore Chandra Mallick	8763423627
15	Sk Jahar Ali	9437547173
	Rabindra Kumar Pattnaik	9937175383
16	Rabindra Kumar Pattnaik	9937175383
17	Sk Jahar Ali	9437547173
18	Bimbadhar Nayak	9776786078
19	Biranchi Narayana Behera	9861351733
20	Sukanta Pradhan	9238687604
21	Sukanta Pradhan	9238687604
	Bimbadhar Nayak	9776786078
22	Biranchi Narayana Behera	9861351733
	Babulidhara Nayak	9861278667
23	Biranchi Narayana Behera	9861351733
24	Babulidhara Nayak	9861278667
25	Kedar Nath Tarai	9938468951
26	Tapas Kumar Sinha	9338402507
	Sukanta Pradhan	9238687604
27	Babulidhara Nayak	9861278667
	Tapas Kumar Sinha	9338402507

	Prafulla Chandra Behera	9937535908
28	Tapas Kumar Sinha	9338402507
29	Prafulla Chandra Behera	9937535908
30	Tapas Kumar Sinha	9338402507
	Prafulla Chandra Behera	9937535908
31	Subash Chandra Das	9439373432
32	Subash Chandra Das	9439373432
	Nihar Ranjan Mohanty	9853286705
33	Nihar Ranjan Mohanty	9853286705
	Rabinarayan Dash	9937555789
34	Rabinarayan Dash	9937555789
35	Santosh Chandra Pattnaik	9439621006
36	Prafulla Chandra Mohanty	9937364591
37	Prafulla Chandra Mohanty	9937364591
38	Prafulla Chandra Mohanty	9937364591
39	Prafulla Chandra Mohanty	9937364591
	Subash Chandra Das	9439373432
40	Pravas Ranjan Barik	7504444495
	Subash Chandra Das	9439373432
41	Pravas Ranjan Barik	7504444495
42	Sudhansu Sekhar Das	9338505055
43	Sudhansu Sekhar Das	9338505055
44	Raj Kishore Mangal	9853148855
45	Raj Kishore Mangal	9853148855
46	Bibhuti Bhusan Swain	9861284949
47	Bibhuti Bhusan Swain	9861284949
	Sudhansu Sekhar Das	9338505055
48	Harekrushna Bhutia	9938875738
49	Harekrushna Bhutia	9938875738
50	Babaji Charan Rout	9658160207
	Prabodha Kumar Baral	9437442350
51	Babaji Charan Rout	9658160207
52	Prabodha Kumar Baral	9437442350
53	Prabodha Kumar Baral	9437442350
54	Prabhat Kumar Pradhan	9238569755
55	Prabhat Kumar Pradhan	9238569755
56	Kapil Jena	9556090589
57	Kapil Jena	9556090589
58	Kapil Jena	9556090589
59	Kapil Jena	9556090589

Annexure-6

Slum List s in Cuttack District

Sl.No	Ward No.	Name of Slum as per OMS	No of Pucca	No of Semi Pucca	No of Katcha	Household	Population	Category	Tenability Status
1	1	Bidanasi Gopal Sahi	112	278	25	415	1747	II	Tenable
2	1	Bidanasi Kumbhar Sahi	215	98	44	357	1422	II	Tenable
3	1	Bidanasi Dhoba Sahi	16	8	0	24	110	II	Tenable
4	1	Bidanasi Bauri Sahi	21	2	43	66	264	II	Semi-tenable
5	1	Bidanasi Municipal Colony, Nua Sahi	235	323	10	568	2339	II	Untenable
6	1	Bidanasi Bandha Tala Sahi	0	10	25	35	147	I	Untenable
7	1	Bidanasi Munda Sahi	10	58	8	76	339	II	Tenable
8	2	Dhabaleswar Gada Harijana Sahi	0	20	30	50	190	I	Untenable
9	2	Braja Bihariपुर	29	123	42	194	783	II	Untenable
10	2	Munda Sahi Cda, Sec-13	29	8	111	148	578	II	Tenable
11	2	Nua Adibasi Sahi (Bidyadhar Pur)	0	0	32	32	127	II	Untenable
12	2	Puruna Adibasi Sahi (Bidyadhar Pur)	0	0	22	22	72	II	Semi-Tenable
13	2	Kaibarta Sahi (Sandhapur)	52	57	16	125	488	II	Tenable
14	2	Judge Patha Cda Sec-12	0	50	24	74	329	II	Tenable
15	3	Bidanasi Hairanpur	0	75	13	88	377	I	Tenable
16	3	Satichaurabandha Tala Sahi	5	9	202	216	920	I	Untenable
17	3	Sati Gumpaha	0	73	22	95	366	I	Untenable
18	3	Kathajodi Vihar (A)	2	92	94	188	773	I	Untenable
19	3	Kathajodi Vihar-B	3	39	46	88	350	I	Untenable
20	3	Dobandha	0	12	38	50	206	I	Untenable
21	3	Petanaia	0	51	10	61	207	I	Untenable
22	3	Krusaka Bazar	1	179	123	303	1137	I	Semi-Tenable
23	4	Mahatab Nagar	5	19	6	30	133	I	Untenable
24	4	Idga Refugee Colony	48	4	102	154	609	II	Tenable
25	4	Idga Muslim Sahi	20	41	4	65	308	II	Tenable
26	4	Deula Sahi Dhoba Sahi	139	39	64	242	910	II	Tenable
27	4	Satabdi Nagar	11	50	24	85	318	I	Untenable
28	4	Gopabandhu Sahi	0	14	51	65	257	III	Tenable
29	3	Radhakrishnapur	0	31	28	59	264	I	Untenable
30	5	Tulasipur Tanla Sahi	20	184	64	268	965	I	Semi-Tenable
31	5	Ringroadbandha Talasahi Behind tulasipur Dispensary	6	26	17	49	180	I	Untenable
32	5	Tulasipur Hadi Sahi	10	43	24	77	321	I	Semi-Tenable
33	5	Tulasipur Bauri Sahi	45	53	58	156	648	II	Semi-Tenable
34	5	Tulasipur Hatua Sahi	67	151	2	220	952	II	Semi-Tenable
35	5	Nima Bastee	5	24	2	31	116	I	Semi-Tenable
36	6	Tulasipur Bila Sahi	5	17	0	22	83	I	Semi-Tenable
37	6	Stewart Patna Tanla Sahi	26	90	20	136	532	II	Untenable
38	6	Tinigharia Sahi	6	27	0	33	131	II	Tenable
39	6	Christian Sahi Tulasipur	17	53	0	70	232	II	Tenable
40	7	Mansingh Patna Muslim Sahi	13	9	0	22	101	II	Semi-Tenable
41	7	Sidheswar Sahi Pana Sahi	36	97	2	135	546	II	Semi-Tenable
42	8	Sati Chaura Harijana Sahi	39	90	19	148	576	I	Untenable
43	8	Harihara Ghat Near Gundicha Mandira	0	5	20	25	108	I	Untenable
44	8	Dagarapara	257	199	36	492	1932	II	Tenable
45	9	Alisha Bazar Hadi Sahi	78	18	23	119	515	II	Tenable
46	9	Matha Gali Antaryami	61	20	4	85	355	II	Tenable
47	9	Bhandari Sahi(Immam Badi)	57	50	25	132	543	II	Tenable
48	9	Laban Sahi Alisha Bazar	118	92	27	237	959	II	Tenable
49	10	Mehendipur	2	89	3	94	370	II	Tenable
50	10	Mehindpur Sunadei Gali	11	22	2	35	147	II	Tenable
51	10	Gangamandir Mitra Colony	5	29	0	34	147	II	Tenable

