

Coronavirus (COVID-19)



DISTRICT ADMINISTRATION KEONJHAR

ମୋ ଜୀବିକା,
ମୋ ସୁରକ୍ଷା

#MaskupKeonjhar
#Stay Alert Stay Safe

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DISTRICT DISASTER MANAGEMENT PLAN-2023-24



Prepared By:

***District Disaster
Management
Authority (DDMA),
Keonjhar***

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Abbreviation

AWC	Anganwadi Centre
BDO	Block Development officer
BCR	Block Control Room
CCA	Climate Change Adaptation
CDMO	Chief District Medical Officer
CDPO	Child Development Project Officer
CDVO	Chief District Veterinary Officer
CMRF	Chief Ministers Relief Fund
DCR	District Control Room
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plan
DDM	District Disaster Manager
DEOC	District Emergency Operation Centre
DRDA	District Rural Development Agency
DSWO	District Social Welfare Officer
DRR	Disaster Risk Reduction
GoI	Government of India
GP	Gram Panchayat
HRVA	Hazard Risk and Vulnerability Assessment
IAY	Indira AawasYojana
MO	Medical Officer
NGO	Non-Government Organisation
OSDMA	Odisha State Disaster Management Authority
PDS	Public Distribution System
PHC	Primary Health Centre
PWD	Public Works Department
RD	Rural Development
SP	Superintendent of Police
VSO	Veterinary Stock officer
W&CD	Women & Child Development
UNDP	United Nations Development Programme
NIDM	National Institute of Disaster Management
CDKN	Climate & Development Knowledge Network
GEAG	Gorakhpur Environmental Action Group
ISET	Institute for Social and Environmental Transitions
SLD	Shared Learning Dialogue
BDO	Block Development officer
BDMC	Block Disaster Management Committee
BDMP	Block Disaster Management Plan
BCP	Block Contingency Plan
BDM	Block Disaster Manager
BCR	Block Control Room

CCA	Climate Change Action Plan
DDM	District Disaster Manager
DCR	District Control Room
DRR	Disaster Risk Reduction
GPDMC	Gram Panchayat Disaster Management Committee
OIC	Officer In charge
CDPO	Child Development Project Officer
MO	Medical Officer
VSO	Veterinary Stock officer
VAS	Veterinary Assistance Surgeon
JAO	Junior Agriculture Officer
SI	School Inspector
AFO	Assistant Fishery Officer
JE-RWSS	Junior Engineer- Rural Water Supply & Sanitation
JE- R & B	Junior Engineer-Roads and Buildings
JE- PWD	Junior Engineer- Public Works Department
CMRF	Chief Ministers Relief Fund
AWC	Anganwadi Centre
PMRF	Prime Ministers Relief Fund
CDMO	Chief District Medical Officer
CDVO	Chief District Veterinary Officer
SC	Schedule Caste
ST	Schedule Tribe
GEN	General Caste
BPL	Below Poverty Line
APL	Above Poverty Line
VHF	Very High Frequency
ADM	Additional District Magistrate
WEO	Welfare Extension Officer
SEO	Social Education Organizer
LSEO	Lady Social Education Organizer
FEO	Fishery Extension Officer
DEOC	District Emergency Operartion Center

PREFACE

It was essential that, we look at Disaster Management from the development angle. It is no longer either a one-off or stand-alone activity. Despite the fact that, Disaster Preparedness is most essential, it is apparent that, proper mechanisms for Disaster Awareness and mean of Disaster Recovery are essential for achieving the Millennium Development Goals. Reversing the loss of environmental resources can never be achieved without giving due emphasis to effective Disaster Management Strategies.

Keonjhar, a tribal dominated district is having both hilly terrains and plane tracts. Due to its Geographical location, the Sub-Division of Anandapur in one hand is mostly affected by high floods every year and on the other hand, the hilly tract of rest part is affected by flash floods, drought etc. Besides the floods and draught, various calamities like Hail storms. Heavy rains, Whirl winds are the frequent visitors to this district and ruin the economy of the people with loss of crops, livestocks, lives and lively hoods. Many people become marooned, shelters being washed away, no feeds and foddors cause to death of livestocks. In view of this, preparedness is quite essential to mitigate the evils of calamities and preparation of DDMP is a welcoming step.

The District Disaster Management Plan (DDMP) 2023-24 has illustrated the various key activities that are required to be followed for mitigating the risk. I think, it will be extremely useful to help understand the methods and path to be followed in Disaster Risk Reduction in the district.

I am very much glad that, all out efforts have been made to bring out this plan in its complete shape. I am also very much thankful to all the Officers and Staff who have provided the valuable inputs for making it a final compilation of DDMP. It should therefore be the responsibility of all concerned stakeholders from Government to Non-Government Organizations, to give the right priority to follow the same with co-operation. Only that will ultimately guarantee disaster risk reduction for all and minimize their sufferings.

Lastly, I wish, the plan be reviewed timely and updated in order to be amply rewarded.

(Mr. Ashish Thakare, IAS)
Collector & District Magistrate, Keonjhar

Chapter – 1 (Introduction)

Prelude:

The District Keonjhar has been divided geographically in to three parts e.g(a) Vast riverine belt in the eastern part of Anandpur sub division (b) the mining and industrial belt of jodaBarbil of champua subdivision (c) dense forest land with cultivating plain land patch in the keonjhar subdivisions adjoining to Anandpur subdivision and northern part of Champua subdivisions.

The district is vulnerable to both Natural and manmade disasters. Not all the disasters can be predicted or prevented however precautionary measures taken within the existing infrastructure, in the form of preparedness considerably mitigate the human sufferings, loss of life, property and restore the normalcy at the earliest. The DM Plan 2021-2022 gives an insight on how the district disaster management plan helps to prevent and mitigate the upcoming days of any calamities. The Course of disasters is depending on how early the same is identified and how effectively specific control measures are applied in time. In other word District Disaster Management plan is one component within the framework of a holistic approach to reduce the impact of disasters. Planning in a pre-disaster phase helps us to be prepared for a post- disaster situation where in resources can be adequately deployed and thus losses can be minimized. Keonjhar district has a profile of varied hazards, the district has witnessed the devastating disasters like FANI2019, Bulbul 2019 Amphan 2020, COVID-19 2020, and YASS-21.

Considering the consequences of past disasters, priority has been given to preventive mitigation and preparedness measures. Preparation of District Disaster Management Plan (DDMP) is a part of it. The Disaster Management Act 2005 under section 31(I) provides directive to have a disaster management plan in every district. Apart from this statutory requirement, the hazard profile and disaster history of the district demands for a comprehensive District Disaster Management Plan to be in place for coordinated and streamlined management of disaster in the District.

Keonjhar is prone to a large number of natural as well as man-made disasters. Mainly Anandapur sub-division Ghashipura, Hatadihi, Anandpur & Anandpur Municipality are affected by occurrence of flood as the River Baitarani passes through the district. Typically, 200 km of the district is prone to floods and river erosion; This area is also prone to cyclones; 13 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches.

Vulnerability to disasters/ emergencies of Chemical, Biological, origin also exists. Heightened vulnerabilities to disaster risks can be related to expanding population, urbanization and industrialization, development within high risk zones, environmental degradation and climate change to ensuring clarity about roles and responsibilities of the District. Disasters disrupt progress and destroy the hard-earned fruits of painstaking developmental efforts in quest for progress. Keonjhar District has a profile of varied hazards, the district has witnessed the devastating disasters like FANI2019, Bulbul 2019 Amphan 2020, and COVID-19 2020,

Considering the consequences of past disasters priority has been given to preventive mitigation and preparedness measures. Preparation of District Disaster Management Plan (DDMP)





is a part of it. The Disaster Management Act 2005 under section 31 provides directive to have a disaster management plan in every district. In accordance with the provisions of the DM Act the District Disaster Management Plan (DDMP) of Keonjhar District has been updated and prepared covering with all aspects of Hazard, Risk, Vulnerability and Capacity Assessment (HRVCA), prevention, mitigation, preparedness, response plan and procedures to reduce the impact of various disasters in the district. These processes are to be incorporated in the developmental plans of the different departments and preparedness to meet the disaster and relief, rescue and rehabilitation thereafter, so as to minimize the loss to be suffered by the communities and are to be documented so that it is handy and accessible to the general public at large.

In the mean while the district based on its disaster experience has improved a lot in institutional, legal, financial and disaster infrastructures in the district. Thus, keonjhar administration is serious to deal with the issues of DM on priority basis. It is expected that these multi-hazard response plans would increase the effectiveness of administrative intervention during disasters

1.1-Vision:

The aim of the District Disaster Management Plan is to assess the available resources of the District and ensure the optimum utilization of the resources in the shortest possible time with minimum simple orders and procedure by activating the participation of Government, Community and volunteers at all levels. Further this plan will focus on making maximum utilization of human resources, material resources, and social resources to prevent loss of lives and minimize the loss of property serving fastest restoration of the situation.

1.2-Aims and Objectives: The DDMP identifies the roles and responsibilities of all the government line departments and other supporting organizations:

-  To improve preparedness at the district level, through risk and vulnerability analysis of disasters and to minimize the impact of disasters in terms of human, physical and material loss.
-  To ascertain the status of existing resources and facilities available with different departments & agencies involved in the management of disaster risks in the district that enhance the capability of the district administration in handling the disaster risks. This enables the district to respond to a disaster in an effective way and builds confidence across different segments of society.
-  To develop a framework for proper documentation of future disasters in the district, to have an update on critical information essential to a plan, to critically analyze and appraise response and to recommend appropriate strategies.
-  To evolve ADDMP as an effective managerial tool within the overall policy framework of Government of Odisha.

1.3-Preparation and Approval of DDMP:

As defined in Section 30 of DM Act 2005, DDMA shall act as the district planning; coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in the district in accordance with the guidelines laid down by the National Authority and the State Authority.

The District Collector discussed the modalities and seek views for preparation of a holistic plan in the virtual meeting held on 17 July 2020 in the NIC, Keonjhar. It was also discussed that the information collection, compilation and completion of the DDMP preparation should be completed by 31 August 2020. After finalisation of the DDMP, the DDMA will approve the same by the last week of August 2020 and then send a copy of the DDMP to the State Disaster Management Authority for their kind reference.

The District Disaster Management Plan should be reviewed and updated annually.

1.4-Multi-disaster Response Plan:

The Keonjhar District Disaster Management Plan (KDDMP) dresses the districts' response to disaster situations such as earthquakes, landslides, cyclones, epidemics, off-site disasters and roads accidents and fires. The present plan is a multi-hazard response plan for the disasters and outlines the institutional framework required for managing such situations. However, the plan assumes a disaster specific form in terms of the actions to be taken by the various agencies involved in the disaster. The form-end or local level of any disaster response organization will differ depending upon the type of disaster, but at the level of the back-end i.e, at the controlling level at the district it will almost remain same, for all types of disasters.

This document provides basic information required for the management of disasters in Keonjhar District by:

- Defining the Risks and Vulnerabilities of citizens of the district to different disasters;
- Identifying private and public sector stakeholders with prime and supporting responsibilities to reduce or negate these vulnerabilities
- Defines actions to be taken by these parties to avoid or mitigate the impact of possible disasters in the district.
- Subsidiary plans are developed at the:
 - At the Village and G.P level;
 - For major industrial sites located in the district (Off-site Emergency plan for Industrial Accidents available with DIS);
 - Through Standard Operating Procedures (SOPs) of Line Departments detailing how specific disaster response actions will be accomplished.
- Developing and maintaining SOPs are the responsibility of parties with designated prime or supporting tasks assigned by this plan.

Keeping in view all the possible aspects of the aforesaid problem in mind and to keep the Administration prepared in all possible ways to respond properly to various Disaster situations with minimum delay, possible Disaster situations have been identified and the component plans have also been identified & mentioned in detail in this document.

1.5-Non-Governmental Organization (NGOs) and Voluntary Agencies:

The capacity of non-governmental organization and voluntary agencies to reach out to community groups and their sensitivity to local traditions of the community, gives them an added advantage during disasters. Some of the agencies, both from within and outside the state, have technical expertise and capabilities which can be brought into managing difficult situations. During the post-disaster phase, therefore, efforts should be made to enlist partnership of some of the NGOs with relevant expertise, to assist the district administration in the process of relief and rehabilitation.

1.6-Role of District Administration:

The Deputy Collector, in charge of Emergency is assisted by the all the administrative officers incorporating with line departments, NGOs and multilateral agencies is responsible for developing plans and activities to mitigate (Preparedness & prevention) during disaster.

1.7-Authority for DDMP:

Under Section 31 of the DM Act -2005 the District Plan:

1. There shall be a plan for disaster management for every district of the State.
2. The District Plan shall be prepared by the District Authority, after consultation with the Different Line departments, local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority.
3. The District Plan shall include -
 - (a) The areas in the district vulnerable to different forms of disasters;
 - (b) The measures to be taken, for prevention and mitigation of disaster, by the Departments of the Government at the district level and local authorities in the district;
 - (c) the capacity-building and preparedness measures required to be taken by the Departments of the Government at the district level and the local authorities in the district to respond to any threatening disaster situation or disaster;
 - (d) The response plans and procedures, in the event of a disaster, providing for –
 - (i) Allocation of responsibilities to the Departments of the Government at the district level and the local authorities in the district;
 - (ii) Prompt response to disaster and relief thereof;
 - (iii) Procurement of essential resources;
 - (iv) Establishment of communication links; and
 - (v) The dissemination of information to the public;
 - (e) Such other matters as may be required by the State Authority.
4. The District Plan shall be reviewed and updated annually.
5. The copies of the District Plan referred to in sub-sections (2) and (4) shall be made available to the Departments of the Government in the district.
6. The District Authority shall send a copy of the District Plan to the State Authority which shall forward it to the State Government.
7. The District Authority shall, review from time to time, the implementation of the Plan and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

1.8-Evolution of DDMP:

The DDMP was first evolved in 2004 during the implementation of Government of India-United Nations Development Programme Disaster Risk Management Programme. With the enactment of the National DM Act, 2005 it provides for the preparation of the District Plan as per Section 31. District Disaster Management Plan, Keonjhar district of Odisha .

1.9-Stakeholders & their responsibilities:

The DDMA with Collector Cum District Magistrate as the RO and other line departments at district HQ are the main stakeholders in DM. They are responsible to deal with all phases of DM (Preparedness, Prevention, Mitigation, Response & Recovery) within the district. Other technical institutions, community at large, local self-governments, NGOs etc. are also stakeholders of the DDMP. The role of the stakeholders have been prepared with the avowed objective of making the concerned organizations understand their duties and responsibilities regarding disaster management at all levels and accomplishing them.

1.10-Approach to Disaster Management:

The Government of Gujarat takes an inclusive approach to disaster management. Disaster impact decrease is divided into three broad areas:

1.11-Warning, Relief and Recovery:

Necessary actions are intended to eliminate the loss of life and property and hardship due to disasters. Plans and SOPs at District level should provide as seamless as possible provision of warning, relief and recovery assistance to avoid or reduce losses and hardship.

The focal point for early warning, relief and recovery is the District Collector, who directs and coordinates these efforts within the district. The Collector is also answerable for coordinating warning, relief and recovery with similar activities in neighbouring districts and with the OSDMA and Revenue Department.

1.12-Mitigation, Preparedness and Prevention:

Mitigation, preparedness and prevention actions are to be taken before a disaster to reduce the probability of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible disaster. Vulnerability reduction is given priority over a risk reduction. The district can avail itself of four mechanisms (singularly or together) to reduce risk and vulnerability;

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly building and safety codes and land use plans,
- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and,
- Capacity building including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The Collector, assisted by the District Emergency Officer is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above.

The overall approach to disaster management is based on six elements;

- Precise risk and Vulnerability assessment
- Planning and efficient allocation of resources,
- Capacity building and training
- Provision of ample resources
- The assignment of disaster management roles and responsibilities which correspond to normal roles and responsibilities (if possible) and,
- Use of diverse legal and operational mechanisms to accomplish disaster management objectives.

Base on the interim assessment of risk and vulnerabilities, the district will focus on the following areas for mitigation, preparedness and prevention;

- Resilience of lifeline systems (water, power and communications)
- Reduction in disaster impact on health care facilities, schools and roads
- Vulnerability reduction in flood-prone areas
- Vulnerability reduction to high winds
- Improvement of off-site Preparedness near industrial sites.

1.13-Finance:

The finance arrangement as per the fund granted by OSDMA / State nodal agencies to the district. District Collector has authorities to distribute / impart the fund to the counter partners of Disaster management in the district as per required activities, according to the instructions of Government of Odisha.

1.14-Preparations and Revision of the Plan:

The District Collector is responsible for the preparation and revision of the District Disaster Management Plan in collaboration with the line departments and other organizations in the district. The plan should be reviewed annually/half yearly and updated:

- When significant changes in the nature of any hazards
- Lessons learnt following any major disaster or
- When there is any significant change to organization or responsibility of primary members of the task forces defined in the plan.

1.15-Preparation Process:





- District level Consultation workshop with District administration, line departments and Agency, NGO, CSR and authorities of District.
- Sharing of data format designed by OSDMA and Collection of Data and Plan from line departments and agencies.
- Data consolidated validation&compliance and preparation of draft plan.

DDMA shall compile its learning and proposed new mechanisms for improvement of the capacity to deal with disasters The Collector is further responsible for developing long term relief, recovery and rehabilitation plans during the course of a disaster. These plans will include steps to reduce


disaster impact in the future and be coordinate with the OSDMA in terms of policy and implementation.

Lesson learnt and Gap analysis (Review of 2021-22 DDMP) from different incidents happned in District during 2018-19.

Incidents were

-  FANI sever cyclonic storm Response 3rd to 5th may 2019.
-  Flood situation of Anandpur NAC, Anandpur,Keonjhar on 23rd September 2019.
-  YASS Cyclonic storm May 24th2021
-  Amphan in 2020, 20th May

Yaas in 2021, 26th May

-  Jawad in 4th -6th December.

SL NO	Departments	Gap identified	Recommendation to Departments
1	Rural Development & District Administration	Lack of adequate HR, Lack of information and funds distribution to disaster affected Beneficiaries, Non utilisation of funds due to lack information .	Development programes and schemes may design according to local disaster threats. Coordiantion between Govt and development programmes. SBM,MGNRGA, and other developmental programme should convergence with disaster management
2	Panchyati Raj	Instruction to PR members to alert during disaster operation of Panchayat emergency center and control room at GP level. Disaster paln at GP level.	GP plan and VDMC, village disaster paln ,training for PRI members and village volunteers, School cum cyclone shelter
3	Agriculture/Herticulture	Crop insurance, RKVYlist, Kisan credit Card list,List of Or chads and farm house, Nursery list, Farmers list with land records	Crop insurance, RKVY list, Kisan credit Card list, List of Orchads and farm house, Nursery list, Farmers list with land records. Insurance compny list
4	PHD	Drinking water facilities, tubewell, handpum,tank water, cholorination of water	NRDW,Watersuplly post in urban and rural area under vulnerability ,Tube well and hand pumps list under vulnerability area.

5	Animal Husbandry	Insurance of Animal husbandary of district, Goataryfarm,piggery, poultry farm etc List of farm and animal resource of the district, fully equipped LI center operation at G.P levele.	List of LI center, List of anmalfarm, Type of farm,Animal list and insurance list.
6	Industries (DIC)	List of Industries ,Type of solid waste sludges ,	Solid waste Management sludge disposal mechanisim,ofsite and insite disaster plan with preparedness and mitigation startgey .
7	Health	List of PHC& CHC under vulnerability area,Ambulance ,Doctor list,paramedical staff list ,RMC list and have adequate doctor,medicine and Operational RMC should there.,Ambulance ,All wheather road connection to CHC &PHC.Women employees and disaster based preparation should be at CHC, PHC and DHH also.Covid hospital arragemnt,trainedANM,Nurses&Par amediocl staffs were arrgend ,PPE kit,Sanitiser other COVID management logistic kit were procured	PHC& CHC have adequate doctor,Medicine and Operational RMC shouldthere.,Ambulance ,Allweather road connection to CHC &PHC.Women employees and disaster based preparation should be at CHC, PHC and DHH also. Departmental palnshoud be there.
8	Education	Lack identification of VulnarableSchool /colleges,and other educational institute	Departmental DP,List of vulnerable school ,school cum cyclone shelters.
9	Forest &Enviornmnet	Lack Idendification of vulnerability of Forest area,Beat area vulnarablearea,VSS and forest list ,	Departmental disaster plan with all list forest,type of forest with tree list
10	Irrigation	Lack of vulnerable dam area,river embank ment,riverwter flow,	Departmental disaster plan with all list vulnerable dam area,river embank ment,riverwterflow,s
11	Sports	Lack Field,statidum ,	Departmental disaster plan need
12	Culture/Heritages/Monu ments	Lack of protection	Departmental disaster plan need
13	CSR/NGO	Lack support from NGO/CSR	OFSDP not supported cutter team to cuuting down the uprotted trees.

SWOT ANALYSIS STRENGTHS OF KEONJHAR DISTRICT

Nearly 1500 mm of annual rainfall. Well endowed groundwater resources in one part. conducive climate and land topography suitable for commercial crops like (flower, off season vegetables, fruits etc.) large forest area. Availability of suitable land for agriculture. Connectivity of district and block headquarters. Availability of black bengal breed of goat. electricity in a number of villages. Dairy infrastructures, (chilling plant). Upcoming industries. local desi varieties available like black gram biri (pejuabiri) , maize, dhanualanka and brinjal. a good network of banks. number of women self help groups. almost in all blocks there are ngos. A number of government developmental programmes. agriculture related resource and extension organisations(kvk, rrtsetc).

LARGE NUMBER OF RIVERS AND RIVULETS

Strengths continued.... large number of rivers and rivulets

STRENGTHS Favourable Agro-Climatic Conditions Forest Coverage

Continued.... Favourable Agro-Climatic Conditions Prolonged Dry Winter High Rainfall (mm) Soil type (Red & Black – 2-5% & Red & Yellow – %) Forest Coverage- Total forest area Sq. Km.(37.30 %)- Reserve Forest Sq. Km.(22.08 %)

STRENGTHS Mineral Resources (In Million Tones) Iron ore :- 2361.17

Continued..... Mineral Resources (In Million Tones) Iron ore : Manganese : Chromites : Quartz : Quartzite : Pyrophyllite and Bauxite :

STRENGTHS Types of Industries Number Continued..... Sponge Iron 21

Ferro Manganese based Plant 07 Manganese Ore Processing Unit 05 Pyrophyllite Powder Unit Rice Mills Small Scale Industries Cottage Industries Handloom Industries Cold Storage Milk Chilling Plant

STRENGTHS Tourism Sanghagara water fall Maa Tarini Temple

Sanghagara Lake Khandadhar Bhimkund

STRENGTHS Total forest area - 3097.18 Sq. Km.(37.30 %)

Continued..... Total forest area - Sq. Km.(37.30 %) Reserve Forest - Sq. Km.(22.08 %)

WEAKNESS

LOW LEVEL OF LITERACY. SMALL LANDHOLDINGS.

Forest Degradation Due to the dependency of the Families on Woodcutting and shifting Cultivation. Deforestation By Mining Activities Are Affecting The Ecological Balance. Degradation Of Uplands Due To Erosion. Landlessness Is High(29%) Even With Access to Resource Base. Soil Acidity And Iron Toxicity hampers Crop Growth. Low Soil Fertility. Subsistence Farming System And Low Agriculture Production Due To unavailability of Irrigation. Traditional Method Of Cultivation (Subsistence Farming). Lack of Support services Like Agri Clinic or Entrepreneurs, Soil Testing Lab. Easy And Unexploitable Credit Is not available. Poor Infrastructures Supporting / Promoting any activity like Cold Storage processing Unit. Unorganised Market. Poor Connectivity affecting the Supply Of Inputs And Output Marketing. Unavailability Of All Weather Roads To The Interior Villages. Lack Of Proper Focus Upon Livelihood Enhancement of The Poor Is the Major of the Affecting the Family Well Being And leading to higher BPL.

WEAKNESSES BPL FAMILIES(RURAL) - 220820 BPL FAMILIES(URBAN)

Female Literacy 56%Traditional Agro-Horticulture Practices (Low Returns) Small undulated &fragmented land holding.Low Level of Entrepreneurial Skill.Inadequate Health Care Facilities.Marginal Farmers 198044 (With lowLandholding size)

OPPORTUNITIES

Agriculture production enhancement by creating decentralized and individual or community managed water harvesting and irrigation infrastructuresintensification and diversification of farming system along with by improved practices of crop cultivation, storage and marketingthere are scopes for expanding in more areas under maize, arhar and biri.ginger / turmeric, chilli (organic scope is there) intercropped with cowpea in the elephant prone area can be a viable option.scope for increasing yield of most of the major cropscope for realizing more values in niger by market interventionplantation and horticulture due to the presence of huge uplands and suitable climateproduction enhancement in allied sectors like poultry, dairy, goat rearing and pisciculture by making producers adopt scientific practices and collectivizationproduction enhancement in forest based livelihoods like tasar sericulture through introduction of systematic rearing practices with quality inputshuge availability of funds under periphery development society.

THREATS

Mining, industries threat to environment and natural resources-based livelihoods.unplanned industrial growth. uncertainty in rainfall is another threat. degradation of natural resource basewide spread malnutrition, large scale vacancies of para-medicos. farming is becoming less attractive to the youthselephantpredationelephant and monkey in parts of the keonjhar is a big threatclose proximity to naxal infested area.

1.16- District Collector & District Magistrate, Keonjhar.

- Facilitate and coordinate with local Government bodies to ensure that pre and post Disaster Management activities in the district are carried out.
- Assist community training, awareness programmes and the installation of emergency facilities with the support of local administration, non-governmental organizations and the private sector.
- Function as leader of the team and take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- Recommend Relief Commissioner and State Government for declaration of disaster.

Different Departments at District level

Every Office of the State Government at the District level shall prepare a Disaster Management Plan setting out of the following:

- Provisions for prevention and mitigation measures as provided in the District
- Plan and as assigned to the department or agency concerned;
- Provisions for taking measures relating to capacity-building and preparedness as laid down in the District Plan;
- The response plans and procedures, in the event of, any threatening disaster situation or disaster;

- Coordinate the preparation and the implementation of its plan with those of the other organizations at the district level including local authority, communities and other stakeholders;
- Regularly review and update the plan; and submit a copy of its Disaster Management Plan, and of any amendment thereto, to the District Authority. District Disaster Management Plan, Keonjhar District, Odisha.
- District Disaster Management Authority, Keonjhar.

Local Authorities

- Provide assistance to DC in Disaster Management activities.
- Ensure training of its officers and employees on Disaster Management
- Ensure that resources relating to Disaster Management are maintained as to be readily available for use in the event of any threatening disaster situation or disaster.
- Ensure that all construction projects under it conform to the standards and specifications laid down.
- Carry out relief, rehabilitation and reconstruction activities in the affected area within the district.

Private Sector & Corporate

- Encourage for their active participation in the pre-disaster activities in alignment with the overall plan developed by the DDMA or the DC.
- Adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authorities.
- As a part of Corporate Social Responsibility (CSR) undertakes DRR projects in consultation with the DC for enhancing district's resilience.

1.4.5 NGOs/CBOs and Volunteer Agencies

- Assist in prevention and mitigation activities under the overall direction and supervision of the DDMA or the DC.
- Participate in all training activities organized and should familiarize themselves with their role in Disaster Management.

1.4.6 Citizens

It is the duty of every citizen to assist the DC or such other person entrusted with or engaged in Disaster Management whenever demanded generally for the purpose of Disaster Management.

Media Supports: - District media cell had plighted their responsible in DDMP preparation process, The SAMBAD a leading daily Odianews paper had published the district disaster management plan process workshop organised at district level on 17th May 2019.

1.5 How to use DDMP Framework

As per Section 31 of DM Act 2005 it is mandatory to prepare a DDMP, for the protection of life and property from the effects of hazardous events within the district.

- The Collector & DM as the chairman of DDMA has the power of overall supervision and direction control as may be specified under State Government Rules/SDMP guidelines.

- The DEOC will be staffed and operated as the situation dictates. When activated, operations will be supported by senior officers from line department's government agencies; private sector and volunteer organizations may be used to provide information, data and resources to cope with the situation.
- Facilities vital to operation of the district government functions have been identified.
- The Collector & DM/RO or his designee will coordinate and control resources of the District.
- Emergency public information will be disseminated by all available media outlets through the designated media and information officer.
- Prior planning and training of personnel are prerequisites to effective emergency operations and must be considered as integral parts of disaster preparations.
- Coordination with surrounding districts is essential when events occurred that impact beyond district boundaries. Procedure should be established and exercised for inter district collaboration.
- Departments, agencies and organizations assigned either primary or supporting responsibilities in this document must develop implementation documents in order to support this plan.
- When local resources prove to be inadequate during emergency operations request for assistance will be made to the State or higher levels of government and other agencies in accordance with set rules and procedures.
- District authority will use normal channel for requesting assistance and resources, i.e., through the DEOC to the SEOC. If state resources have been exhausted, the state will arrange to provide the needed resources through central assistance.
- The DEOC will coordinate with the SEOC, Agencies of the Govt. of India like IMD/CWC to maintain up to-date information concerning potential flooding, cyclones etc. As appropriate, such information will be provided to the citizens of the affected areas in the district.
- Upon receipt of potential problems in these areas, DEOC/designated official will appropriately issue alert and notify action to be taken by the residents.
- Disaster occurrence could result in disruption of government functions and, therefore, all levels of local government and their departments should develop and maintain procedures to ensure continuity of Government action.

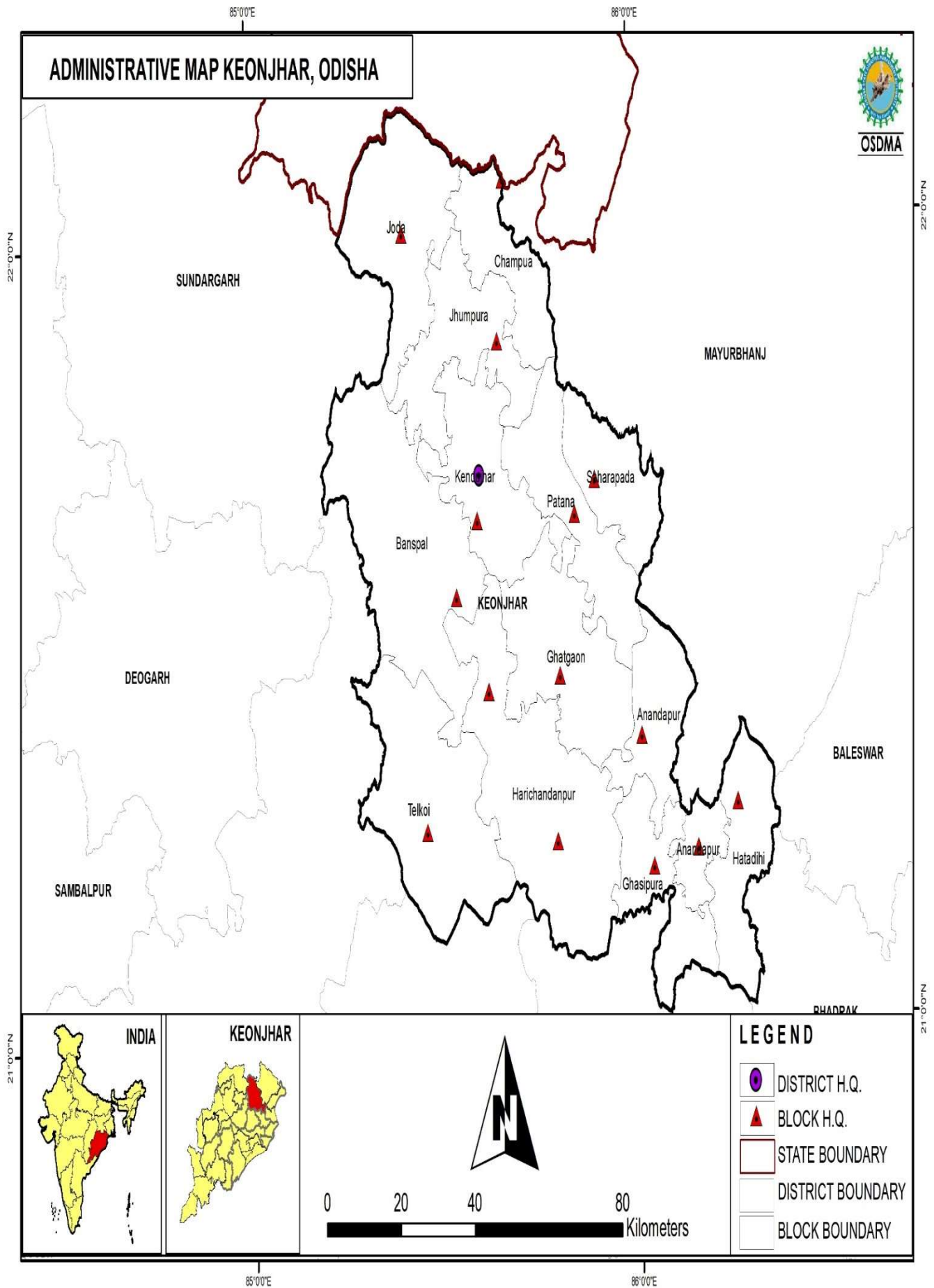
Approval Mechanism of DDMP

As per Section 30 of DM Act 2005, the DDMA acts as the district planning, co-ordinating and implementing body for disaster management and take all measures for the purpose of DM in the district in accordance with the guidelines laid down by the National Authority and the State Authority. Accordingly, the District Plan is prepared by the DDMA, after consultation with the local authorities and having regard to the NDMP and the SDMP. DDMA Committee will approve the DDMA under chairmanship of Chairperson DDMA and Collector & DM.

1.7 Plan review and updation

The District Plan shall be reviewed and updated annually as per Section 31 (4) of the DM Act 2005.

Chapter-2



District profile

Keonjhar enjoys pride of a place in the geological and anthropological map of the State. Its minerals are varied and rich. Its iron-ore, manganese and chrome ore are opulent as well as extensive. Anthropologically, it has two main tribes, the Juangs and the Bhuyans who have unique ethnic life style. Both Juangs and Bhuyans insist on their right for shifting cultivation which is known by different names such as Rama, Biringa and Podu. Bhuyans follow many traditional Hindu practices. When a distinguished visitor arrives in a Bhuyan Village, the women according to Hindu tradition insist that the visitor should stand on a little elevated wooden pedestal, so that they could wash his feet. For natural beauty, Keonjhar is as varied as the whole of Odisha¹ with waterfalls of many heights, roaring gorges with rolling boulders and rocks of varying hue which are otherwise rare. Wild animals in the forests almost become extinct due to indiscriminate poaching.

Keonjhar has the distinction of having one of the oldest rocks in the world covering an area of 100 square kms. at Asanpat. The rock is said to be 38,000 million years old. It must have been there before peninsular India broke away from Antarctica and moved north.

KEONJHAR DISTRICT Situated in the Northern Part of the State.

Total Geographical Area – 8303 Sq. Kms. Distance from State Capital -235 Kms. 3 Sub-Divisions. 13 Tahasils. 13 C.D. Blocks. 286 Gram Panchayats. 2132 Villages. 4 Municipalities. 20 Police Stations.

Administrative set up

The district has three Sub-divisions, Thirteen Tahasils and thirteen Blocks. There is a 3-tier Panchayati Raj system in the district with all the rural development schemes and programmes being implemented and monitored through PRIs viz. Zilla Parishad at district level, Panchayat Samitis at block level and Gram Panchayat at the grass root level. The details of administrative Blocks (TD & CD) operating under the three sub-divisions are as follows:

There are four Municipalities in the district with headquarters at Keonjhar, Anandapur, Joda and Barbil. There are 24 Police Stations in the district.

Subdivisions- 03,	1. Anandapur, 2. Champua, 3. Kendujhar
Revenue Circles	50
Gram Panchayat-	291
Sub-Registrar Office-	06
Police Stations-	24
Towns	06
Municipalities- 04:	Anandapur, Barbil, Kendujhar, Joda
N.A.C-	4
Inhabited Villages-	2135
Fire Stations	14
ICDS Projects	14
Treasury/Sub Treasury	07
HQ. Hospital/Hospitals-	04
Community Health Centre/ UGPHC-	13
Public Health Centre-	81
Sub Centre (Health)-	316

Demography

As per census 2011, Kendujhar had population of 1,802,777 of which male and female were 907,135 and 895,642 respectively. There was change of 15.42 percent in the population compared to Population as per 2001. The male-female ratio in the district is more favourable towards women as compared to National average.

DEMOGRAPHY OF KEONJHAR

Average literacy rate of Kendujhar in 2011 were 68.24 compared to 59.24 of 2001. If things are looked out at gender wise, male and female literacy were 78.12 and 58.28 respectively. For 2001 census, same figures stood at 71.99 and 46.22 in Kendujhar District. Total literate in Kendujhar District were 1,052,518 of which male and female were 605,119 and 447,399 respectively. In 2001, Kendujhar District had 780,918 in its district. Population Density: 188 per Sq. Km.