52	11	Telgu Sahi Rover Street	1	19	0	20	79	I	Untenable
53	11	Mehendipur Refugee Colony	29	53	0	82	283	II	Tenable
54	11	Khatbinisahi-Fakirlane Muslimsahi	219	132	19	370	1542	II	Semi-Tenable
55	12	Gadagadia Patha Adibasi Sahi	4	6	168	178	588	I	Untenable
56	12	Pattapole Muslim Sahi	96	59	20	175	829	II	Tenable
57	12	Telugu Basti Opp Narisevasadan	2	44	1	47	184	I	Untenable
58	13	Fasidia Pana Sahi	5	122	116	243	917	I	Untenable
59	13	Berhampur Bastee Inside Gada Khai	0	31	120	151	561	I	Untenable
60	13	Berhampur Bastee Inside Barbati Stadium	0	12	22	34	120	I	Untenable
61	13	Gorakabar Muslim Sahi	7	51	5	63	336	II	Semi-Tenable
62	14	Sutahat Hadi Sahi	114	65	11	190	795	I	Semi-Tenable
63	14	Pattapole Colony	128	32	31	191	803	II	Semi-Tenable
64	14	Sutahat Tanti Sahi	0	21	0	21	76	II	Semi-Tenable
65	14	Pattapole Tanti Sahi	166	102	39	307	1220	II	Tenable
66	14	Godam Gali Pattapole	34	18	2	54	228	II	Semi-Tenable
67	14	Dagbar Sahi Sutahat	134	49	14	197	803	II	Semi-Tenable
68	15	Oriya Bazar Gauda Sahi	105	45	12	162	599	II	Semi-Tenable
69	15	Baunsa Gali Part	44	28	5	77	331	II	Tenable
70	15	Oriya Bazar Telugu Bastee	44	20	0	64	267	II	Tenable
71	16	Deewan Bazar Muslim Sahi	291	205	27	525	2250	II	Tenable
72	16	Deewan Bazar Tanti Sahi	78	67	6	151	567	II	Tenable
73	16	Kazi Bazar Dhobi Sahi	14	6	1	21	89	II	Tenable
74	16	Oriya Bazar Chamar Sahi	87	23	0	110	470	II	Semi-Tenable
75	16	Oriya Bazar Kutakhai Gali	51	41	2	94	404	II	Semi-Tenable
76	16	Sutahat Pana Sahi Gali	11	39	2	52	198	II	Tenable
77	16	Oriya Bazar Muslim Sahi	31	80	1	112	537	II	Semi-Tenable
78	17	Dhuanpatria Gali	36	24	0	60	218	II	Tenable
79	17	Ganeshghat Pana Sahi	53	34	9	96	431	II	Semi-Tenable
80	17	Ganeshghat Bhandari Sahi	63	32	0	95	389	II	Semi-Tenable
81	17	Sahebzada Bazar	21	16	0	37	157	II	Tenable
82	18	Gopaljew Matha Sahi, Harijana Sahi	46	28	0	74	387	II	Tenable
83	18	Purighat Bauri Sahi	15	76	31	122	480	II	Semi-Tenable
84	19	Makaraba Sahi Dhobi Lane	42	52	0	94	388	II	Semi-Tenable
85	19	Makaraba Sahi Telugu Muslim Sahi	16	30	0	46	201	II	Untenable
86	19	Meria Bazar	1	16	3	20	89	II	Semi-Tenable
87	20	Telgu Bastee (Infront Of Asha Apartment)	0	0	30	30	121	I	Untenable
88	20	Tinikonja Bagicha	104	142	32	278	1093	II	Semi-Tenable
89	20	Kadam Rasool	194	181	79	454	2015	II	Semi-Tenable
90	21	Samanta Sahi	19	56	0	75	285	II	Semi-Tenable
91	21	Haripur	29	67	8	106	450	II	Tenable
92	22	Bepari Sahi Muslim Sahi	3	29	1	33	143	II	Tenable
93	22	Thoria Sahi Harijana Sahi	34	36	0	70	260	II	Tenable
94	22	Akhada Gali	20	55	0	75	313	II	Tenable
95	22	Badhei Sahi Buxi Bazar	126	119	12	257	944	II	Tenable
96	22	Kesharpur	216	201	54	471	2083	II	Tenable
97	23	Tinigharia Jama Gali (Jhola Sahi)	14	32	0	46	206	II	Tenable
98	23	Hatipokhari	7	46	1	54	217	II	Tenable
99	23	Nima Sahi Dhoba Sahi Tanti Sahi	9	44	0	53	226	II	Tenable
100	23	Nima Sahi Pana Sahi	42	115	1	158	676	II	Tenable
101	23	Nima Sahi Kumbhar Sahi	13	102	1	70	271	II	Tenable
102	23	Pithapur Pana Sahi	18	36	16	70	286	II	Tenable
103	23	Jhola Sahi Bauri Sahi	5	18	1	24	85	II	Tenable
104	24	Purighat Pana Sahi	21	8	32	61	262	II	Tenable
105	24	Rajabagicha Puruna Hadi Sahi	4	35	0	39	165	II	Tenable