The sex ratio in the district is higher than both the state and national average

The growth rate of population in the district is slightly more than the State average but less than the National average. The density of population per sq. Km. in the district is much lower than the State & National averages

There is a predominance of rural population and the district has not caught up with the urbanization process in the country.

The figure clearly shows that the Keonjhar has predominance of tribal population.

Natural resources

The district occupies an important place in the mineral map of the country. The Joda, Barbil sector has got one of the richest mineral reserves with huge deposits of Iron ores, Manganese of superior quality. Besides, deposits of Chromites, Quartz and Quartzite, Pyrophyllite, etc. are also reported from different parts of the district. The Iron ore reserves are estimated at 2361.17 million tonnes. Similarly, Manganese, Chromites, Quartz and Quartzite, Pyrophyllite and Bauxite reserves are of the order of 28.40 million tonnes, 3.25 million tonnes, 2.75 million tonnes, 20 million tonnes and 5 million tonnes respectively. The most important Singbhum-Keonjhar-Bonai iron-ore belt runs through the district. A number of mineral based industries have also been established particularly in Barbil and Joda sector. The major mineral deposits are as follows:

Sl.No.	Minerals	Place of deposit	Qty. of resources in Million Tonne
1.	Iron	Thakurani, Joda, Banspani, Gandhamardan Hill, Chamakpur, Deogaon	2871.00
2.	Manganese	Barbil, Joda, Banspani, Chamakpur, Nayagarh, Silijoda, Guruda	28.40
3.	Chromites	Sulanair	24.40

In view of the rich deposit of minerals in the district, it is considered as the storehouse of the mineral resources of the state.

Details of Mineral Resources in the District						
Name of the Ores/ Minerals	No. of working Mines	Area Covered (In Hect.)	No. of Worker Employed	Output (In .000 M.T)	Value (Rs. In 000)	Quantity Export abroad
2	3	4	5	6	7	8
Chromites	4	409.96	813	134	1304088	-
Iron ores	86	25639.41	10349	51815	120521690	11940
Manganese	29	5583.7	3016	372	4602756	-
Manganese	1	40.47	-	-	-	35
Pyrophyllite	5	177.90	35	5	905	-
Quartzite	7	177.9	-	4.5	900	-
Serpentine	1	40.47	-	1	NA	-
Total	133	32069.81	14213	52331.5	126430339	11975

Source: District Statistical Handbook, Keonjhar, 2011

Economy

Kendujhar District is highly rich in mineral resources and has vast deposits of iron, manganese and chromium ores. About 30 percent of its total area is covered with dense tracts of forests. But the district in spite of its immense mineral and forest wealth is still economically backward.

In 2006 the Ministry of Panchayati Raj named Kendujhar one of the country's 250 most backward districts (out of a total of 640). It is one of the 19 districts in Orissa currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

District Particulars		Statistical Information	
Geographical Area (Sq. Km.)		8303	
Distribution of Land areas (%)		5.33	
Rank in the State as per Distribution in Land Area		4	
Total workers		766514	
Main Workers		442497	57.72 %
Marginal Worker	3 to 6 months	262422	34.23%
	less than 3months	61595	8.035%
Total workers		766514	
Workers, (2011 Census)	Cultivators	198044	25.83%
	Agricultural Labourers	310075	40.45%
	Workers in Household industry	21314	2.78%
	Other workers	237081	30.92%
Total Worker	Total	766514	

(Main+Marginal)	Rural	682446	89.03%
	Urban	84068	10.96%
Work Participation Rate	Total		42.5
	Rural		44.1
	Urban		33.2

Source: District Statistical Handbook, Keonjhar, 2011

BASIC SOCIAL INDICATORS OF THE DISTRICT

Total population 2 Birth rate 22.003 Death rate 9.004 Infant mortality 54.74/1000 Live birth 5 Maternal mortality rate 243/ Live birth 6 HEALTH INSTITUTIONS Hospital, Dispensary, PHC/APHC, CHC etc. 84 Sub-Centre 3517 Nos. of vacancies in various hospitals & Health Centres Doctors 49 Paramedicos 101

ECONOMIC INDICATORS 830300 Ha 309718 Ha (37.30%) 324395 Ha

Geographical area Ha 2 Forest area (Area and %) Ha (37.30%) 3 Cultivable Area () Ha 4 Cultivated area (Area and %) Ha (35.80%) 5 Normal Rain fall (mm) Rain fall in 2007 mm mm 6 Irrigated area/Net area sown (Area & %) Kharif (in 2007) 68884 Ha (23%) Rabi (in) 33572 Ha (11.3%) 7 Net Sown area Ha

ECONOMIC INDICATORS 8 NAME OF THE BLOCKS HAVING >35% IRRIGATION

Ghasipura 41.80% Hatadihi 48.00% 9. NAME OF THE BLOCKS HAVING <35% IRRIGATION Anandapur 14.60% Ghatagaon 22.60% Harichandanpur 17.50% Patna 31.80% Saharpada 5.10% Keonjhar 23.90% Banspal 4.40% Telkoi 28.00% Champua 8.40% Jhumpura 6.50% Joda 5.80%

ECONOMIC INDICATORS 10 Total Paddy Cultivated (2007-08) Area 171009 Ha

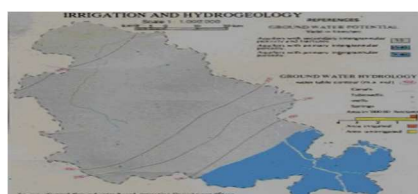
Production MTs 11 Total Non-Paddy Cultivated Pulses 35663 Ha 15779 MT Wheat 22408 Ha 6501 MT Fibres 4920 Ha 7590 MT Maize 26681 Ha 30467 MT Bazra 30 Ha 15 MT Vegetables 29785 Ha MT Spices 3902 Ha 6058 MT Sugercane 858 Ha Other Millets 724 Ha 406 MT 12 Paddy (Yield/Ha) 24.38 Qtl/Ha 13 Seed Replacement Ratio 13.50% 14 Fertilizer Consumption (Per Ha) 9.80 (Kg/Ha)

ECONOMIC INDICATORS 15 Average size of land holdings Marginal Farmers

0.50 Ha Small Farmers 1.37 Ha Big Farmers 3.57 Ha 16 No. of Rural BPL families (76%) 1997 Census 17 Total no. Rural families (1997 Census) 18 Railway Lines 155 Kms

Soil Fertility

Soils of 12 blocks under North-Central Plateau zone are mostly red loam covering 75% of area with 2-5 % of mixed red and black soil and 20-23 % of red and yellow soil. The soils are mostly acidic in nature, topsoil is light textured whereas sub-soil is heavier with low N & P availability but with moderate level of K availability. The soils of Anandapur and part of Hatadihi block under north-eastern costal plain zone are red and laterite and deltaic alluvium.



IRRIGATION AND HYDRO GEOLOGY

The ground water quality of the district is quite suitable for the domestic and irrigation uses. The utilizable ground water potential of the district as per the recent estimate is 132291 Hectare Metre (Hm). The total utilization of ground water resources of the district is 16042 Hm. At present the stage of ground water development of the district is merely 12.13% hence there exists a good scope for ground water development through installation of different ground water extraction structures to augment the irrigation potential. The district is endowed with a number of potential rivers and streams. Surprisingly 23% of the cultivable area is covered under irrigation network.

Category		Figures in Ha.
Cultivable Land		2,97,873
Irrigated Land		68,510
i)	Major	11754 (Salandi)
ii)	Medium	9800 (Kanjhari)
		4708 (Canal)
iii)	Minor	20466
iv)	L.I.	5892
	Dug well	6253
	Sanitary Well	1423
v)	Bore Well	
	W.H.S.	1128
	Others	6576

Proportion of Population:

The rural population of Keonjhar constitutes 86.00 per cent of the total population whereas urban population constitutes 14.00 per cent as per 2011 Census.

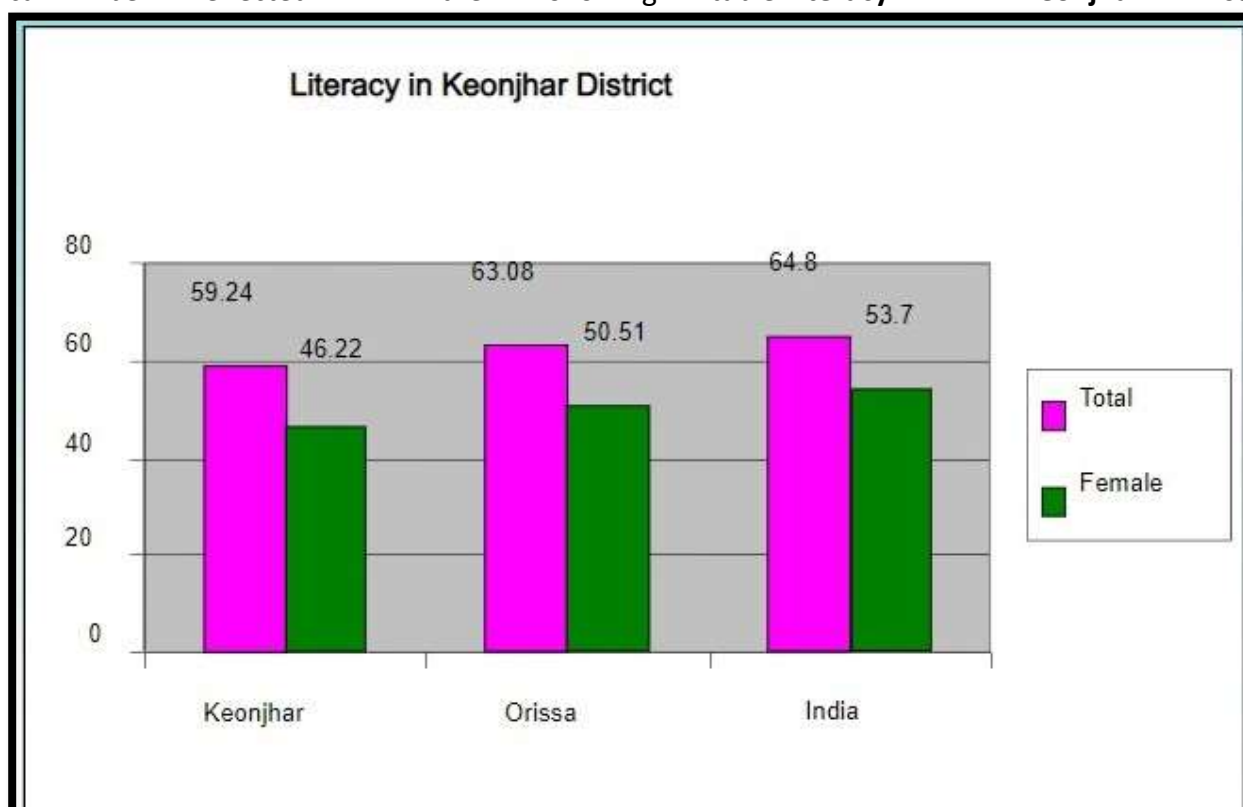
SI No.	Year/Block/ULB	Geographical Area in Sq.km.	No of Households	Number of Villages		
				Inhabited	Un-inhabited	Total
1	2	3	4	5	6	7
	2001	8303.0*	326784	2069	53	2122
	2001					
	BLOCK					
1	Anandapur	295.9	20344	123	4	127
2	Banspal	1200.79	17937	164	0	164
3	Champua	345.92	21012	145	4	149
4	Ghasipura	350.19	27675	180	4	184
5	Ghatagaon	465.76	20948	140	2	142
6	HC PUR	624.39	25521	208	10	218
7	Hatadihi	345.92	31207	217	5	222
8	Jhumpura	487.3	20718	149	3	152
9	Joda	438.82	22874	114	5	119
10	Keonjhar	450.62	28492	219	5	224
11	Patna	416.23	19304	149	4	153
12	Saharpada	383.53	16698	138	1	139

13	Telkoi	559.69	17679	143	6	149
Urban Level Bodies						
1	Anandapur(M)	77.29	6841	-	-	-
2	Barbil(M)	41.44	11092	-	-	-
3	Joda(M)	26.42	8305	-	-	-
4	Keonjhar(M)	26.40	10137	-	-	-

Literacy

Average literacy rate of Kendujhar in 2011 were 69.00 compared to 59.24 of 2001. If things are looked out at gender wise, male and female literacy were 79.22 and 58.70 respectively. For 2001 census, same figures stood at 71.99 and 46.22 in Kendujhar District. Total literate in Kendujhar District were 1,069,023 of which male and female were 616,025 and 452,998 respectively. In 2001, Kendujhar District had 780,918 in its total region.

According to the 2001 Census report the total literacy of Keonjhar district is 59.83 as against state literacy rate of 63.61. The literacy rate of males is 72.32 and that of female is 46.34. The density of population of the district is 188 as against 161 in 1991 census. In 2001 census the sex ratio of the district is 977. The regional variations in literacy rate among the blocks as well as different socio-economic groups are the silent features of the district. The result of that can be reflected in the following table. **Literacy in Keonjhar District**



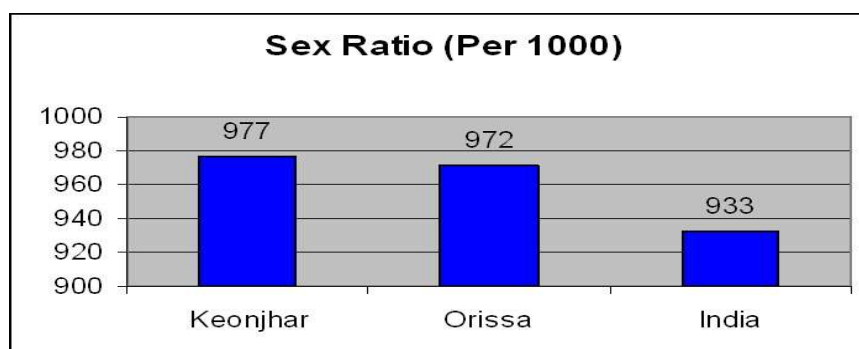
The literacy rate stood as follows:- 2001- Male—71.99%. Female---46.22% 2011—Male—78.12% Female---58.28% In the year 2009-10, number of High Schools was 477 with 61000 students, out of which girls were 47.54%, ST-11.47% and SC-29.50%.

BLOCKWISE LITERACY POSITION

Sl.No.	Name of the Block/NAC/ Municipality	Literates			Sex ratio
		M	F	T	
1.	Anandapur	66.25	40.44	53.34	983
2.	Banspal	40.26	15.07	27.66	1015
3.	Champua	75.94	48.5	62.22	996
4.	Ghasipura	82.7	61.36	72.03	981
5.	Ghatagaon	70.81	42.78	56.79	987
6.	Harichandanpur	65.36	37.4	51.38	977
7.	Hatadihi	83.58	61.41	72.49	972
8.	Jhumpura	69.61	41.07	55.34	991
9.	Joda	59.23	31.33	45.28	950
10.	Keonjhar	73.49	44.17	58.83	982
11.	Patna	73.78	47.67	60.72	1004
12.	Saharpada	71.76	42.81	57.28	1019
13.	Telkoi	67.35	38.49	53.14	985
14.	AnandapurMplty	89.26	71.29	80.27	954
15.	BarbilMplty.	76.21	54.13	65.17	904
16.	JodaMplty	75.17	51.50	63.33	927
17.	KeonjharMplty.	88.84	74.94	81.89	886
TOTAL		72.32	47.34	59.83	977

The above table shows that the percentage of literacy rate in Ghasipura and Hatadihi block and all urban areas is above the district average. The percentage of literacy in the remaining areas is below the district average. It further appears from the table that the percentage of literates among males in rural areas is 56.51 as compared to 27.18 among females. The difference is due to apathy for women education and tribal issues.

Sex Ratio



With regards to Sex Ratio in Kendujhar, it stood at 987 per 1000 male compared to 2001 census figure of 977. The average national sex ratio in India is 940 as per latest reports of Census 2011 Directorate.