106	24	Rajabagicha Hadi Sahi	2	146	4	152	712	II	Semi-Tenable
107	24	Sarbodayapur	23	42	9	74	325	II	Tenable
108	24	Muslim Sahi Tinapita Sahi Tala Telenga Bazar	3	34	0	37	137	II	Semi-Tenable
109	25	Labour Colony Sweeper Sahi	0	43	0	43	162	I	Tenable
110	25	Dolamundai Baurisahi	19	36	8	63	240	II	Tenable
111	25	Jhanjirimangala Harijansahi	37	45	1	83	344	II	Tenable
112	25	Jhanjirimangala Pana Sahi (Lunia Sahi)	25	7	34	66	223	II	Tenable
113	25	Rajabagicha Kusunpur	42	56	8	106	400	II	Tenable
114	27	Gopa Nahakani Bastee (Private Land)	0	18	8	26	121	I	Tenable
115	27	Narayan Mishra Lane Bauri Sahi	0	10	16	26	114	I	Tenable
116	27	Professorpara	9	139	10	158	628	II	Tenable
117	27	Sagadia Sahi	242	223	81	546	2095	II	Tenable
118	28	Siakari Sahi	20	23	23	66	243	II	Semi-tenable
119	29	Gamhadia	11	73	9	93	414	II	Semi-Tenable
120	29	Thoria Sahi Ghashia Sahi	70	91	46	207	823	II	Tenable
121	29	Thoria Sahi Main Bastee	45	140	29	214	855	II	Tenable
122	29	Thoria Sahi Nayak Sahi	115	51	9	175	656	II	Tenable
123	30	Mallha Sahi Nadikula Sahi	0	54	117	171	721	I	Semi-Tenable
124	30	Thoria Sahi Mallha Sahi	128	125	11	264	912	II	Tenable
125	31	Ranihat Canal Road	0	3	138	141	578	I	Untenable
126	31	Joy Maa Mangala Sahi	1	0	51	52	217	I	Untenable
127	31	Medical Behera Sahi	1	226	109	336	1246	II	Untenable
128	31	Engineering School Back Side Near Ring Road	5	7	43	55	200	I	Untenable
129	32	Balabhadrapur Telugu Sahi	2	15	19	36	136	I	Semi-Tenable
130	32	Balabhadrapur	186	46	36	268	1015	II	Tenable
131	32	Mahatab Road New Colony	28	13	1	42	159	II	Tenable
132	32	Mahatab Road	19	9	3	31	122	II	Tenable
133	33	Bisinabar	48	107	71	226	895	II	Semi-Tenable
134	33	Sankarpur Main Bastee	471	196	2	669	2736	II	Tenable
135	34	Pilgrim Road Das Sahi	3	266	124	393	1466	I	Untenable
136	34	Chhatra Bazar Behera Sahi	0	79	97	176	636	I	Untenable
137	34	Malgodown Behera Sahi	1	239	7	247	1067	I	Untenable
138	34	Surya Nagar Sahi (Pilgrim Road)	0	23	8	31	143	I	Untenable
139	34	Gurkha Colony	1	5	90	96	387	I	Untenable
140	34	Santala Sahi Gorkha Lane	0	0	29	29	118	I	Untenable
141	34	Samadhipatna (Northside)	24	108	1	133	620	II	Tenable
142	34	Malgodwn Koela Depot Basti	0	4	40	44	202	I	Untenable
143	34	Nua Sahi , Malgodown	0	64	7	71	267	I	Untenable
144	34	Hukeshwara Temple, Pilgrim Road	0	23	51	74	280	I	Untenable
145	35	Kulibasa Lanenear Railway Station	0	28	62	90	395	I	Untenable
146	35	Potters Colony Station Bazar	0	28	6	34	137	I	Semi-Tenable
147	35	Junuspātna Harijanasahi Canalroad Chunabhatibasti	8	16	0	24	100	I	Untenable
148	35	Pareswar Sahi	8	25	0	33	136	II	Tenable
149	35	Patra Sahi	14	62	6	82	339	II	Tenable
150	35	Pareswar Sahi Mir Sahi	0	45	0	45	148	II	Semi-Tenable
151	35	Station Bazar Matha Sahi	19	43	5	67	286	II	Tenable
152	35	Canal Road Bastee	2	67	54	123	417	I	Untenable
153	35	Muradkhan Patna, Samal Sahi	16	6	60	82	330	II	Tenable
154	36	Barrage Colony	0	78	1	79	314	I	Tenable
155	36	Jobra Nadikula Sahi	60	65	13	138	510	II	Untenable
156	36	Charigharia	13	110	6	129	536	II	Tenable
157	36	Jamal Bastee Bhoi Sahi Bhandari Sahi	8	94	106	208	912	II	Untenable
158	37	Muradkhan Patna Samadhi Patna	0	267	0	267	1196	II	Tenable
159	37	Jobra Tinapita Sahi	36	128	9	173	803	II	Tenable

160	37	Koila Basti Jobra Near Over Bridge	9	11	9	29	108	I	Untenable
161	37	Jobra Nua Sahi	10	24	1	35	148	II	Tenable
162	38	Nua Nima Sahi	0	38	27	65	269	I	Untenable
163	38	Chauliagunj Dhoba Sahi	216	77	3	296	1108	II	Tenable
164	38	Chauliagunj Matha Sahi	254	122	72	448	1811	II	Tenable
165	38	Nilakantheswar Basti Cahuliaganja	0	7	63	70	268	I	Untenable
166	39	Chauliagunj Muslim Sahi	67	42	11	120	490	II	Tenable
167	40	Khannagar Bauri Sahi Sahar Sahi	14	88	10	112	419	I	Untenable
168	40	Kali Vihar Nadikula Sahi	0	68	29	97	405	I	Untenable
169	41	Manimatha Sahi	1	117	38	156	587	I	Untenable
170	41	Nua Gauda Sahi	69	26	5	100	421	II	Tenable
171	41	Khannagar Guru Sahi Keuta Sahi	254	92	27	373	1459	II	Semi-Tenable
172	42	Sikharpur Uppar Sahi	10	34	0	44	199	II	Semi-Tenable
173	42	Sikharpur Nadikula Sahi	30	54	54	138	576	II	Semi-Tenable
174	42	Kora Pokhari Harijana Sahi	21	32	12	65	249	II	Tenable
175	43	Chauliagunj Sahar Sahi	15	20	11	46	157	II	Semi-tenable
176	43	Gandarpur Sahar Sahi	2	20	6	28	115	II	Tenable
177	44	Najarpur Keuta Sahi	0	13	65	78	317	I	Untenable
178	44	Najarpur Munda Sahi	2	67	97	166	664	I	Untenable
179	44	Jagatpur Old Industrial Estate	1	26	55	82	356	I	Untenable
180	44	Bhubanpur Hadi Sahi	5	3	13	21	104	I	Semi-Tenable
181	44	Laxmanpur Muslim Sahi	11	11	16	38	146	II	Tenable
182	44	Najarpur	84	28	30	142	590	II	Tenable
183	44	Sikaripur Bateswar Sahi	0	96	16	112	427	I	Tenable
184	44	Nimapur Sahar Sahi	19	11	87	117	384	II	Untenable
185	44	Laxmanpur Harijana Sahi	1	9	53	63	195	II	Tenable
186	44	Jagatpur Harijana Sahi	30	21	5	56	224	II	Tenable
187	45	Industrial Estate Jagatpur Bali Sahi	0	73	50	123	501	I	Untenable
188	45	Station Bazar Jagatpur	1	43	65	109	397	I	Untenable
189	45	Tarala Saharsahi Adibasis Sahi	0	50	31	81	348	I	Untenable
190	45	Immam Nagar Muslim Sahi	8	32	7	47	183	II	Tenable
191	45	Podabara	42	20	10	72	289	II	Semi-Tenable
192	45	Nankar Dhoba Sahi Behera Sahi	58	26	40	124	532	II	Semi-Tenable
193	45	Jagatpur Harijana Sahi Nuasahi	74	30	32	136	581	II	Untenable
194	45	Immam Nagar Harijan Sahi	170	61	41	272	1119	II	Semi-Tenable
195	45	Immanagar Bariksahi	18	17	11	46	186	II	Tenable
196	45	Immanagar Mallicksahi	45	8	5	58	239	II	Tenable
197	45	Immam Nagar Dama Sahi	3	4	33	40	151	I	Untenable
198	46	Jagannath Colony	12	80	6	98	408	I	Untenable
199	46	Mangala Sahi	0	51	44	95	401	I	Untenable
200	46	Santoshi Nagar	0	60	11	71	288	I	Untenable
201	46	Gujurati Basteer Near Ghatakula	33	86	7	126	525	I	Untenable
202	46	Nuapada Bali	0	61	3	64	247	I	Tenable
203	46	Press Chhak Slum	1	0	32	33	121	I	Untenable
204	47	Munda Sahi Near Poporada	2	51	0	53	251	I	Untenable
205	47	Nuapara	39	34	129	202	886	II	Tenable
206	47	Sartol Mallick Sahi	46	51	8	105	406	II	Tenable
207	47	Sartol Bauri Sahi	0	38	1	39	147	II	Tenable
208	47	Poporada	248	196	9	453	1762	II	Semi-Tenable
209	47	Tinigharia Canal Road	24	51	17	92	345	II	Semi-Tenable
210	47	Sartol Bhoi Sahi	5	31	0	36	144	II	Tenable
211	47	Tinigharia Nua Sahi	0	13	20	33	133	I	Tenable
212	48	Bissalyakarani Lane Bauri Sahi	10	27	0	37	162	I	Semi-Tenable
213	48	Rajendra Nagar Sabar Sahi	0	0	0	0	0	I	Tenable

214	48	Kazidhia	14	62	18	94	336	II	Semi-Tenable
215	48	Sriram Nagar Kela Sahi	0	3	67	70	290	I	Tenable
216	49	Dargha Patna	12	21	4	37	144	II	Tenable
217	49	Andarpur	1	27	0	28	115	II	Tenable
218	50	Jagannath Road Near Leprosy Colony	0	36	76	112	444	I	Untenable
219	50	Mahima Nagar	1	71	0	72	281	I	Semi-Tenable
220	50	Debendra Nagar	4	125	2	131	494	I	Tenable
221	50	Gandhipalli	1	60	3	64	243	II	Semi-Tenable
222	50	Nehrupalli	0	31	1	32	109	II	Tenable
223	50	Potapokhari Sahi	154	122	15	291	1111	II	Tenable
224	50	Nayabazar Sastri Nagar Basti	0	28	2	30	104	I	Semi-Tenable
225	50	Potapokhari Tala Sahi	0	24	0	24	101	II	Tenable
226	51	Bhadimula Nadia Bagicha	16	17	2	35	149	I	Untenable
227	51	Canal Bandha Bastee Infront Of Crri Gate	0	35	57	92	386	I	Untenable
228	51	Bidyadharpur Mallick Sahi Bhoi Sahi	27	57	6	90	340	II	Tenable
229	51	Bidyadharpur Barik Sahi	81	51	4	136	542	II	Tenable
230	51	Bidydharpur Gopinath Bazar	0	0	60	60	208	II	Semi-Tenable
231	51	Bidyadharpur Pana Sahi	24	26	15	65	232	II	Tenable
232	51	Kanheipur Bauri Sahi	59	65	20	144	605	II	Semi-Tenable
233	51	Keshpur	118	73	5	196	743	II	Tenable
234	51	Bhadimula	160	68	46	274	1160	II	Semi-Tenable
235	52	Srikoruan Gurubari Sahi	103	15	49	167	682	II	Tenable
236	52	Srikoruan Bauri Sahi	86	97	21	204	811	II	Tenable
237	52	Gopalpur Harijana Sahi	83	67	12	162	605	II	Tenable
238	52	Balikuda Samal Sahi	10	126	39	175	714	II	Untenable
239	52	Subhadrapur Harijana Sahi	14	51	22	87	382	II	Tenable
240	52	Kajipatna Muslim Sahi	46	137	70	253	1066	II	Semi-tenable
241	52	Tota Sahi	6	75	0	81	335	II	Tenable
242	52	Amaniapatna Bhoi Sahi	44	33	45	122	504	II	Untenable
243	52	Kajipatna Indiracolony	8	62	6	76	275	II	Untenable
244	52	Mukameswar Kaibart Sahi	38	81	8	127	557	II	Tenable
245	52	Gopalpur Samal Sahi	58	101	41	200	822	II	Untenable
246	52	Shyampur Harijan Sahi	114	73	5	192	779	II	Untenable
247	53	Pratap Nagari Kaibartya Sahi	68	21	12	101	377	II	Tenable
248	53	Bhanapur Samal Sahi	9	26	1	36	126	II	Untenable
249	53	Purunanuagada Bariksahi	18	29	15	62	275	II	Tenable
250	53	Nuagada Dandakulala Sahi	76	42	4	122	477	II	Tenable
251	53	Paika Sahi Gopalpur	72	65	9	146	609	II	Tenable
252	53	Bhanapur Doba Sahi	8	11	3	22	92	I	Tenable
253	53	Ananta Balia College Behera Sahi Nuagada	0	14	19	33	117	II	Untenable
254	53	Nuagada Kuda Sahi And Barik Sahi	57	31	12	100	393	II	Tenable
255	53	Pira Bazar Muslim Sahi Banapur	52	79	3	134	567	II	Tenable
256	53	Gopalpur Deuri Sahi	2	7	59	68	253	II	Tenable
257	53	Nuagada Ostakuda Sahi	20	44	0	64	268	II	Tenable
258	54	Adhangadhia Harijana Sahi	8	8	10	26	109	II	Untenable
259	54	Nua Patna Indira Gandhi Colony	3	37	39	79	358	II	Tenable
260	54	Mugabhanga Muslim Sahi	14	19	5	38	170	II	Tenable
261	54	Kacharamala Harijana Sahi	7	4	33	44	187	II	Untenable
262	54	Puruna Kacharamala Harijanasahi	9	48	8	65	299	II	Tenable
263	54	Adhanga Diha Mallick Sahi And Bhoi Sahi	5	7	18	30	123	II	Tenable
264	22/30	Machua Bazar	366	240	17	623	2434	II	Tenable
Total			10508	15005	6635	32106	129471		

Flood Affected areas during the Flood 2014

Sl. No.	Ward No.	Locations	Place where evacuees are staying	No. of Families Evacuated	Total Population (in No.)	Population	
						Adult (60%)	Child (40%)
1	2	Dhabeleswar Patha	Ring Road	40	200	120	80
2	4	Mausima Mandir to CDA, Sec-6	Ring Road	50	250	150	100
3	4	CDA, Sec-6 to Balighat	Ring Road	80	400	240	160
4	5	Balighat to Tareni Mandir	Ring Road	25	125	75	50
5	5	Tareni Madir to Biren Mitra Park	Ring Road	90	450	270	180
6	15	Gadagadia Patha near Bali Yatra Padia	Ring Road	40	200	120	80
7	15	Seashore Basti	Ring Road & Kanshei Khana	45	225	135	90
8	16	Deer Park	Ring Road	10	50	30	20
9	34	Mata Matha near Hadia Patha	Ring Road	20	100	60	40
10	44	Kali Vihar	Ring Road	30	150	90	60
11	48	Laxmanpur Hadi Sahi at Jagatpur	Jagatpur IB Road	10	50	30	20
12	50	Santoshi Nagar & Gujurati Basti	Near Ghatakula	15	75	45	30
13	51	Mangala Sahi	Near Bayalish Mouza Bridge	30	150	90	60
14	54	Gandhipalli	Leprosy Hospital Compound	20	100	60	40
15	55	Dairy Farm, Bhadimula	Mahanadi Embankment	30	150	90	60
16	15	Gadagadia Patha near	Marooned	60	300	180	120