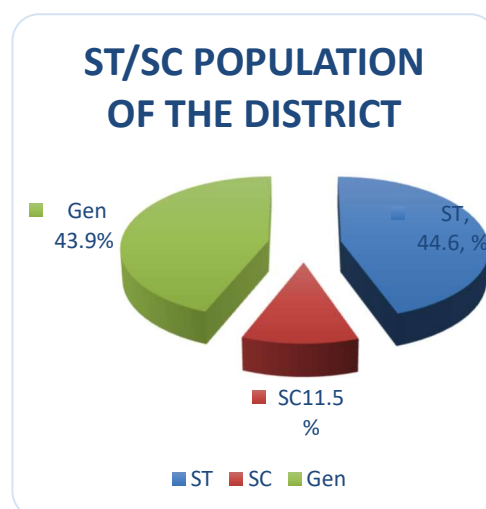
Description	2011	2001	Decadal Variation
Actual Population	1,802,777	1,561,990	+2,40,787
Male	907,135	790,036	+1,17,099
Female	895,642	771,954	+1,23,688
Proportion to Orissa Population	4.30%	4.24%	+0.06%
Average Literacy	69.00	59.24	+9.76%
Male Literacy	79.22	71.99	+7.23%
Female Literacy	58.70	46.22	+12.48
Literates	1,069,023	780,918	+2,88,105
Male Literates	616,025	479,337	+1,36,688
Female Literates	452,998	301,581	+1, 51,417

Source: Census, Govt. of India

Demographic Diversity

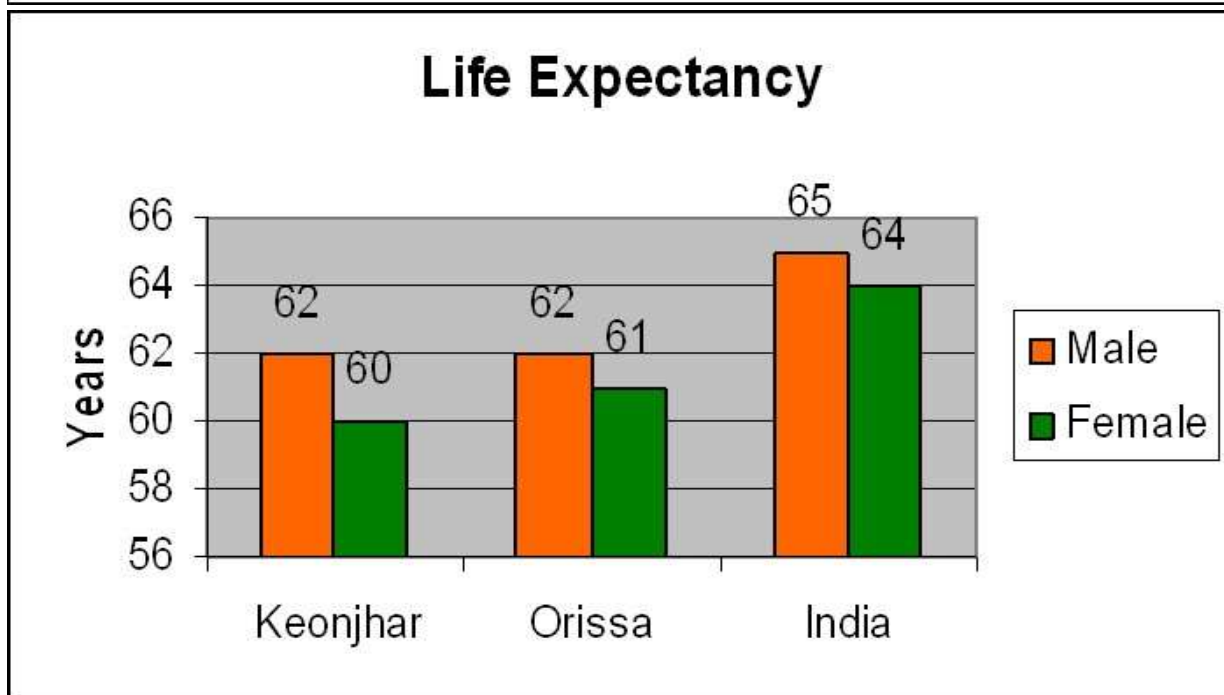
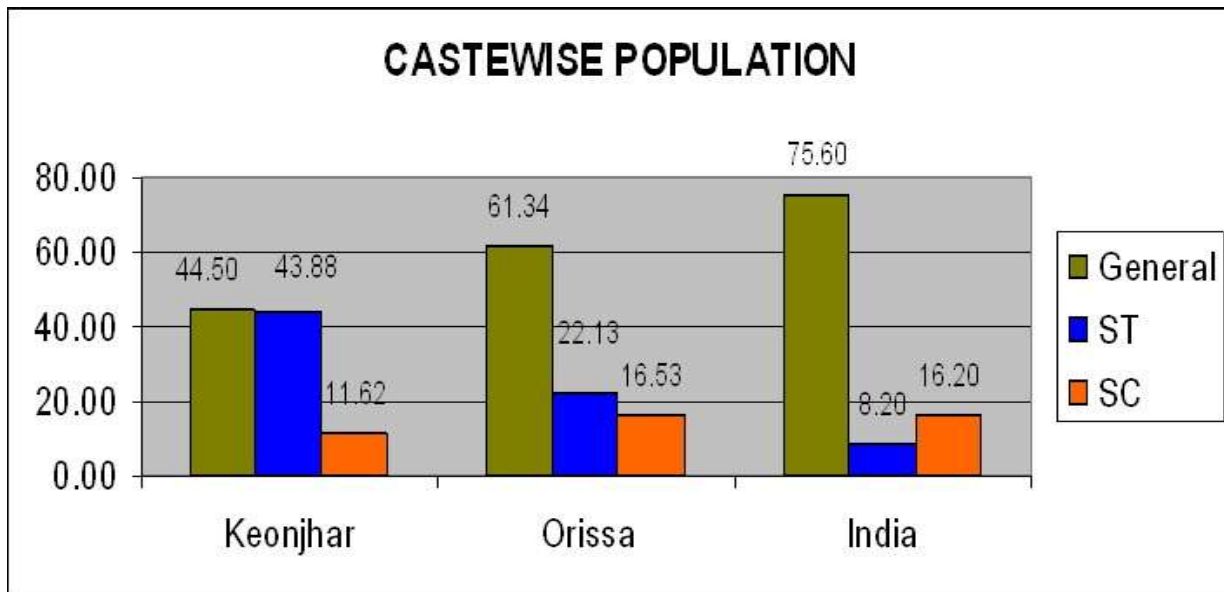
The district Keonjhar is known for anthropological diversity as the district has a high percentage of tribal population. There are 25 types of tribes in the district. The literacy level of the entire district stands at 69 % and the female literacy rate stood at only at 59.24% for the entire district. But in case of tribal the literacy rate is mere 40.3 %. The gender gap in education at rural level is 20.52%. Out of 13 blocks of Keonjhar Banspal, Champua, Harichandanpur, Joda, Jhumpura, Keonjhar (Sadar Block), Telkoi and Ghatagaon, Patna & Saharpada are tribally dominated blocks and declared as scheduled blocks under Tribal Sub-Plan and at the same time these blocks are enlisted as Educationally Backward Blocks (EBB)

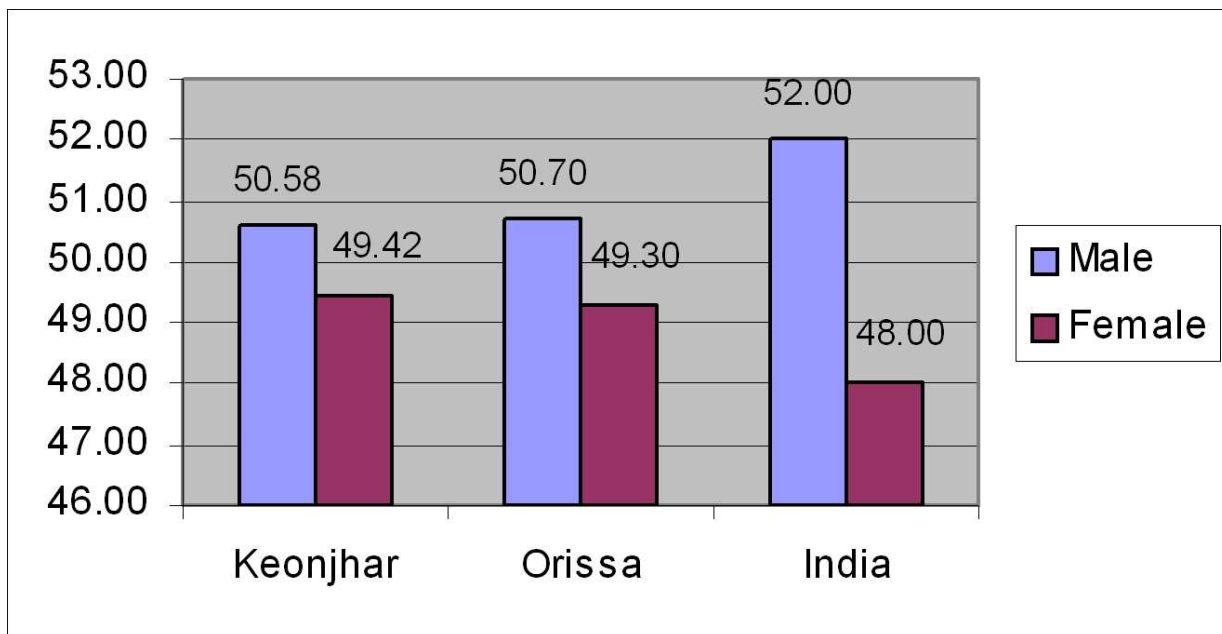
. There are 41 types of tribes residing in the district. Out of 13 Blocks of Keonjhar district Banspal, Champua, Harichandanpur, Joda, Jhumpura, Keonjhar (Sadar Block), Telkoi and Ghatagaon are tribal dominated Blocks and educationally quite backward. Keonjhar, Telkoi, Champua, and Barbil Tehsils are declared as Scheduled areas of the district. The literacy rate among the tribal people of the district tunes to 40.3 per cent. This shows that tribal communities still lag behind in comparison to other communities of the district in spite of the fact that government have been taking various development measures for improving the situation. Linguistically tribal population of Austric and Mundari language groups are dominated in Keonjhar district, which include various tribal communities like Juang, Munda, Kol and Ho, while Bhuiyan tribal community belongs to Indo- Aryan Language group.



Out of thirteen Blocks of Keonjhar eight Blocks are having large percentage of tribal population. The linguistic map of the district shows that all the Blocks are multilingual in varying degrees. The main tribal communities that co-exist and co-operate with Oriya language are Juang, Santali, Ho and Munda. In the Blocks of Harichandanpur and Keonjhar Sadar Oriya language

emerges as the major language. In the Blocks of Champua, Joda, Banspal and Jhumpura, Oriya is used as a subsidiary and a supplementary language with tribal language. In Telkoi Block the tribal like Kissan use local Oriya dialect while Munda and Juanga use their respective dialect.



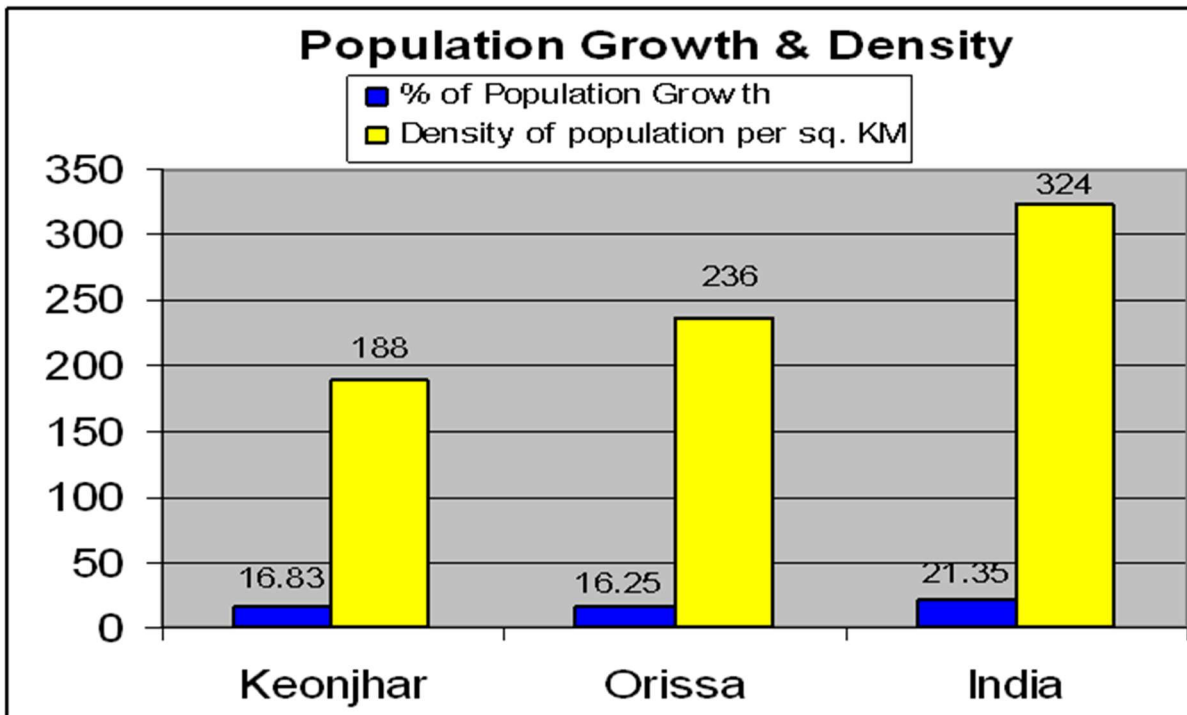


Key Indicators of the District as per CENSUS-2011

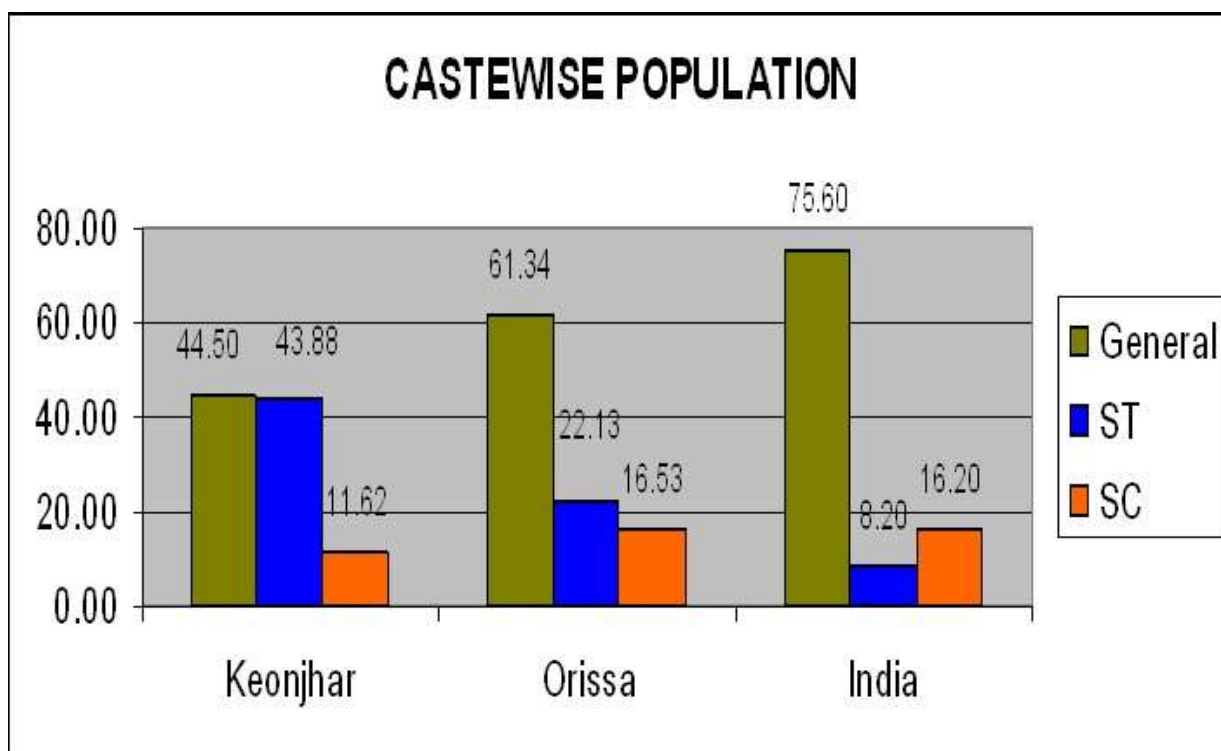
Details of the Household			
Data/Indicator	Data Value	Unit	Subgroup
Number of households	348448	Number	Rural
Number of households	56824	Number	Urban
Number of households	405272	Number	Total
Average size of households	4.4	Number	Rural
Average size of households	4.5	Number	Urban
Average size of households	4.4	Number	Total
Population density	217	Persons per Sq. km	Total

Distribution of the Population As per 2011			
Data/Indicator	Data Value	Unit	Subgroup
Population size	1548674	Number	Rural
Population size	253059	Number	Urban
Population size	1801733	Number	Total
Population size	895246	Number	Female
Population size	127518	Number	Female 0-6 yrs
Population size	906487	Number	Male
Population size	131885	Number	Male 0-6 yrs
Population size	259403	Number	0-6 yrs
Population size	774007	Number	Rural Female
Population size	121239	Number	Urban Female
Population size	774667	Number	Rural Male
Population size	131820	Number	Urban Male

Population size	224941	Number	Rural 0-6 yrs
Population size	110830	Number	Rural Female 0-6 yrs
Population size	114111	Number	Rural Male 0-6 yrs
Population size	34462	Number	Urban 0-6 yrs
Population size	16688	Number	Urban Female 0-6 yrs
Population size	17774	Number	Urban Male 0-6 yrs

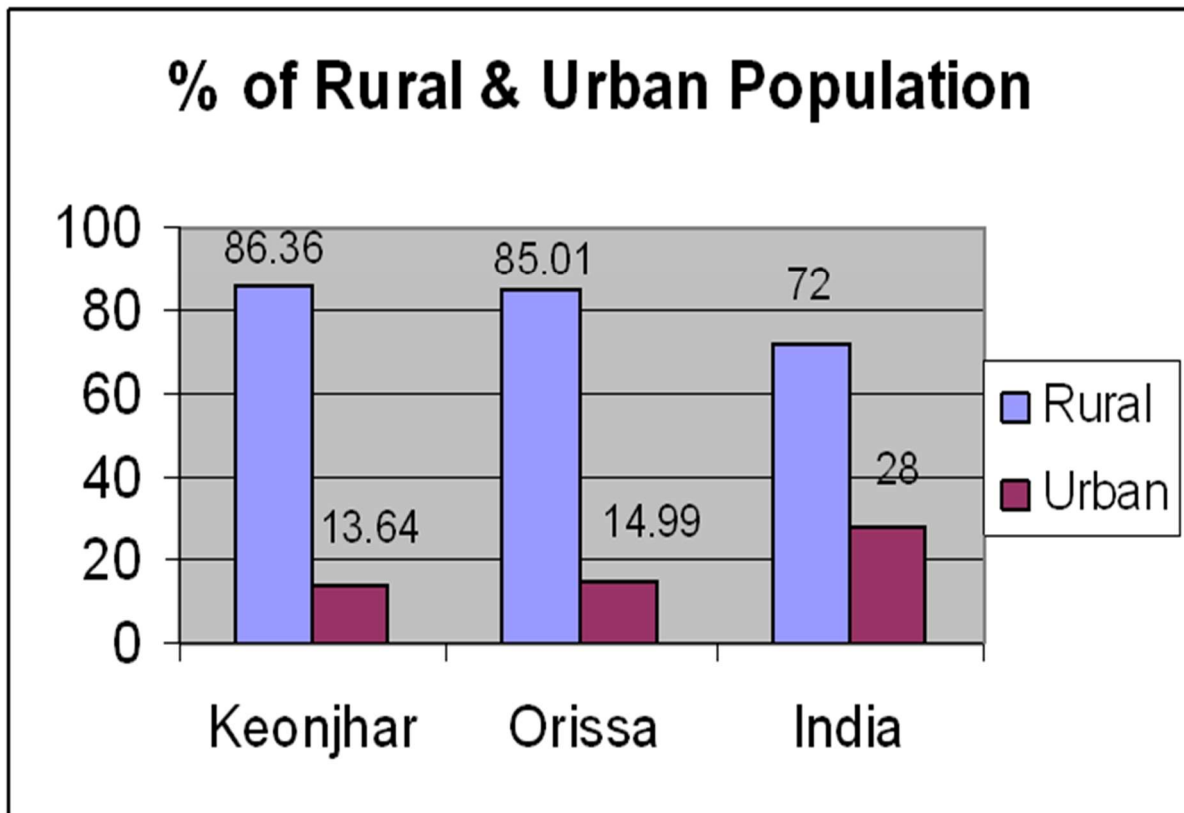
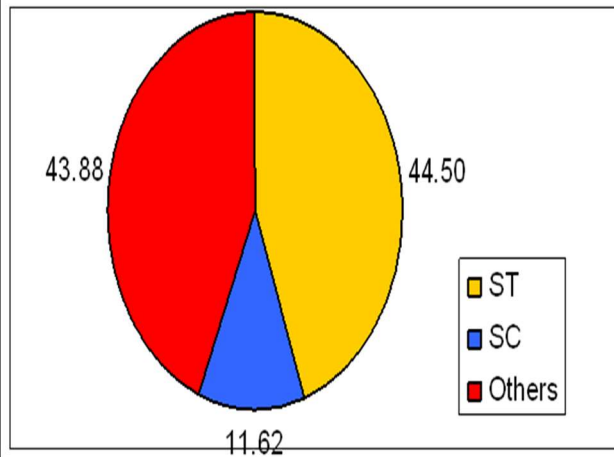
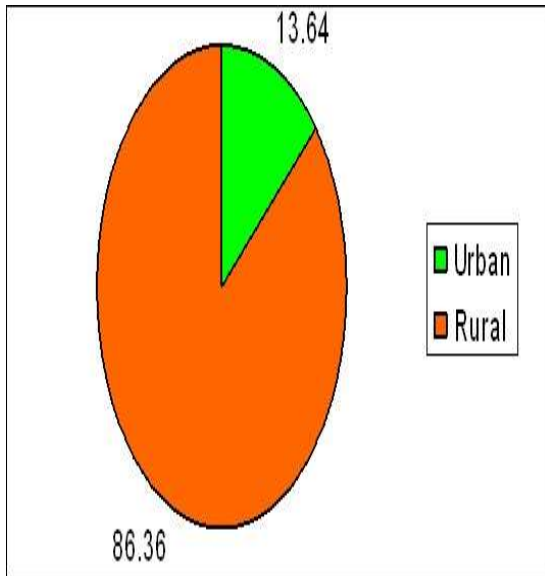