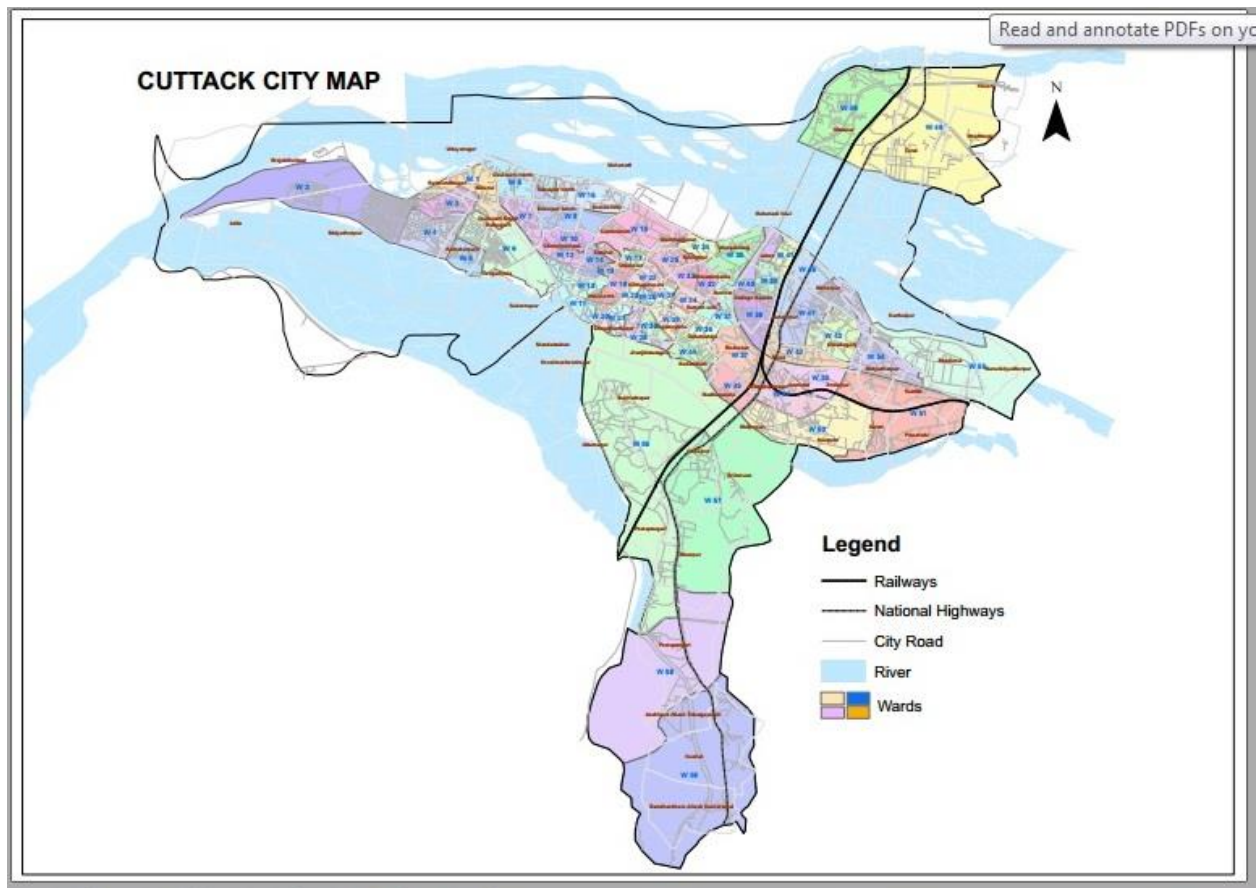
		Bali Yatra Padia					
17	49	Najarpur Pradhan sahi, Nimapur Munda Sahi	Marooned	67	335	201	134
18	49	Jagatpur Maa Mangala Cricket Club back side	Marooned	17	85	51	34
19	49	Jagatpur Trinath Sahi	Marooned	32	160	96	64

Evacuation Centers for the Cyclone "Hud Hud"

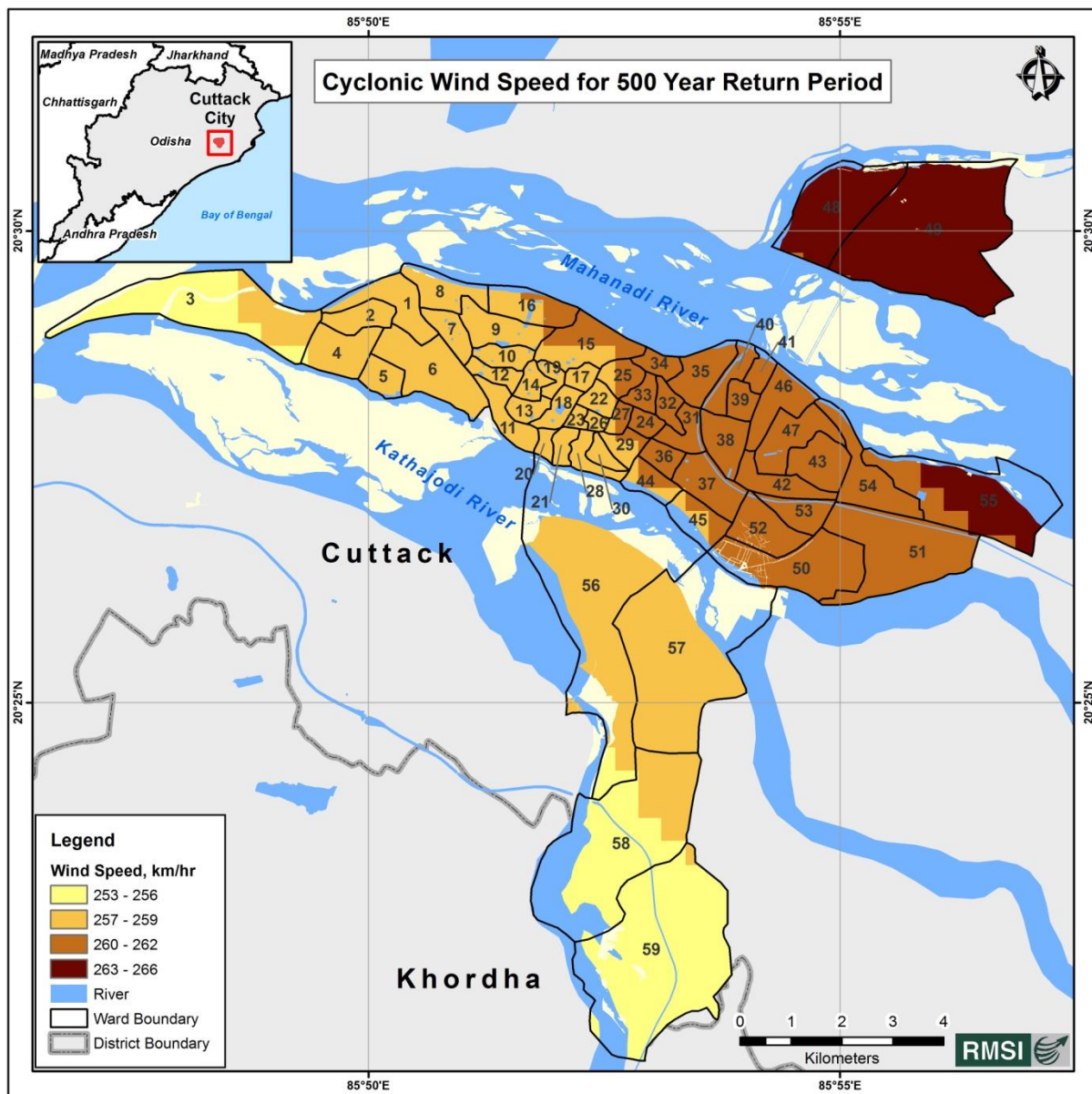
SI No	Ward No	Slum Name	Kachha HH	Population	Shelter For Evacuees
1	22	Makarbagh Sahi Dhobi Lane	30	150	Meria Bazar School
2	22	Makarbagh Telegu/Muslim Sahi	50	200	Meria Bazar School
3	22	Meria Bazar	20	100	Meria Bazar School
4	23	Telegu Basti Infront of Asha Aprtmnt	30	120	Biren Mitra School Kathagada Sahi
5	23/22	Tinikonja Bagicha	100	500	Biren Mitra School Kathagada Sahi
6	23	Kadam Rasool	100	500	Kadam Rasool School/ Community Centre
7	24	Samanta Sahi	20	100	Gamhandia School
8	25/22	Bepari Sahi	33	150	Bali Bhagat Schhol
9	25	Thoria Sahi Harijan Sahi	30	150	Thoria Sahi Girl's High School
10	25	Akhada Gali	30	150	Hadibandhu High School
11	25/22/23	Kesharpur	150	700	Kesharpur Madrasa
12	26	Tinigharia Jama Gali Jhola Sahi	30	100	Biren Mitra School
13	26	Hatipokhari	50	200	Biren Mitra School
14	26	Nima sahi Pana Sahi	100	500	Seminary School
15	27	Pithapur Pana Sahi	70	200	Pithapur School
16	27	Jhola sahi Bauri Sahi	20	100	Jhola Sahi School

17	28	Purighat Pana Sahi	50	250	Community Centre
18	28	Rajabagicha Sweeper Colony	100	500	Rajabagicha High School
19	28	Rajabagicha Puruna Hadi Sahi	40	200	Rajabagicha High School
20	29	Dolamundai Bauri Sahi	40	200	Babasagar Bidyapitha
21	29	Labour Colony Sweeper Sahi	40	200	Labour Colony U.P.School
22	29	Jhanjirmangala Harijan Sahi	20	100	Community Centre
23	29	Lunia Sahi Pana Sahi	30	150	Jhanjirmangala U.P.School & Community Centre
24	30	Sarbodaypur	50	250	Rajabagicha High School
25	30	Rajabagicha Kusunpur	50	250	Rajabagicha High School
26	32	Shikari Sahi	40	200	Ranihat Gopal Sahi School
27	33	Gamhandia	40	200	Gamhandia School

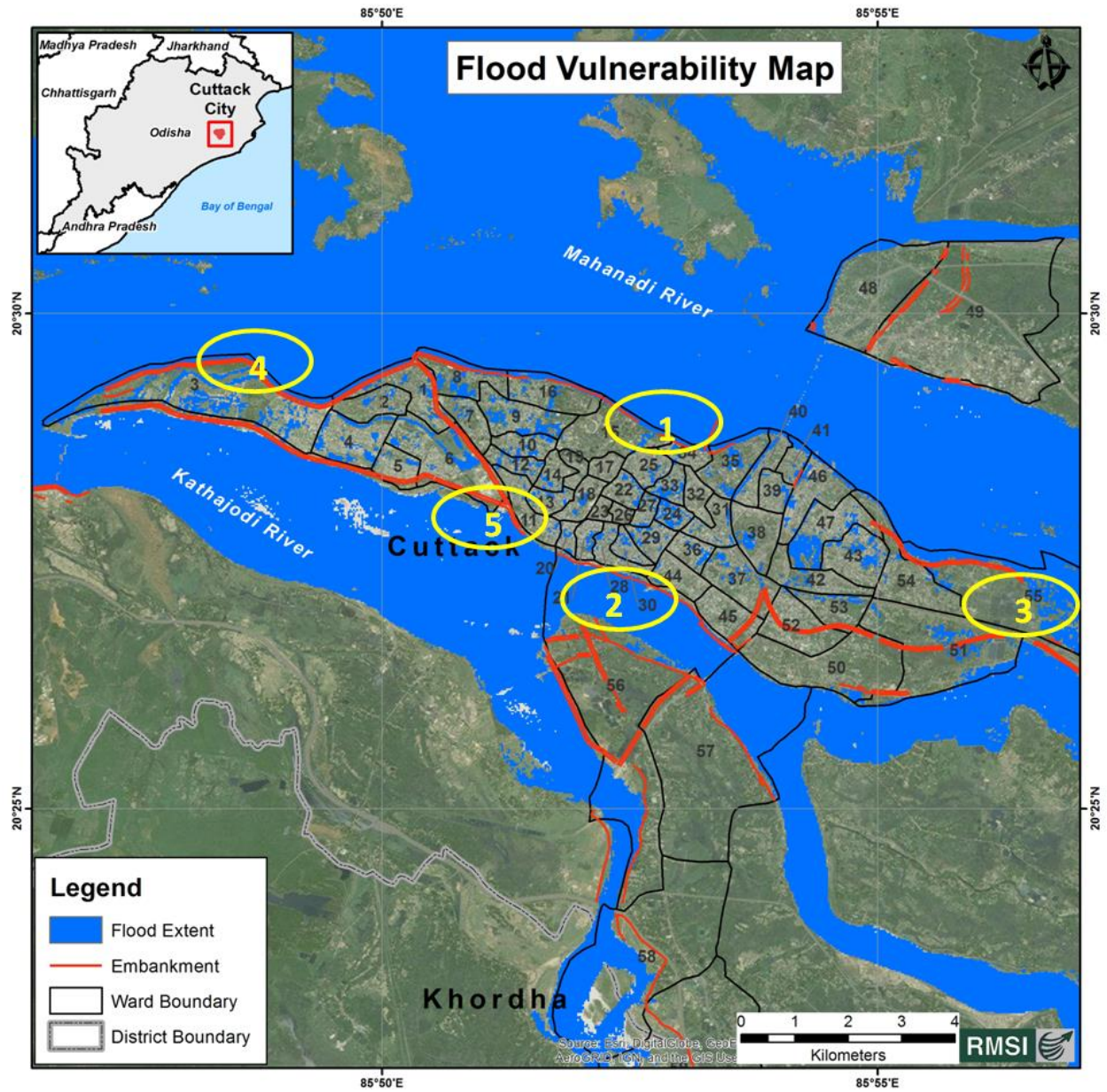
MAP-1
Administrative Map of Cuttack Municipal Corporation