Distribution of the Population according to Social Category			
Data/Indicator	Data Value	Unit	Subgroup
Population size	209357	Number	SC
Population size	104684	Number	Male SC
Population size	104673	Number	Female SC
Population size	818878	Number	ST
Population size	405927	Number	Male ST
Population size	412951	Number	Female ST
Population size	86630	Number	Rural Female SC
Population size	383682	Number	Rural Female ST
Population size	86283	Number	Rural Male SC
Population size	376255	Number	Rural Male ST
Population size	18043	Number	Urban Female SC
Population size	29269	Number	Urban Female ST
Population size	18401	Number	Urban Male SC
Population size	29672	Number	Urban Male ST
Population size	172913	Number	Rural SC
Population size	759937	Number	Rural ST
Population size	36444	Number	Urban SC
Population size	58941	Number	Urban ST



Proportion of SC/ST Population as per Census 2011			
Data/Indicator	Data Value	Unit	Subgroup
Proportion of SC population to total population	11.2	Per Cent	Rural
Proportion of SC population to total population	14.4	Per Cent	Urban
Proportion of SC population to total population	11.6	Per Cent	Total
Proportion of ST population to total population	49.1	Per Cent	Rural
Proportion of ST population to total population	23.3	Per Cent	Urban
Proportion of ST population to total population	45.4	Per Cent	Total

Sex Ratio in among different Sub group as per Census, 2011			
Data/Indicator	Data Value	Unit	Subgroup
Sex ratio	999	Number	Rural
Sex ratio	920	Number	Urban
Sex ratio	988	Number	Total
Sex ratio (0-6 years)	971	Number	Rural
Sex ratio (0-6 years)	939	Number	Urban
Sex ratio (0-6 years)	967	Number	Total
Sex ratio (SC)	1004	Number	Rural
Sex ratio (SC)	981	Number	Urban
Sex ratio (SC)	1000	Number	Total
Sex ratio (ST)	1020	Number	Rural
Sex ratio (ST)	986	Number	Urban
Sex ratio (ST)	1017	Number	Total



Proportion of Child Population as per Census 2011			
Data/Indicator	Data Value	Unit	Subgroup
Proportion of child population (0-6 years)	14.5	Per Cent	Rural
Proportion of child population (0-6 years)	13.6	Per Cent	Urban
Proportion of child population (0-6 years)	14.4	Per Cent	Total
Proportion of child population (0-6 years)	14.2	Per Cent	Female

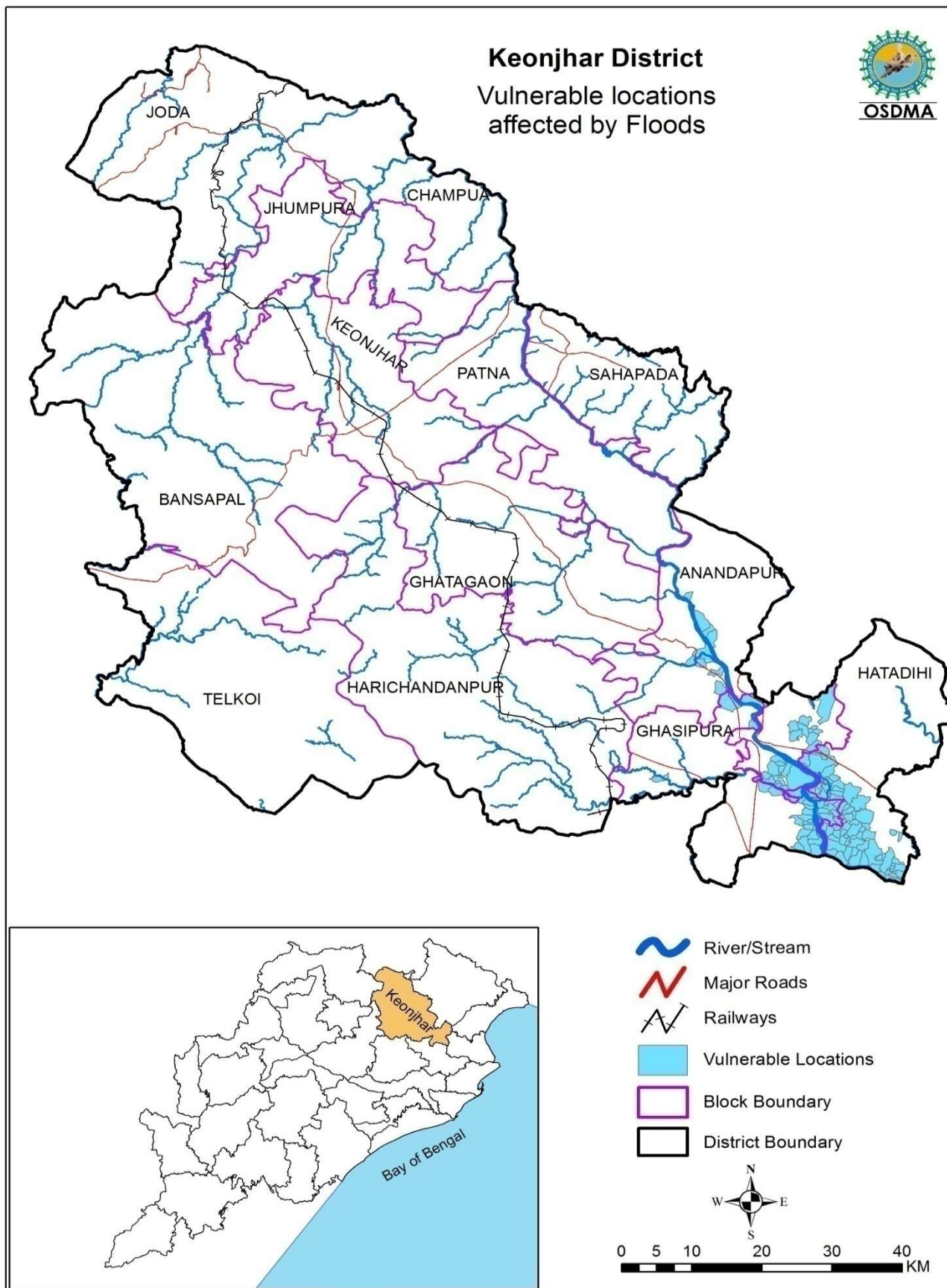
Proportion of child population (0-6 years)	14.5	Per Cent	Male
Proportion of child population (0-6 years)	14.3	Per Cent	Rural Female
Proportion of child population (0-6 years)	13.8	Per Cent	Urban Female
Proportion of child population (0-6 years)	14.7	Per Cent	Rural Male
Proportion of child population (0-6 years)	13.5	Per Cent	Urban Male

Basic Information of The District :

Table No.01

Sl. No	Feature	Unit	Value
1.	Geographical Area	Sq. Km	8303
2.	Population as per 2011	Laky	18.02
3.	Sub-Division	Number	3
4.	Block	Number	13
5.	Teasels	Number	13
6.	Revenue Village	Number	2122
7.	Urban Habitation	Number	65 wards
8.	Gram Panchayats	Number	291
9.	Panchayat Samitis	Number	13
10.	Municipal Councils	Number	4
11	National Highways	Km	287
12	NH -20	Km	79
13	Major District Roads	Km	78
14	Other District Roads	Km	359
15	Rural Roads	Km	1210
16	Forest Roads	Km	246
17	Panchayat Samiti	Km	926
18	Gram Panchayat Roads	Km	2923
19	Length of Rail Network	Km	164.82
20	Watershed	Number	1289
21	Irrigated Agriculture	Hectares	65779
22	Rain fed Agriculture	Hectares	23204
23	Wasteland	Hectares	26522
24	Forest	Sq. Km	3097.18
25	Major and Medium Dams	Number	4

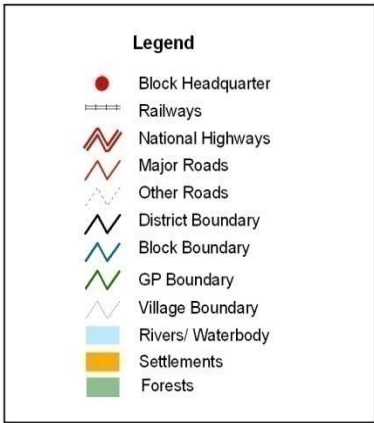
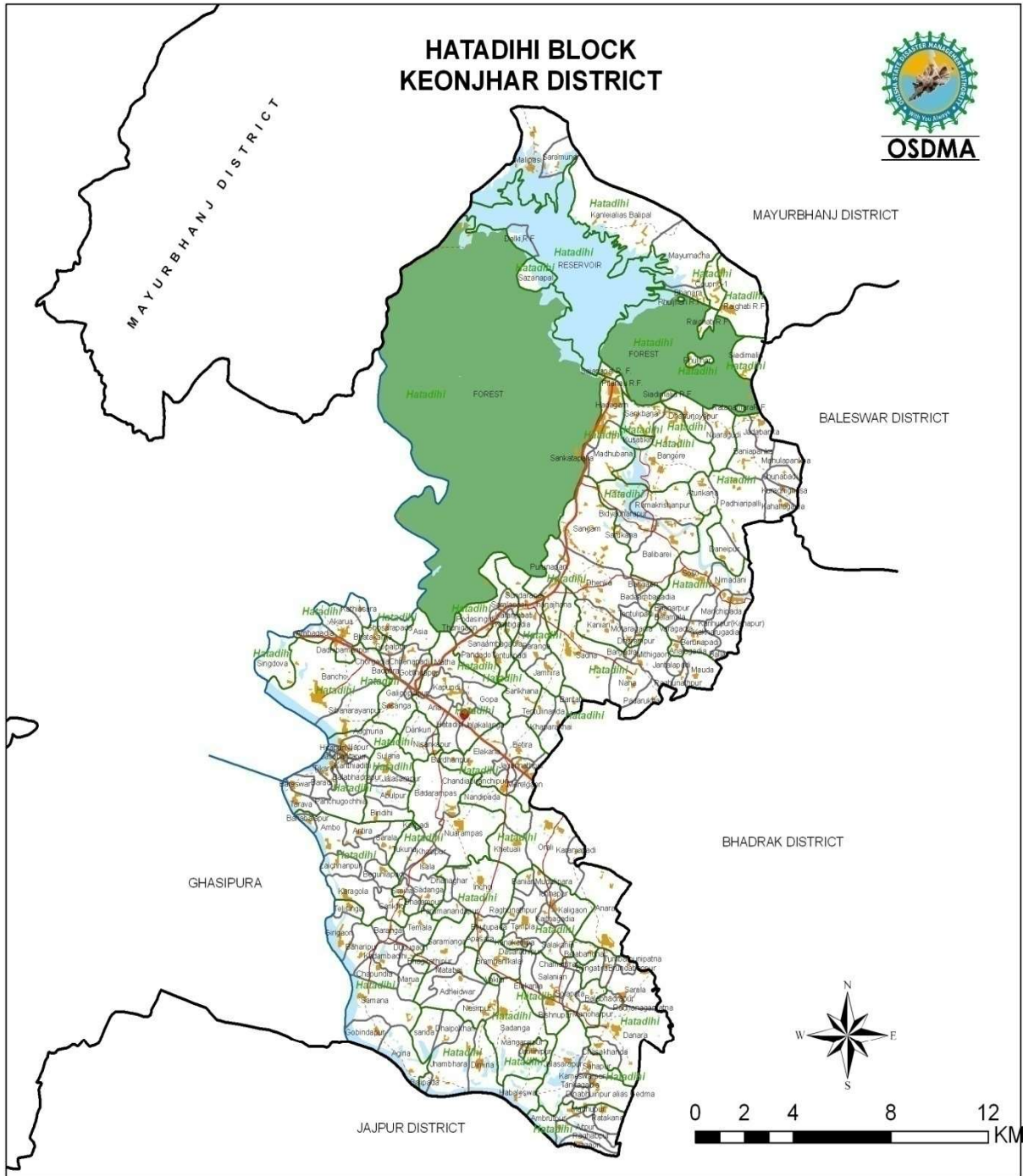
FLOOD/CYCLONE VULNERABLE MAPS OF THE DISTRICT & BLOCKS:



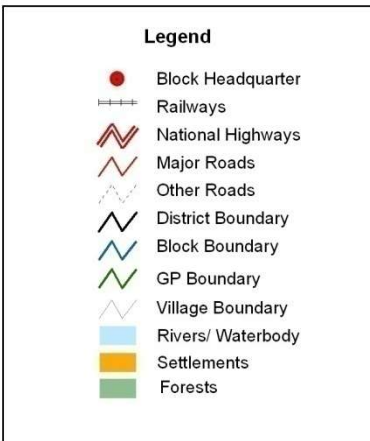
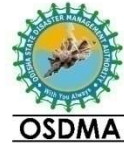
HATADIHI BLOCK KEONJHAR DISTRICT



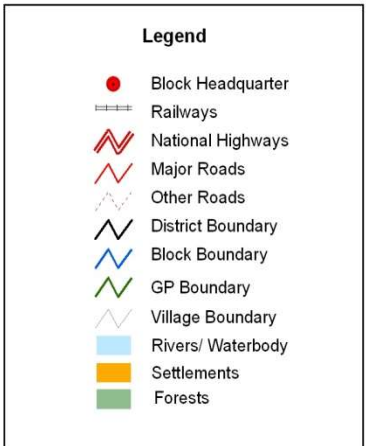
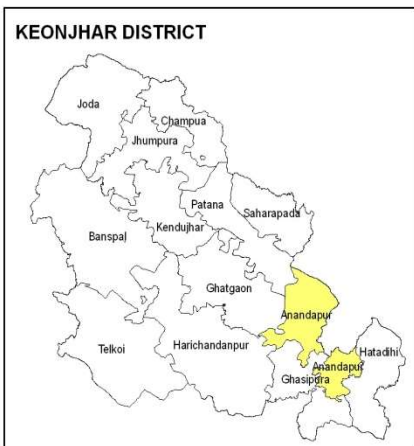
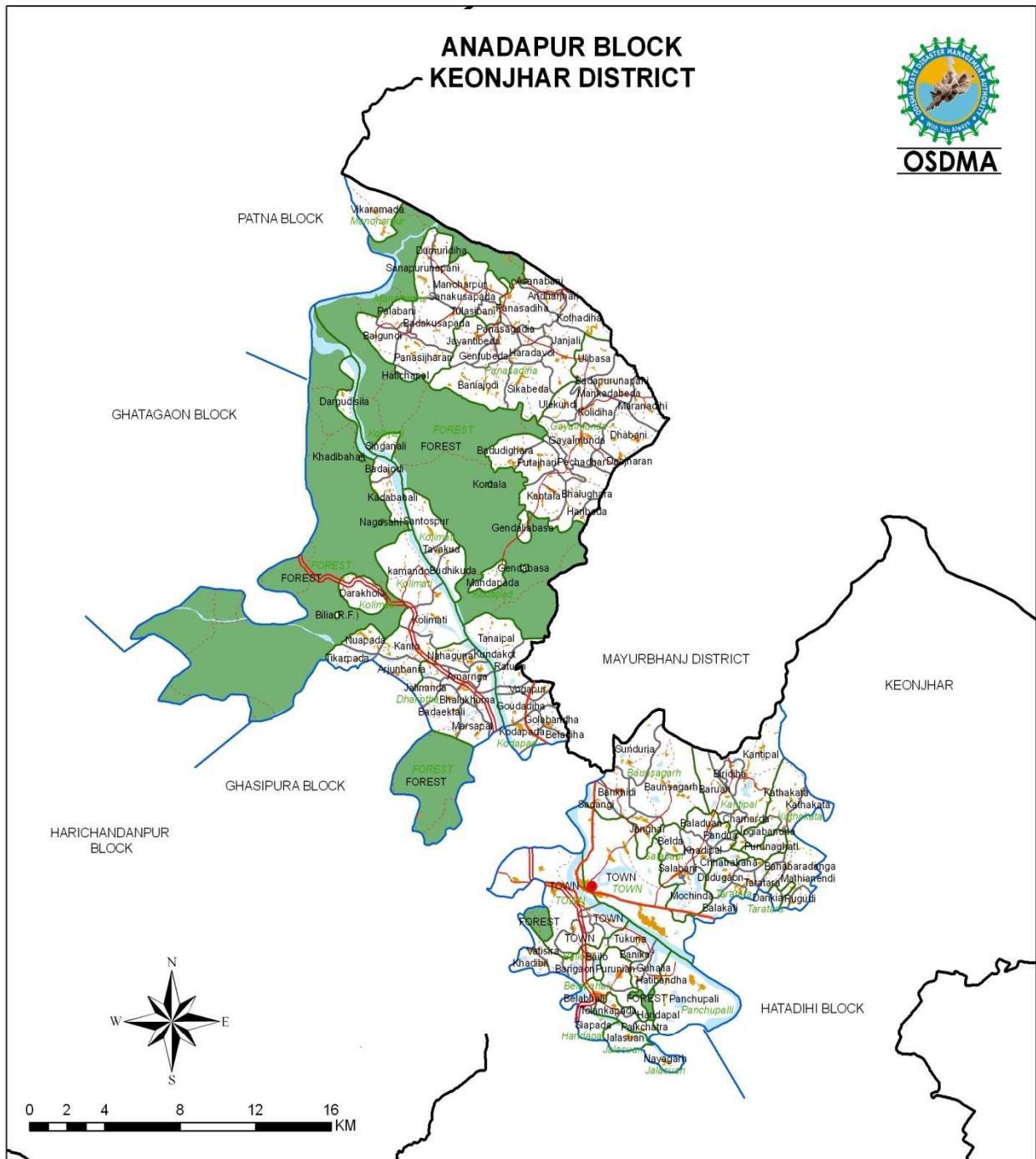
OSDMA



GHASIPURA BLOCK KEONJHAR DISTRICT



ANADAPUR BLOCK KEONJHAR DISTRICT



Hills and Mountains

Wide ranges of lofty hills and dense jungles; constitute the boundary between Keonjhar and the neighbouring districts. From the eastern side of this range a large plateau extends to Mayurbhanj and Singhbhum on the one hand and to the borders of lower Keonjhar on the other, varying in height from 244 to 457 metres. With the exception of isolated hills and undulating tracts, this vast plateau is generally open and occupied by large Villages and numerous Hamlets; it is well watered by streams which in the rains are raging torrents, hurrying to discharge their waters into the Baitarani. At the source of the Baitarani at Gonasika, a temple has been built. The range of hills in which the Baitarani originates, rises on the south-east into lofty peaks as well as wide ridges; till it touches Sukinda border, a former Zamindari of Cuttack district.