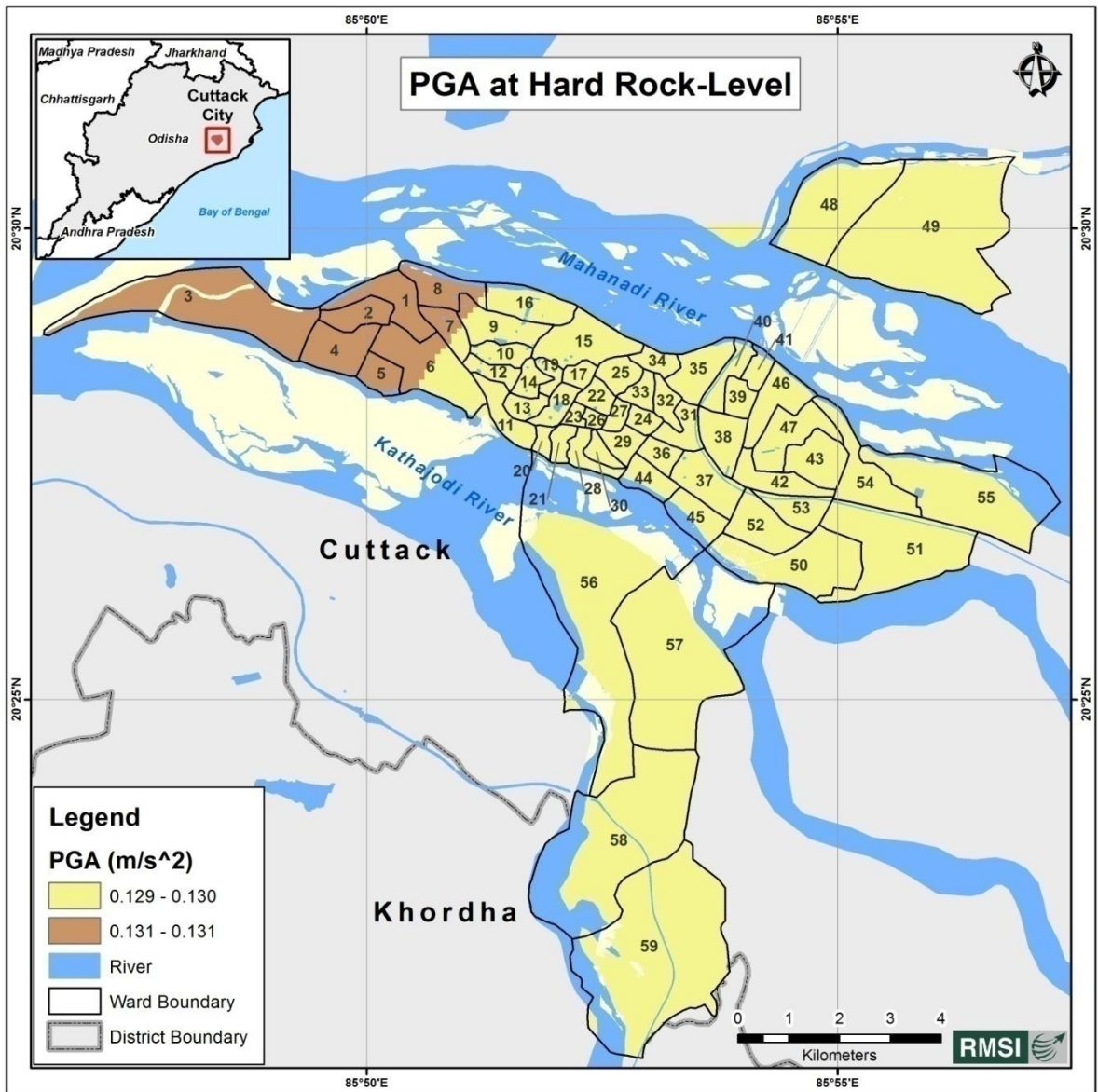
Map-2

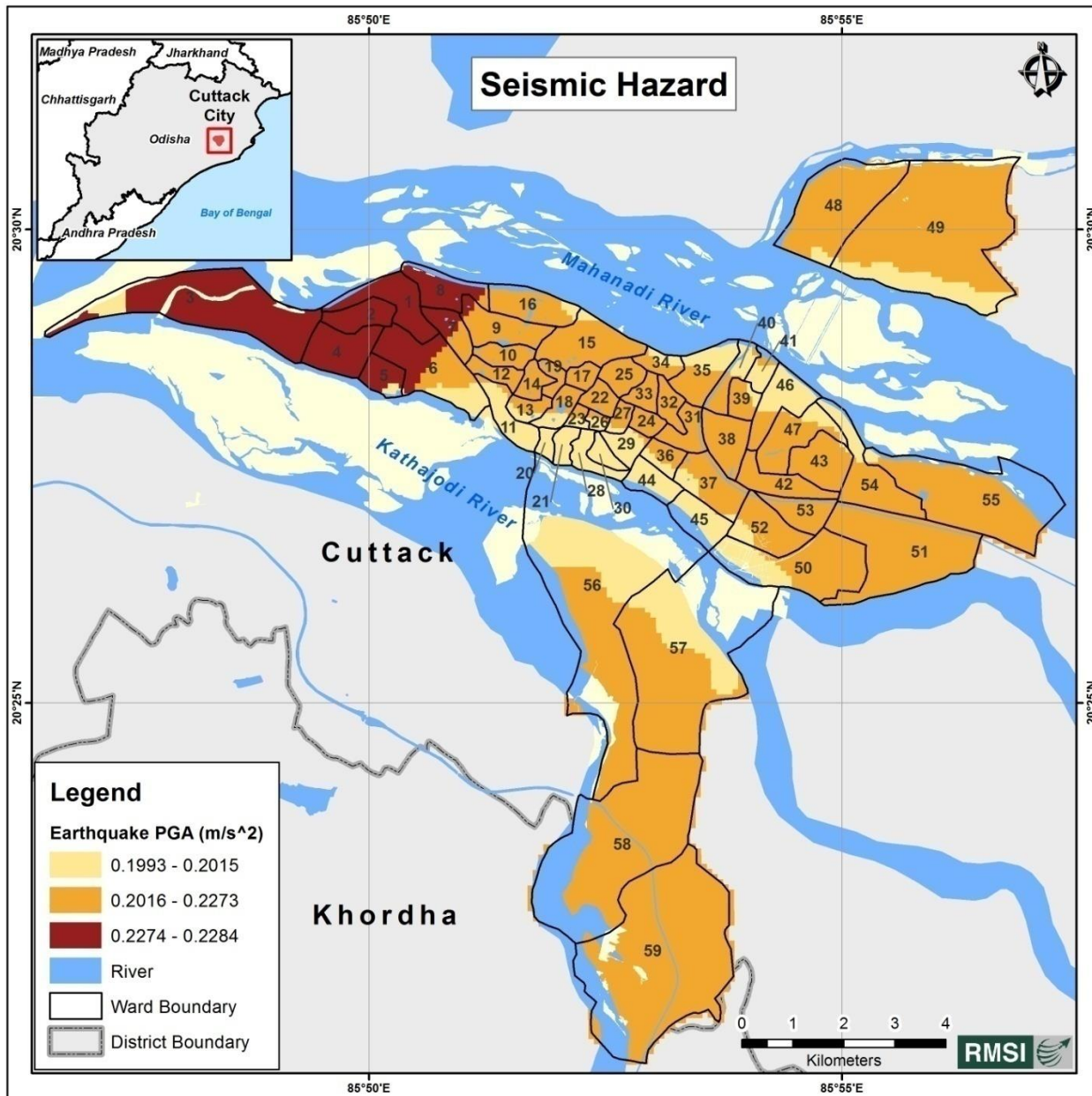


Map-3

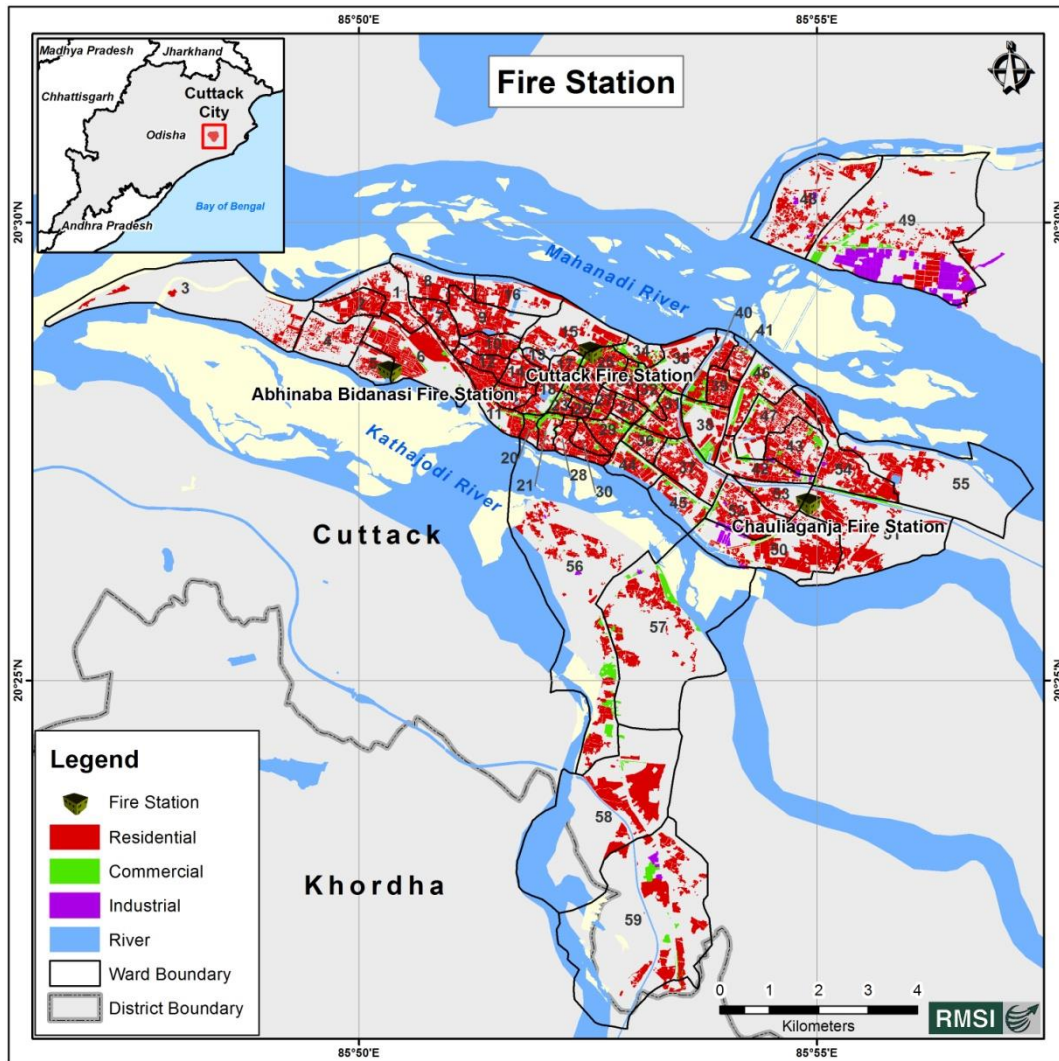


Map-4