Below this belt towards the east, lie the lower Keonjhar comprising Anandapur Sub-Division and a portion of Keonjhar Sub-Division. For the first 16 km., this tract emerges as a gentle slope from the belt of hills and then spreads out into an open plain towards Cuttack district flanked by two long ranges of hills towards Sukinda and Mayurbhanj borders. This tract is similar to the adjoining districts of Bhadrak and Jajpur containing little jungle and dotted with a few isolated hillocks. It is well cultivated and thickly populated.

The crescent-shaped watershed which runs from north to south is the home of the primitive tribes, chiefly the Bhuyans and the Juangs. On the west of this range, there is one Pargana and the former Zamindari of Kaliahata which, unlike the plateau on the otherside, is of no particular elevation. Though the valleys consist of rich alluvial soil, the highlands consist mainly of detritus and intersected here and there by hill streams which eventually discharge their waters into the Brahmani.

The principal peaks are Gandhamardan (1,060 m.) about 10 km. from the headquarters with a wide ridge on the top, Mankadanacha (1,117 m.) on the Bonai border, Gonasika (978 m.), Thakurani (915 m.), Tomaka (785 m.), Bolat (554 m.), Khajaru (918m.), Ranga(897 m.), Mahaparbat (716 m.), Khandadhar Parbat (915 m.), situated near the border of Bonai and Pallahara. Chakratirtha or Baula Parbat is situated at a distance of 16 km. from Anandapur in north-easterly direction. The height of the highest cliff of this hill is 183 m.

The heights of different peaks of Keonjhar district are given as under:-

Height of different Peaks of Keonjhar District.

Sl. No.	Name of the peak	Height in mtrs.
1.	Mankadanacha	1117
2.	Gandhamardan I	1090
3.	Gandhamardan II	1062
4.	Meghanada	1054
5.	Gonasika	1009
6.	Baliparbata	990
7.	Kajalpahar	929
8.	Thakurani	918
9.	Pithapidha	916

10. Ranga Parbat	897
11. Tankiahudi	890
12. Kiriburu hill Top	883
13. Dahighar	874
14. Suring	834
15. Purunapani	829
16. Siddhamath	805
17. Mahaparbat	721
18. Koili	667
19. Sikheswari	589
20. Sinduria	511
21. Kalapahar	463
22. Boula	55

Source: DDM, Joda/ Jt. Director, Geology,

Keonjhar River System and Water Resources

The rivers of the district emerge out of the hilly tracts and flow into the plain with great velocity, charged with large volume of water during monsoon. In summer they are almost dry. Their beds are usually rocky which render them unfit for navigation. There are a large numbers of hill streams in the district which form major water sources. Cobden Ramsay rendered a poetic presentation of the beauty of hilly streams in the following manner : "In the highlands.....clear pellucid hill streams flow perennially, babbling over stones and rushing in tinkling waterfalls between grass-clad banks and sedgy shores, shaded by towering trees: many are the deep silent pools with the banks fringed with masses of white lilies, and the silence broken only by the gentle gurgle of the stream as it slowly trickles from the pools or by the splash of some rising fish: here the kingfisher darts to and fro in all his glory and birds of every hue imaginable brighten the scene; in the rains these streams become wild tearing torrents sweeping all before them".

Baitarani River

The river Baitarani is the largest River in the district. It originates from the Guptaganga hills about 2 km from Gonasika Village at an elevation of 900m at latitude 21°-31'-00" N and longitude 85°-33'-00" E. The River travels a total length of about 360 km before it joins the Bay of Bengal. At the origin the River flows in a northerly direction as a hill stream upto the Chaibasa border where it abruptly turns to the south. After about 80km from the origin it takes a 90 degree turn and flows eastwards. It forms during part of its course, the boundary between Keonjhar and Singhbhum district of Jharkhand and also as a boundary between Keonjhar and Mayurbhanj districts. After traversing mountainous tracts, the river enters the plains of Anandapur. During dry spell, the River is navigable with difficulty in plain regions like Anandapur, Batto and Habaleswar. Champua, the subdivisional head quarters; is on the right bank of the River and Anandapur is on the left. Other important places on the bank are Rajnagar, Udayapur, Sompatana, Fakirpur and Habaleswar.

Almost every year in the rainy season the river is heavily charged with flood water. High flood inflicts severe damages to the life and property mostly in the Anandapur Sub-Division of the district. Recently, in the years 2000, 2007, 2008, 2011 & 2014 high floods occurred in the Baitarani River system. To control the flood in Baitarani River 25.264 kms of capital embankment on left bank and 23.90 km of capital embankment on right bank of the river have been constructed almost downstream of Anandapur.

At a distance of about 15 km from Patna, the Block headquarters on right bank; there occurs a deep pool in the river Baitarani known as Bhimakund. According to legend, Bhima, the second Pandava, took his bath here in the pool when the Pandavas lived in disguise in Biratnagar, which by local belief is supposed to be the present Kaptipada in Mayurbhanj district. Before it reaches the pool, the Baitarani flows through a gorge in steps, forming a series of picturesque rapids. Bhimkund is encircled by precipitous stone walls. The natural scenery of the site is exquisitely beautiful. According to another legend, Rama on his march to Lanka to rescue his wife Sita from the ten headed demon Ravana stayed on the bank of the Baitarani on the border of Keonjhar. During Makar festival in mid January; large numbers of people gather here to take bath on the auspicious day; in commemoration of this legend.

The Kanpur Irrigation Project, a Major Irrigation project is under construction across River Baitarani near Basudevpur Village of Joda Block. The project will be completed by March-2019 and will provide irrigation to 24555 ha. during khariff and 17154 ha. during rabi in Champua, Joda, Jhumpura and Keonjhar Blocks of the district.

Downstream of Bhimakund near Village Daragadisila of Anandapur Block, a barrage has been constructed by a private company named Baitarani Power Projects Pvt. Ltd. to produce 25 megawatts of hydroelectricity. The project will be completed by the end of 2017.

Another barrage across River Baitarani at Anandapur is under construction by Water Resource Department, to provide irrigation to 56720 ha. during khariff in Keonjhar and Balasore districts. The project will be completed by March-2017. 68 numbers of Small Scale and Medium Scale Industries are consuming water from Baitarani River Basin for their industrial use. The Water resource department is collecting water tax from these industries.

Other Rivers of the district and their details are given below :-

Aradei

The Aradei River originates in the hilly regions near Bararoan hill in south-east of Keonjhar and flowing northward, meets Machhakandana River about 3 km south of Palasapanga. It then proceeds further in northerly direction and joins River Baitarani about 8 km downstream of Champua. The River Machhakandana has two waterfalls named Badaghagara and Sanaghagara 23 m and 18 m in height respectively. The other two tributaries of Aradei are Kadai and Sothi or Kasia which are two important hill streams of the district.

Kanjhari

The Kanjhari River originates in the hilly area near about Gonasika and flowing in north-east direction joins the River Baitarani near Village Udayapur. It is about 56 km in length and

important Villages like Ramachandrapur, Raghunathpur, Poipani, Chakka and Dumuria are situated near its course. At nearly 38 km of the River, a dam has been constructed which provides irrigation to 9740 ha in khariff and 2800 ha in rabi of in Patna, Ghatagaon and Keonjhar Blocks.

Seeta

The Seeta River originates in the Sarupata hills situated near Dhenkikote. After flowing about 16 km it meets River Kukurkata.

Kukurkata

It originates from the forest near Jhalbera and flowing in eastern direction through densely wooded tract about a length of 32 km joins River Baitarani. Some important relics of historical interest; are found in its upper valley; noteworthy being those of fresco paintings and inscriptions at Dangaposi and Sitabinji.

Kusei

The Kusei River originates from the Rebanareserved forests south of Meghananda hill and flows in south-eastern direction upto the outfall point of River Kukurungi. Then it flows on easterly to the east in a zigzag course. It falls to the River Baitarani near Belabahali Village of Anandapur block. Its important tributaries are Remal, Sendhei and Ganda. The village Deogaon, famous for the temple at Lord Kushaleswar since medieval times, is situated on the left bank of Kusei.

Musal

The Musal River originating from Meghanada hill, flows a certain distance in the north. After that it turns east and south-east and joins River Baitarani near Village Simiria.

Samakoi

The Samakoi River originates from Gendachua hills. It follows a zigzag course almost in a western direction and falls into the River Brahmani in the Dhenkanal district. Telkoi is situated on its right bank and it covers a length of 50 km inside the district.

Machhakandana

The Machhakandana River originates in the hilly regions near Bararoan hill in south-east of Keonjhar and falls to River Aradei about 3 km south of Palasapanga.

Karo

The Karo River originates from Bonai sub-division of Sundargarh district and enters Keonjhar district from the north-westren corner of the Champua Sub-Division and flows towards Singbhum district in Jharkhanda. Barbil town is situated on its bank.

Salandi

The Salandi River originates from the Meghasani hills of Similipal in Mayurbhanj district. It enters Keonjhar district near Champapal Village. It flows a length of about 19 km inside the district in Padhiharipali and Soso area. A major dam near Hadagarh and a barrage at Bidyadharpur 5 km down stream of the dam have been constructed across River Salandi to provide irrigation to 92908 ha. in khariff and 12747ha. in rabi in Keonjhar, Bhadrak and Balesore districts. The Salandi River joins River Baitarani in Bhadrak district. The important Villages situated on its bank are Balibarei, Soso and Bidyadharpur. The total length from origin to the confluence of River Baitarani is 160 kms.

Other Tributaries of Baitarani namely Sona, Dalco, Mermeda, Neorjal&Kaliapalijhar are flowing inside the district. The River Deo another Tributary of the Baitarani takes its origin from the Similipal Range of Mayurbhanj district. Near Karanjia it flows in a north-western direction and forms the boundary between Keonjhar and Mayurbhanj; till it falls into the river Baitarani.

Kanjahari Dam

Kanjahari Irrigation Project is a Medium Irrigation project constructed across the River Kanjahari near Revenue Village Chakka of Keonjhar Block.

At present the dam is providing irrigation to 9,740 ha during khariff & 2800 ha during rabi in Keonjhar, Ghatgaon & Patna Blocks of the district. The project was taken up under World Bank assistance in the year 1978-79 and completed in the year 1990-91 at a cost of Rs 3319.20 lakhs. The lengths of two main canals are 36.20 km and one distributary with 60 minors and subminors are 138.73 km. There is an inspection bungalow at Kanjahari dam site. Water supply system to Keonjhar municipality from this dam is under progress.

Remal

The Remal Irrigation Project is a Medium Irrigation Project constructed across River Remal, a tributary of Kusei River in Baitarani basin. The dam is located near Village Gaduan in Harichandanapur Block. At present the dam is providing irrigation to 4708 ha. during khariff and 2118 ha. during rabi in Ghasipura and Harichandanapur Blocks. The construction of the project was started in the year 1979-80 and completed in the year 1985-86 at a cost of Rs 1492.52 lakh. The length of two main canals is 16.75 km and that of 18 minor, Sub-Minors are 49.35 km. 9 Panipanchayats have been formed to manage water supply in the project.

Salandi (part)

The Salandi irrigation project is a major irrigation project constructed across River Salandi near Village Hadagarh in Hatadiha Block of the district. The project was executed with the aid received from the World bank. The project commenced in the year 1961-62 and completed in the year 1981-82. At present this project is irrigating 92908 ha. during khariff and 12747ha. during rabi; in Keonjhar, Bhadrak and Balasore districts. In Keonjhar district it provides irrigation to 11632 ha during khariff and 1809 ha. during rabi. 28 Panipanchayats have been formed to manage the water supply in the project. The length of main canal is 34. km and length of minor & sub-minors are 132 km.

Waterfall

Among the waterfalls in the district, the Murga fall which occurs in Champua Sub-Division is worthy at mention. A perennial spring at a height of about a kilometer among the high hills and thick forest; descends about 25 metres. Underneath, the fall is situated at the shrine of Lord Shiva known as MurgaMahadev. The place makes a fine picnic spot. Thousands of pilgrims from surrounding villages gather there on the occasion of Makar Sankranti.

The Handibhanga fall, about 30 metres in height, springs from the Handibhanga hill ranges near a village of the same name at a distance of 3 kms. from Joda-Basantapur road. Being surrounded by a stiff cliff of about.

30 to 45 metres in height, it is almost inaccessible except by a Kutcha but difficult road from Dhubna-Kalimati village.

During extreme summer, one would feel the chill of winter at the foot of the fall.

Besides these, there are some other minor waterfalls in the district famous for their scenic beauty.

District Law & Order situation:

To maintain the law and order of the district there are 24 Police stations in the district these are the details viz. Telkoi, Kanjipani, Nayakote, KendujharSadar, Kendujhar Town PS ,Barbil, Joda, Champua, Bolani, Rugudi, Bamebari, Jhumpura, Baria, Turumunga, Patana, Ghatagaon, Pandapara, Harichandanpur, Daitari ,Ghasipura, Anandapur, Soso, Nandipada and Sainkul. There are four Municipalities viz. Barbil, Joda, Kendujhar and Anandapur. Besides, there are five non-statutory towns i.e. Census towns viz. Balagoda (Bolani), Jajanga, Champua, Jhumpura and Daitari within Keonjhar district.

(Refer DDMP Vol –II Table no - 38)

Climate & Rain fall:

The climate of the district is characterised by an oppressively hot summer with high humidity. Summer generally commences in the month of March. Temperature begins to rise rapidly attaining the maximum in the month of May. During the summer maximum temperature is 38.20 C. The weather becomes more pleasant with the advent of the monsoon in June and remains as such up to the end of October. The temperature in the month of December is lowest i.e. 11.70 C. Sometimes it even drops down to 70 C. The average annual rainfall is 1487.7 mms. The nature of rainfall in the district is quite erratic and uneven. The rainfall may not be available for a long span of time. Due to this there occurs long periods of dry spell even during the peak season of rain fall. This erratic nature of rainfall is mostly responsible for occurrence of draught and it causes large scale failure in crop production. Besides, sometimes unseasonal rain occurs usually after retreat of monsoon and it causes damage to the crop before harvesting.

(Refer DDMP Vol –II Table no 16)

Rainfall Data of Last 10 Years

Topography:

The district consists of a compact area and its extreme length from North to South is nearly 145 km. The average breadth from East to West is about 65 km. It is divided into two widely dissimilar tracts-the lower Kendujhar and the upper Kendujhar. The former is a region of valleys and low lands, while the latter includes mountainous highlands with a general slope from North to South. The highlands consisting of clusters of rugged crags afford a safe retreat to its inhabitants in troubled times. The mountaintops appear from the low lands to be sharply ridged or peaked, but in reality they have extensive tablelands on their summits, fit both for pasture and for tillage. The average elevation in its central part is about 500m. At places, isolated hills rise abruptly from the plains. But most of the areas have a general elevation of over 600m. which forms the watershed of some rivers. The Baitarani River takes its rise in the hilly North Western division. In between these two natural divisions passes the State Highway from Chaibasa to Jajpur Road through the headquarters, Kendujhargarh.

District Demography Details :

As per 2011 census enumerated 18,41,446 population in the district out of which 15,83,644 i.e. 86% live in rural areas and 2,57,802 (14%) live in urban areas. Of the total population, male and female population comprises 50.36% and 49.63% respectively. In absolute figures the male and female population is 927475 and 913971 respectively. The devinial growth rate recorded for the district is 15.42% as against 16.83% in the State. Making a comparison with growth rate of previous decade, it is revealed that the total district growth rate has been reduced to a considerable extent. In 2011 census the DGR was 19.95 which has been reduced to 16.79 in 2001. The rural growth rate was recorded 18.40 in 1991 census. The density of population is 217/sqr.kms.

Households and its distribution:

Sl. No	Total Number of Families/H H	Category		Category				Category	
		Rural	Urban	SC	ST	OBC	GEN	BPL	APL
1	403869	1548674	253059	209557	818878	NA	NA	NA	NA

Population and its composition:

Sl. No	Population			SC		ST		OBC	
	T	M	F	M	F	M	F	M	F
1	1801733	906487	895246	104684	104673	405927	412951	NA	NA

- Population density of the district and decadal growth of population

Key Indicators of the District as per CENSUS-2011

Details of the Household			
Data/Indicator	Data Value	Unit	Subgroup
Number of households	348448	Number	Rural
Number of households	56824	Number	Urban
Number of households	405272	Number	Total
Average size of households	4.4	Number	Rural
Average size of households	4.5	Number	Urban
Average size of households	4.4	Number	Total
Population density	217	Persons per Sq. km	Total

Decadal Growth of District Population:

Age Group

Sl. No.	Total Population	0-5 years	6-14 years	15-59 years	60 years and above
1	1801733	259403	NA	NA	

Sex Ratio:

With regards to Sex Ratio in Kendujhar, it stood at 987 per 1000 male compared to 2001 census figure of 977. The average national sex ratio in India is 940 as per latest reports of Census 2011 Directorate.

Particular	2011	2001	Decadal Variation
Actual Population	1,802,777	1,561,990	+2,40,787
Male	907,135	790,036	+1,17,099
Female	895,642	771,954	+1,23,688
Proportion to Orissa Population	4.30%	4.24%	+0.06%
Average Literacy	69.00	59.24	+9.76%
Male Literacy	79.22	71.99	+7.23%
Female Literacy	58.70	46.22	+12.48
Literates	1,069,023	780,918	+2,88,105
Male Literates	616,025	479,337	+1,36,688
Female Literates	452,998	301,581	+1, 51,417

Literacy Rate:

Literacy Rate	Total	Male	Female
	64.50	73.06	55.97

Particularly Vulnerable Tribal Groups (PVTGs)/ PTGs:

Sl. No.	Name of the PVTG/PTG	Total No. of Households	Population			Population (0-6 Years)	
			M	F	T	Male	Female
1	Juanga	2054 HH	NA	NA	8592	821	718
	<i>Total=</i>	<i>2054 HH</i>			<i>8592</i>	<i>821</i>	<i>718</i>

Socio-Economic profile:

There was change of 15.42 percent in the population compared to population as per 2001. In the previous census of India 2001, Kendujhar District recorded increase of 16.83 percent to its population compared to 1991. The initial provisional data released by census India 2011, shows that density of Kendujhar district for 2011 is 217 people per sq. km. In 2001, Kendujhar district density was at 188 people per sq. km. Kendujhar district administers 8,303 square kilometers of areas. Sex Ratio (Per 1000) 987 977 Child Sex Ratio (0-6 Age) 957 962 Average Literacy 69.00 59.24 Male Literacy 79.22 71.99 Female Literacy 58.70 46.22 Total Child Population (0-6 Age) 253,418 1,069,023 780,918 Male Literates 616,025 479,337 Female Literates 452,998 301,581 Child Proportion 243,655 Male Population (0-6 Age) 129,494 124,210 Female Population (0-6 Age) 123,924 119,445 Literates (0-6 Age) 14.06% 15.60% Boys Proportion (0-6 Age) 14.28% 15.72% Girls Proportion (0-6 Age) 13.84% 15.47%. As per the above table, there are 86.8% respondents who are BPL card holders followed by 10.7% APL. Workforce participation- Workforce participation- Total population of the district are 1801733 out of this ..1223540 are and the remaining are female workforce people under the age group of 18 ~ 60.

Fish

The principal fish are rohi (Labeorohita), mirkali (Cirrhina mrigal), bhakur (Catlacatla), sal (Ophicephalusmarulius) and seul (Ophicephalusstriatus). Besides, a large number of other varieties are also found.

Reptiles

The Godhi or monitor lizard (Varnus monitor) is nearing extinction. Because of commercial importance of its skin people kill them. They are mostly found in the bushy areas of the villages of the district. The PohalaEnduas or Chameleons (Chamaeleon Zeyalanicus) are very common in the wooded areas. The Jhitpitis are met with in almost every house. Snakes belonging to different species are found in the district. Poisonous snakes are not very few. Ahiraja or king cobra (Najahannah) is one of the most poisonous snakes. It occurs in hill tracts. The two species of cobra known as the Nag or Gokhar (Najanaja) and the Tampa (NajaNajaKaouthia) are also very poisonous. The Rana or branded krait is very poisonous and people hardly survive from its bite. The KaudiaChiti or the common krait (Bungarus caeruleus) is of the former type. In addition to this a good number of other poisonous snakes are found in the district. Death due to snake bites is no less negligible.

Among the non-poisonous snakes of the district mention may be made of the Ajagar (Phythonmolurus), the Dhamana (Ptyasmucosus), Kandanala (Natrixstolata), Dhanda (Natrix piscator), Domundi (Eryxconicus), the TeliaSape (Typhlopsbrahminus) etc. The Ajagars are

normally seen in the forests and hills. At times they visit human settlements and swallow domestic animals like sheep, goat etc. Human life is also not safe when an Ajar is met with. Other reptiles like tortoise and crab occur in the sea and the Chilika lake.

The wild animals and the reptiles are of grave concern to the human lives. People die every year due to their attacks. In the seventies a total of 145 persons were reported to have been killed by them.

Census (Population figures of important animals during last three census of Hadagarh Wildlife Sanctuary)

Elephant Census

2009 Census, Adult male - 4 nos. Adult female- 6 nos. Calf-3 nos. Juvenile- 1 no. Total- 14 nos.

2010 Census- Adult male - 2 nos. Adult female- 5 nos. sub-Adult female- 4 nos. calf- 1 no Total- 12 nos

2012 Census- Adult male :- 4 nos., Adult female-14nos., sub-Adult female- nil calf - 07 nos. juvenile - nil Sub- Adult bulls- 1 no. Total- 26nos.

2015- Census- Adult male - 5 nos. Adult cow-9 nos. Sub-Adult cow- 2 calf- 06 nos. Sub- Adult bulls- 3 no. Total- 25nos.

Tiger/ Leopard Census 2007- Leopard – 3nos., 2009- Leopard-2 nos., 2010- Leopard 2 nos. 2014-15- One tiger & 2 leopards in Hadagarh Sanctuary.

Mid-Winter Water Fowl Census 2011- 911 nos. 2012 – 846 nos. 2013- 970 nos. 2014-627 nos. 2015- 250nos.

There are 4 eco-tourism sites found in and around the Sanctuary. There is a great potential for promoting eco-tourism sites at Chakrathri, Gadachandi & Podasingidi. The sites are well known for existing Gadachandi Temple at Gadachandi, Jain Temple at Podasingidi and Siva Temple at Chakrathri. People of Keonjhar district and adjoining districts of Balasore & Bhadrak regularly visit those places round the year for worship and pleasure.

Kenduleaf Operation

Keonjhar district is also important from non-timber forest produce point of view. Chief amongst which is Kendu leaves. This Kendu leaf operation in the district generates about 2,90,30,435 number of kerries with an anticipated production of nearly 7,000 qtls. It is an important activity and generates 20,871 mandays benefiting the BPL families. These people are engaged in different operations like bush cutting, prepare and maintenance of phadi houses, purchase of Kenduleaves, drying and storage, processing, bagging, binding and transportation to central godwons.

There are 168 phadis utilised in storage of Kenduleaves which are given in the table below: -

Range Block	Number of Phadies Keonjhar
Ghatagaon	10
Harichandanpur	15
Patna	01
Banspal	15
Telkoi Telkoi	57
Akul Telkoi	70
Total	168

Agriculture and Irrigation:

Agriculture is main sector of the district which provides livelihood to nearly two-thirds of total workforce in the district. The area under irrigation is about 24 percent of the total cultivated area. Agriculture is the backbone of the district economy. Therefore, it is essential to deal with this sector in a proper way to increase 4 % agricultural growth in the 12th fifth year plan. Heavy pressure on land has resulted in large scale unemployment and under employment in the rural area. Keonjhar district is having 53 % upland followed by 34 % medium and 13 % low land. The district is rich in both groundwater and surface water resources. About 63308 ha of the total irrigated area (31.06lakh ha) is irrigated during Kharif season and 31897 ha is irrigated (assured irrigation) during Rabi season. As per the ground water resources assessed during 2009, the total annual replenishes able ground water resources in the district is 81323 ham. The block wise ground water resources are given in Table 3. Around 4130 ham of the total ground water is used in domestic and industrial water supply. The available ground water resource for irrigation in net terms is 61690 ham. Net ground water availability for future irrigation development is 113353 ham. Over all the present level of ground water development is only 25.55 percent in the district with the maximum in Anandapur block viz. 44.84% and minimum in Bansapal block 11.1%. Hence the district as well as all the blocks come under the white category. Therefore, the challenge before the agriculture department today is to 'produce more from less' i.e., more nutritious food from less land, water and other resources. Another challenge is to protect what we produce. These can be accomplished only through new technologies as the existing technologies do not seem to be adequate. Recent advances made in biotechnology offer exciting opportunities to address some of these challenges. Transgenic technology in crops is one of the most powerful methods and has already made some breakthrough in this endeavour.

Lift Irrigation

The Lift Irrigation Corporation is responsible to provide Lift Irrigation facilities to the farmers of non-irrigated areas. Lift Irrigation projects are of two types, i) lifting surface water from Rivers/ nallahs. ii) lifting ground water from borewells/ tubewells.

Lift Irrigation division, Keonjhar was created on 1.8.1981. Prior to this Lift Irrigation activities in Keonjhar district were managed by a sub-division under Lift Irrigation division, Jajpur Road. Now Lift Irrigation division, Keonjhar has 3 sub-divisions at Keonjhar, Champua and Anandapur.

There were only 117 L.I.Ps upto 1981 which increased to 593 upto 1991, 756 upto 2001, 833 upto 2011. At present, there are 869 L.I. projects in 13 blocks of Keonjhar district covering an ayacut of 17706 hec. Presently the L.I. projects are maintained and managed by Pani Panchayats. Out of 869 L.I.Ps 422 L.I.Ps have been handed over to PaniPanchayats. Now distribution of water to the entire ayacut is being made by direct pumping system through underground PVC pipe line fitted with Tee arrangement and distribution tanks to reduce transmission loss.

Land Utilization status of the district:

Sl no	Block	Geographic Area	Forest	Land put to non agricultural uses	Culturable waste land	Permanent Pastures & other grazing land	Misc. tree crops & grooves not included in net area sown	Current fallow	Other fallow uncultivable land	Net area sown	Gross cropped area	Cropping Intensity in %
1	Anandpur	36824	5293	6473	3024	1657	413	1130	1522	17312	26633	153.8%
2	Ghasipura	40938	5742	6328	3491	1988	320	1268	2120	19681	29243	148.6%
3	Hatadihi	44488	8600	1960	2892	1301	282	1127	249	28077	37698	134.3%
4	Ghatagaon	74098	36600	9139	1276	1611	531	1146	4731	19064	27422	143.8%
5	H.C. Pur	89771	45402	6743	1180	1809	917	1027	7720	24973	33694	134.9%
6	Patna	46208	9721	5125	1235	1136	562	1060	2989	24380	31170	127.8%
7	Saharpada	41371	6098	5271	1157	1181	151	1105	2024	24384	28636	117.4%
8	Keonjhar	56073	13069	6359	0	1653	401	1223	1207	32161	43231	134.4%
9	Banspal	163784	83589	5115	2075	1303	941	955	54941	14865	20598	138.6%
10	Telkoi	91506	59118	8729	5258	1006	533	991	221	15650	21357	136.5%
11	Champua	37382	5862	2724	3089	690	296	1424	806	22491	30955	137.6%
12	Jhumpura	56657	16706	7679	233	1381	383	1666	3916	24693	32441	131.4%
13	Joda	51900	14872	5043	1612	2915	270	1227	11168	14793	19444	131.5%
14	Total	831000	310672	76688	26522	19631	6000	15349	93614	282524	382522	135.4%

Crop Diseases, Control Mechanism and Protection

The crops are damaged by pests and diseases. Besides, damage is also caused by the wild animals and birds. Paddy crop is generally attacked by grass hoppers, stem borers, jassids, and gall midge. Bacterial blight and blast are the common diseases of rice crop during the kharif season. Leaf eating caterpillar and aphids are generally found in maize crop. Groundnut is affected by tikka disease. Fruit and shoot borers and bacterial wilt are found in vegetable crops like brinjal, tomato etc. Aphids are the main problem of the mustard crop in Rabi season.

Agriculture department has made attempts to impress upon the cultivators to use the modern technique in the agricultural practices. Gradually people are adopting scientific method to control different pests and diseases. Some stocks of pesticides and plant protection equipments are being supplied to the farmers in subsidised rates.

Horticulture

All the Horticultural activities were being executed through Agriculture department in Odisha till 1979. In 1979 a separate Directorate of Horticulture under Ministry of Agriculture was created at state headquarters for holistic development of Horticulture in all parts of the state. As such, a post of Deputy Director of Agriculture (Horticulture) at district level and those of Horticulturists at Sub-Division level with small networks of field staff like Gardener, Grafter, Horticulture Overseer, Junior Agriculture Officer were created.

Scope for Horticulture Sector

Over the past few years, fruit tree plantations under various departmental and non-departmental programmes like EAS, JRY, IJRY, IDH and also under ITDA scheme have been taken up by the Horticulture department. Farmers are getting very good return from mango crop. Similarly, cultivation of vegetables as well as off-season vegetables has proved to be quite remunerative to the farmers. In order to provide a fillip to the horticultural production, the district has been included for implementation of programmes under National Horticulture Mission, NMMI since 2005-06.

At the time of separation of Horticulture department during 1979, mango plantation covered 2155 ha., banana 75 ha., citrus 295 ha. in Keonjhar district. Now the covered area is mango 6161 ha., banana 243 ha., citrus 715 ha. and papaya 80 ha. vegetable crop covers 34137 ha.

National Horticulture Mission

National Horticulture Mission was launched in Keonjhar district since 2005-06 for integrated development of horticulture and promoting a holistic growth of the horticulture sector covering fruits, vegetables, protected cultivation structure, mulching root & tuber crops, spices, flowers and medicinal crops and also establish model nursery in private sector.

Animal Husbandry

Animal Resources Development Department in Keonjhar is implementing breeding, feeding & management of Livestock & Poultry in scientific method in order to safe guard the livestock from different diseases & provide better health coverage and breeding coverage.

In Keonjhar district, the department had 3 Veterinary hospitals, 19 Veterinary dispensaries & 92 livestock aid centres in the year 1980-81. During 90's another 22 livestock aid centres were added. Another 42 livestock aid centres were opened during the last decade to cover 286 GPs. Now there are 156 livestock aid centres in the district to look after the health of animals. Artificial insemination is going on in 122 centres to look after the breeding of cattle & buffalo through frozen semen technique from 1980 onwards. Besides during last decade, 92 mobile A.I. centres, 48 Gomitra centres, 40 OMFED A.I. centres, 32 JK TRUST A.I. centres are functioning to provide door step artificial insemination. Cattle and Buffaloes The trend in Cattle

& Buffalo population had seen a small but progressive increase upto 20th century. But in 21st century the population of the indigenous cattle & buffalos have seen a decline giving scope to quality & productive animals. The farmers have taken to small animal holding by disposing of the unproductive animals through organized breeding programme offered by the department. New schemes like Livestock Insurance under Central Plan and National Livestock Mission have been introduced during last decade. Dairy Development

The vast potential of dairy farming in employment generation & poverty alleviation is now well recognized. Dairy provides sustainable income round the year irrespective of nature of land. The increasing demand for milk gave rise to the establishment of OMFED plant at Anandpur during early eighties with 5 societies and daily collection of 200 litres of milk. Since then, there has been a steady increase in formation of societies in Anandpur SubDivision which is now considered as the dairy intensive pocket of Keonjhar district. At present there are 143 Milk societies and daily collection of milk has crossed 10,000 litres per day. Women Dairy cooperatives have been formed with involvement of rural women which has been a major impact on rural economy. Cattle Breeding Programme Keonjhar district has breedable population of 189497 cattle and 30952 buffaloes Crossbred 140398 indigenous cattle and 18147 buffaloes with a variable distribution. The breeding policy of the state has the mandate for 50% exotic inheritance of Jersey and Holstein and upgrading of local cows with improved indigenous breed like Haryana & Red Sindhi. Selective breeding is encouraged in buffaloes. The productivity of the CB cows with improved AH practices has gone up to 10 litres per day & that of Haryana and Sindhi to 7 litres per day. After the launching of NPCBB in the year, 2003 in the State, the project was implemented through Odisha Livestock Resources Development Society (OLRDS). The District Livestock Resources Development Society(DLRDS) has been formed in district level on 7.9.2006 to look after the health of animals. The achievement of artificial insemination has gone up to three folds from the eighties till date. Sheep and Goat Development

Poultry Development

Poultry development in the district has taken a big leap in the last three decades. Over the decades, the country birds have been replaced by improved variety of birds like Banaraja, Giriraja, Gramapriya, & Blackrocks which has increased the egg & meat production in the district. 70% of the poultry products and eggs are consumed in urban and semi urban areas. The private sector has a dominant role in commercial poultry development. The Government of Odisha have declared poultry as agriculture to encourage poultry production in the state. BPL farmers have been benefitted through Backyard poultry & Chick rearing units. District hatcheries have been set up to provide variety like Banaraja and Grampriya day old chicks in subsidized rate to farmers.

The district has a poultry population of 12.46 lakhs. There are 350 commercial broiler farms in the district with capacity of 1000-5000 & there is an annual turnover of 6.20 lakhs broiler birds. Around 6.26 lakhs indigenous birds are reared by poor and backward farmers.

Animal Health Care

Preventive measures are taken by the department through vaccination against diseases like HS, BQ, FMD, Anthrax in large animals; PPR, Goat Pox, HS and Rabies in small animals; RD & FP in poultry. 80% of the livestock population is under the coverage of preventive vaccination against contagious diseases. Vaccines against emerging protozoan disease like Theileria are now available to farmers. 13 Mobile Veterinary units are running in 13 blocks of the district since 2012-13 for wider coverage of animal health services. District Diagnostic

Laboratory has been established in district headquarters during 2009-10 for disease investigation.

Animal Feed and Fodder

Farmers are being encouraged to grow fodder plants in their field like Subabul, Agasti to feed their animals. After 2000, grass land and grass reserve programme was introduced by the Government to promote fodder cultivation on community pasture land. In recent years programmes like enrichment of crop residue, azolla cultivation are being promoted to make up shortage of fodder and protein supplementation. State Government and Central Government schemes like Rastriya KrushiVikasha Yojana have been implemented for wider coverage. To improve the knowledge & skill of the farmers and officials on fodder promotion, training for farmers and departmental personnel is conducted.

Fisheries

Being a land-locked district, it is endowed with only fresh water resources in the form of tanks, ponds, Rivers, canals as well as MIP and reservoirs. Baitarani, the main River of the district along with other small Rivers viz. Ardei, Kusei, Samakoi, Karo, Salandi, Muhana, also provide fish for livelihood of fishers.

Co-Operative Sector

There are 29 Primary Fishermen Co-operative Societies (PFCS) with one Central Fishermen Co-operative Society in Keonjhar district.

Group Accident Insurance Scheme (G.A.I.S)

Under Group Accident Insurance Scheme (GAIS), 600 fishermen were insured at the starting of the scheme in 2005-06 and now 14,100 fishermen have been insured for their lives in this district. They are entitled to get Rs 2,00,000/- in case of accidental death or permanently disability, Rs 1,00,000/- in partial disability and Rs 10,000/- for medical treatment.