Earthquake Map of Cuttack

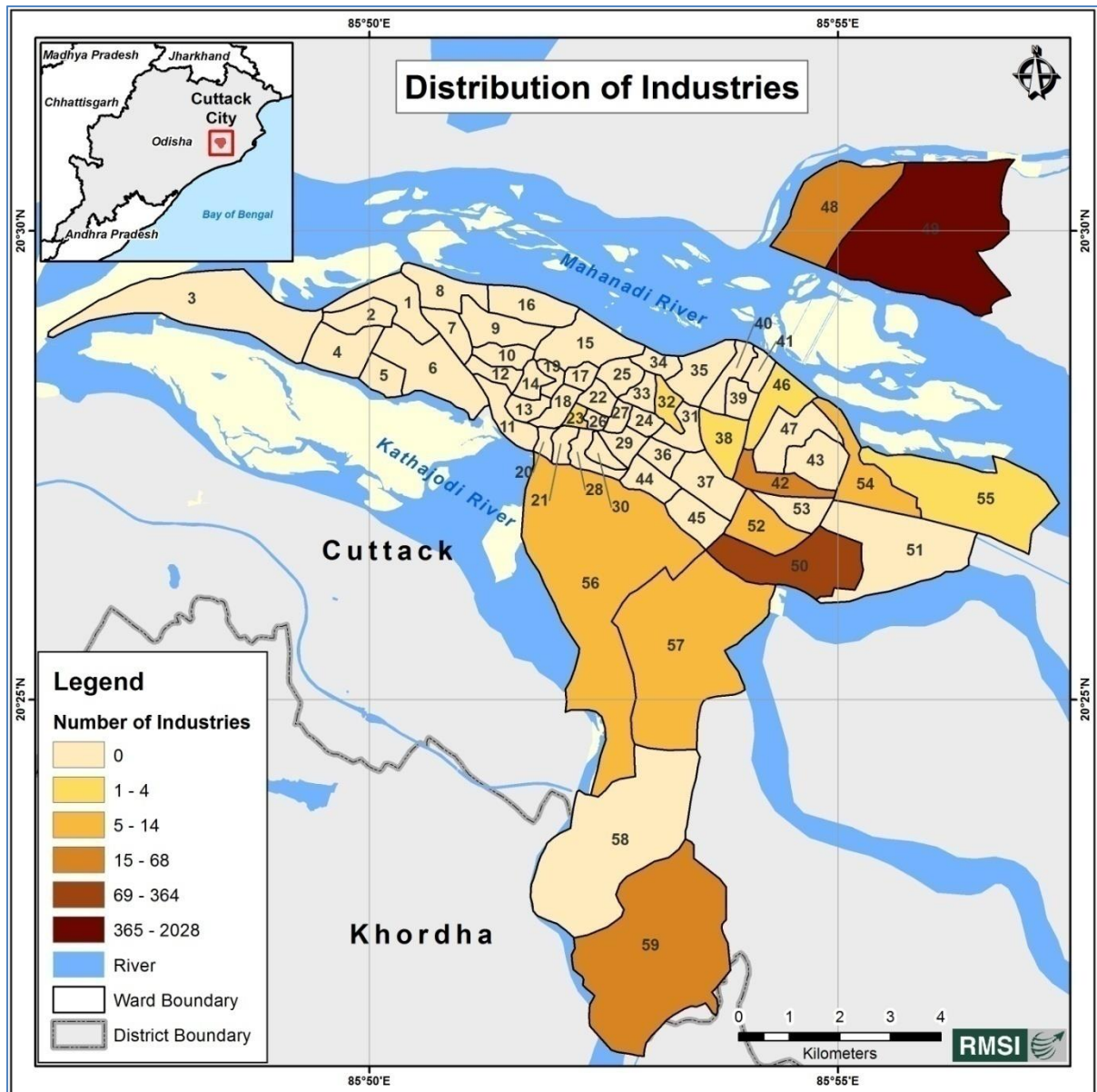




Map-5
Fire hazard



Distribution of Industries Cuttack City



Built of Distribution Cuttack City