Handicrafts

The handicrafts in this district were acknowledged as an important part of rich cultural heritage which attracts visitors from outside. Many rural artisans have been doing their hereditary craft and contributing to the economic growth of the district in particular and the state in general. The handicrafts of this district have made spectacular progress through modernization and technical up-gradation

In Handicraft sector craft wise information of the district is as follows:-

Craft Venue No of handicraft artisans 01. Stone Carving Dhakotha 150 Stone Carving Bhalukuma 70 Stone Carving Marshapal 55 (ST) Stone Carving Alati 70 02. Teracotta Bataharichandanpur 55 Teracotta Haladharpur 60 Teracotta Maliposi 30 Teracotta Mahadevpur 50 Teracotta Ukhunda 30

Teracotta Fakirpur 30 Teracotta Tikarpada 30 Teracotta Tukudiha 30 03. Paper Machie Fakirpur 55 Paper Machie Raikala 30 Paper Machie Naduan 30 04. Applique Anandapur 50 Applique Ghasipura 30 Applique Raikala 30 Applique Sandhiaposi 30 05. Paddy Craft Dihasahi 30 (ST)(W) Paddy Craft Kusunpur 30 (ST)W Terracotta. The terracotta products of Ghatagaon block are famous in the state of Odisha, Jharkhand and Bihar. The following are some other handicrafts in Keonjhar district:-

Stone Carving

The stone carving products are very much appreciated inside and outside the country. Skill up-gradation and design development training have been provided to the artisans by the Director, Handicrafts & Cottage Industries, Odisha and NABARD.

Bamboo Craft

Bamboo craft is prevailing in all 13 blocks of the district. As the forest growth of the district is especially rich in varieties of bamboo, this craft has become viable in this district.

Paper Mache

Papermache is a unique craft of Odisha. Fakirpur Village of Anandapur block is famous for this craft.

Jute Craft

Moreigaon Village of Hatadihi Block is famous for Jute craft. The products are being sent to different parts of Odisha for sale.

Food item (Keonjhar Badi)

The manufacturing of Badi is a unique cottage industry with low cost investment and has resulted in tangible improvement in the living condition of the poor women. The geographical and climatic condition of Keonjhar is very soothing for the farming of different kind of pulses among which the black gram (biri) is one. It is also important in other ways as it is used to prepare a special kind of cake, popularly known as BADI. No preservative is required to be used for its storage. For its special type of natural fragrance,

Badi has penetrated into international market. It has occupied the status of micro units in the district.

Looking at the popularity of “KendujhareeBadi”, the ORMAS has come forward to give financial support for development of products and packaging units. The district administration has taken initiative to establish “Badi” projects and packaging of units in a cluster manner and also to mechanise its production. The project has started its production at Village Tentulinanda. Presently, about 20 SHGs are engaged in Badi making in the district. All members of SHGs have been given basic orientation and skill up gradation training under the assistance of DRDA, Keonjhar and NABARD. A federation of SHGs has been formed under direct supervision of ICDS, Keonjhar. Marketing tie up of packaged “Badi” has been made with Reliance Fresh & Big Bazaar at Bhubaneswar & Cuttack to create extensive marketing facilities.

Education:

Keonjhar District is economically a backward District in the State of Orissa. Educationally it is emerging as a developing District with the passing of time. The average literacy rate of the district is 68 % male literacy is 78 % and female literacy is 58 % still it is a major concern that girls are not getting priority to get basic education. Parents always giving importance to male child of the family due to patriachal mindset. Tribal people of 23 tribal communities generally pre-dominantly inhabit the district.

Health: The medical facilities are provided by different agencies like government, private and by NGOS in the districts. The health service has been increased in a better way to cater the need of the community. Earlier there were no proper medical facilities available in the district either the people depend on the traditional herbal medicine or they were used to visit Cuttack & Sambalpur to avail the medical facilities. Now due to strong intervention of the government there were 85 numbers of allopathic hospitals, with 470 patient bed available in the district, 34 number of homeopathic dispensaries, and 48 number of ayurvedic dispensary avail in the district.

Housing:

One of the primary need of a human is house or shelter in which he could reside peacefully save him from natural disaster, animal attacks etc Housing scheme has to ensure affordable house for the poor and marginalized communities to the people of rural and urban areas of the district, most of the s Housing for All (HFA) scheme is envisioned by our Honourable Prime Mister Mr. Narendra Modi. “By the time the Nation completes 75 years of its Independence, Pradhan Mantri AwasYojna will bring a ‘Pucca house’ for every family in urban cities with water connection, toilet facilities, 24x7 electricity supply and complete access. As addressed by our Prime Minister in the joint session of parliament on 9th June, 2014. The district collector and PD-RDRDA are the nodal officer of successful implementation of this plan, 204371 number of In 2011, total 290 families live on footpath or without any roof cover in Kendujhar district of Orissa. Total Population of all who lived without roof at the time of Census 2011 numbers to 1,068. This approx 0.06% of total population of Kendujhar district are homeless.

Occupational Pattern

Table 3.3 Occupation-wise classification of workers in Keonjhar according to 1991 census.

OccupationsNo of Workers

A. Main Workers	
I. Cultivators	209789
II. Agricultural Labourers	107879
III. Live Stock, Forestry, Fishing, Hunting and Plantation, Orchards and allied activities	7063
IV. Mining and Quarrying	30708
V. Manufacturing, Processing, Servicing and repairing	
a] In Household industries	10208
b] In other than Household industries	12397
VI. Construction	3155
VII. Trade and Commerce	15474
VIII. Transport, Storage and Communication	6955
IX. Other Services	36325
Total Main Workers	439953
B. Marginal Workers	79073
Total Workers	519026

Source : Census of India, 1991.

Total number of workers of the district engaged in different occupation is 5,19,026 according to data available as per 1991 census. Out of these, the main workers are 4,39,453 and 79,073 are marginal workers. A high proportion of main workers is with agricultural occupations (cultivators 88 and agricultural labours) which is estimated to be 61.2 per cent of the total workers.

Power(NESCO Utility) Administration

Initially Keonjhar division started from Joda in the year 1979 consisting of 4 Sub-Divisions i.e. Keonjhar, Joda, Champua & Anandapur under administrative control of Jajpur Road Circle. During the year 1986 a new division was created at Anandapur separating it from Keonjhar division with 3 sub-divisions. Subsequently in the year 2009, Keonjhar division was again bifurcated into two divisions namely Keonjhar & Joda with creation of two new sub-divisions i.e. Barbil and Turumunga. A Circle office was created at Keonjhar separating it from Jajpur Road circle. The newly created Keonjhar Electrical Circle has the administrative control over 3 divisions i.e.

132 (1) Keonjhar Electrical division, (2) Joda Electrical division and (3) Anandapur Electrical division with 9 sub-divisions.

Power System

Initially Keonjhar sadar, Joda, Barbil, Champua, Patna, Banspal, Telkoi, Ghatgaon & Harichandanpur blocks were availing power from Joda Grid, similarly Anandapur & Ghasipura blocks from Jajpur Road Grid, Hatadihi block from Bhadrak Grid & Saharpada block from Rairangpur Grid. During 1983 a new Grid functioned at Polaspanga and power supply was separated for Keonjhar, Patna, Telkoi, Banspal, Ghatgaon, Harichandanpur, Champua & Jhumpura blocks. A new Grid functioned at Anandapur in the year 2010 and power supply was provided for Anandapur & Ghasipura blocks. Lastly in the year 2014 another Grid started functioning at Barbil for Barbil municipality and its peripheral area. 32 new 33/11KV sub-stations under ODSSP scheme are under construction.

Village Electrification

Initially in the year 1981, 1742 Villages were declared electrified. Now 1981 Villages are electrified out of 2132 Villages after implementation of RGGVY and BGJY scheme. Presently the consumer strength of Keonjhar district is 223503 including 116254 BPL in RGGVY-I and BGJY. Further in RGGVY-II, DDUGJY, IPDS & BGJY etc. another 60,000 BPL household consumers will be added in the system.

Renewable Energy

The OREDA RE cell in Keonjhar district has been functioning with effect from 1984 under administrative control of PD, DRDA for creating awareness and disseminating the use of different renewable energy devices/ programmes to meet the future demand of energy and to provide clean energy to every household.

Handloom & Textile

The Handloom Industry in Keonjhar district has occupied a unique place for production of coarse cotton saree, napkin, lungi, bedsheet & tassar products i.e. tassar saree, gamucha, kantia, chadar in Anandapur & Fakirpur area. Near about 2000 weavers are engaged in handloom activities. In fact, all the members of each weaver household are engaged in the preloom and post-loom activities. In order to attract others to adopt the Handloom weaving profession as their livelihood, a series of developmental and welfare programmes are launched by Central Government as well as Government of Odisha.

Drinking water and sanitation:

The main objective of Rural Water Supply & Sanitation Organisation is to provide drinking water facilities in the rural areas. This objective is achieved by implementing various Rural Water supply programmes sponsored by Central Govt. and the State Government. As per the present norm, one drinking water source (i.e. Tube well or Sanitary Well) is to be provided for each 250 populations or part thereof in an identified habitation of each village basing on 2011 census. In Keonjhar district there are 6250 nos. of identified habitations and all of them have been provided with drinking water sources as per requirement based on population except seven nos. of habitations which are partially covered. Further seven nos. of sources are required to cover all the habitations fully. Presently repair and maintenance of tube-wells are being made by the departmental maintenance staff stationed at each block headquarters of the district under the supervision of the concerned Junior Engineer; RWS&S whose headquarter is same as the block headquarter. In Keonjhar district, two blocks namely Patna and Telkoi have been selected for implementation of this new system in the 1st phase. This system is going to be the most suitable system for maintenance of hand pump as it involves participation of the public.

Migration:

Migration is not a big issue of this district very few youngsters seasonally migrate to south Indian cities like Bangalore, Chennai for seeking labour work. Generally this temporary migration happened after Makar festival they returned back to the home land by June for agricultural work.

Food security:

The Civil Supplies Section is a part of the Collectorate, Keonjhar, which is being managed by F.S. & C.W. Department. The mission of Organization is to provide food security to the consumers through BPL/AAY/APL Schemes. The primary policy objective of the department

of Food and Public Distribution System (PDS) is to ensure food security for the vulnerable people through timely and efficient procurement and distribution of food grains. This is jointly managed by the Ministry of Consumer Affairs and Public Distribution System of Govt. of India with the State Govts. Measure commodities distributed include staple food grains such as Wheat, Rice, Sugar and Kerosene Oil through a network of Public Distribution Shops (PDS) called Fair Price Shops (FPS). The PDS involves the entire work of procurement of various food grains, building of and maintenance of stocks, their storage, movement and delivery to the beneficiaries. The focus is on incentivizing farmers through fair value of their produce i.e. paddy by way of payment of minimum support price. Now ration cards distributed as per National Food Security Act 2013 (NFSA) provides for food & nutritional security in human life cycle approach by ensuring access to adequate quantity and quality of food at affordable prices to people to live a life with dignity.

Social Security:

District Social Welfare Officer is the nodal officer for the implementation of all the social security schemes of the district. Mainly the social security department laid stress upon the protection and rights of vulnerable groups of society like –SC/ST/ Women, Girls and age old people of the district. Special schemes and program has been lunch by the government to uphold and preserve the rights & entitlements of the special people. In the district, each ICDS project is headed by a Child Development Project Officer (CDPO), the project is further divided into 5-6 Sectors. Each sector is headed by a Supervisor, who oversees the work of 20-25 Anganwadi Centres (AWC) functioning at the village level. The Department has five statutory bodies, viz. (a) State Commission for Women (SCW) (b) State Council for Child Welfare (SCCW), (c) State Social Welfare Board (SSWB), (d) Social Security and Empowerment of Persons with Disabilities (SSEPD) and (e) State Commissioner for Protection of Child Rights(SCPCR).

Religion

The following table gives the distribution of population by religion according to the census of 2011:-

Name of the Religion	Number of followers	Percentage to total population
Hindu	1752694	97.28
Muslim	27752	1.54
Christian	9141	0.51
Sikhs	2177	0.12
Buddhist	209	0.01
Jains	131	Negligible
Other religions and persuasions	7372	0.40
Religion not stated	2257	0.13

According to the 2011 Census, 97.28 percent of the people in the district professed Hinduism. The preponderance of the followers of Hinduism in the district is so high that it occupies sixth place in the state of Odisha. Among the Hindus most of the people are semi-Hinduised tribals. They have adopted Hindu customs and they worship Hindu Gods. They claim to be orthodox Hindus, but side by side worship their own tribal Gods and Sylvan Deities. In every Village there is invariably a Village priest who is known as dehuri, jani, etc. They appease the evil spirits and the sylvan deities of the tribals with sacrifices of buffaloes, goats and fowls. The Villagers do not

conduct any auspicious work without worshipping the Village deities which are generally represented by a log of wood or a stone smeared with vermilion and are usually located in a dense forest. The priests get remuneration from the Villagers for their services. These Village deities are also worshipped as Durga, Tarini, Sidhamata, Gadachandi, BisriThakurani, etc. The worship of the gramadevati is conducted with great pomp and show on the Mahastami day of the Durga puja. At some places goats and buffaloes are sacrificed.

The Hindus of the district are polytheists. They worship gods and goddesses in temples dedicated to Lord Jagannath, Siva, Rama, RadhaKrishna, Shakti, the mother goddess in her various manifestations, and other deities. The people congregate near these temples on different festive occasions like RathaJatra, Durga Puja, Sivaratri, DolaJatra, RahasJatra, Chandan Jatra, etc. They show great respect to their priests who are Brahmins, and Jyotish who are their family chroniclers. The Hindus worship Sun-god and many abstain from eating fish or meet on Sunday as it is the sacred day for Sun-god. The earth is described as the holy mother of all living things and the giver of all good and is regarded as a benevolent female deity. Besides, the Sun and Earth, planets like Sani, and Rahu are also worshipped on certain occasions. Thursday is considered an auspicious day for goddess Lakshmi and is observed with religious devotion mostly by the women folk. The people believe in spirits, magic and good and bad omens. They believe in the existence of malevolent and benevolent spirits. The malevolent spirits are supposed to be the causes of death and disease and, as such, are appeased by offering of fowls and goats. If a person is supposed to be possessed by some evil spirit, Raulia, the exorcist is called to expel it from the body. The Raulia is believed to be an expert in the job and is invited by the people. The Hindus of the district consider Pipal (*Ficus religiosa*), Banyan (*Ficus bengalensis*), Bel (*Aegle marmelos*), mango (*Mangifera indica*), Anla (*Phyllanthus emblica*), Duba (*Cynodondactylon*), Asoka (*Janesiaasokasaracaindica*), Brakuli (*Zezyphus*), Bakul (*Mimusopselengi*) and Tulsi (holy basil) as sacred. They worship these trees and plants on festive occasions.

In almost every Hindu household there is a chaura or a sacred place where Tulsi is planted and worshiped. Siva is the most popular among the Gods in the Hindu pantheon. Adherents of Saivism worship the deity under the name of Rudra, Sadashiva, Shankara, Shambhu, Mahadeva, Neelakantha, etc. In Keonjhar district famous Siva temples are found at Deogan (Kushaleswar), Gonasika, Barhatipira, Deojhar and Murgamahadev. Usually Siva is represented by the phallic symbol, the Linga and the Yoni enshrined in the temple. Sivaratri is the principal festival of Lord Siva. Siva chaturdasi is also observed by the people. The orthodox devotees of Lord Siva use three horizontal lines of sandal wood paste on their forehead as religious mark and wear rudraksha (*elaecarpusganitrus*) mala round their neck.

Shakti is conceived as the divine Mother and the consort of Lord Siva. Among the common people Sakti is often the presiding deity of fertility. In the district, Sakti is worshiped in several forms such as Tarini at Ghatagaon, Parbati at Gonasika, Gadachandi at Soso, and Sidha kali at Keonjhar. These are important places of Sakti worship in the district. Sakti is also worshipped in the Villages in the form of folk Goddesses. The Mahima Dharma which started at Joranda in Dhenkanal district is a cult which believes in one God, i.e., the Param Bramha, the Supreme Being. The followers are residing in Keonjhar district also

The census of 1971 has recorded 6,928 Muslims in the district. As per 2011 census the number of Muslims increased to 27,752 which is 1.54 % of the total population of the district. The Muslims of Keonjhar district belong to Sunni Sect.

In 1971 the Christian population in the district was 2,595 which was 0.27 percent of the total population of the district. As per 2011 census the number of populations increased to 9141 which is 0.51 % of the total population.

The Sikhs residing in the district are mostly immigrants from outside the state. They numbered 947 in 1971 and are mostly found in ChampuaSubDivision. In 1954-55 they established a Gurudwar at Barbil. The Sikh population has increased to 2177 as per 2011 census which is 0.12 % of the total population of the district.

The Buddhists with an aggregate population of 48 (the census of 1971) constitute a microscopic minority in the district. The Buddhist population increased to 209 as per 2011 census.

In 1961 there were 161 Jains in the district. The number declined and in 1971 only one person was found professing this faith. The Jain population is 131 as per 2011 census.

Industrial Relations and Labour Laws

The term“Industrial relations” commonly denotes employee- employer relations in both organised and un-organised sectors of the economy. It can be viewed from various angles which may range from economic and social, political to the legal, psychological and managerial. Industrial relations basically depend upon the labour management system.The primary responsibility of the labour machinery is implementation of various labour laws like- Minimum Wages Act, 1948, Payment of Wages Act, 1936, Equal remuneration Act, 1976, Industrial Disputes Act, 1947, Odisha Shops and Commercial Establishments Act, 1956, Contract Labour (R&A) Act, 1970, Child Labour (P&R) Act, 1986, Inter State Migrant Workmen (RE & CS) Act, 1979, Building and Other Construction Workers (RE & CS) Act, 1996.

Labour Welfare

The importance of labour welfare was recognised in 1931, when the Royal Commission on Labour stated that labour welfare may be regarded as a wiser investment towards bringing a profitable return in the form of greater efficiency. It covers the social security and other activities such as medical aid, creche, canteen, recreation, housing, adult education, rest- shed, drinking water and arrangements of transport of labour to and from the work place etc. The Government of India have laid down certain provisions for labour welfare under different labour laws like- The Factories Act, 1948, The Mines Act, 1952, The Contract Labour (R & A) Act, 1970, The Inter State Migrant workmen (RE& CS) Act, etc.

There is RashtriyaSwasthyaBima Yojana (RSBY), being implemented in Keonjhar district through the insurance company, New India Assurance Co. Ltd. Through this Yojana, the beneficiaries can avail of medical assistance upto Rs. 30, 000/- per family.

Trade Unionism

Trade Unions have become permanent features of the industrial society. National level Trade Unions have been formed backed by political parties like Congress and Communists. BJP has also entered into the area. They articulate the problems of the labourers and help in the determination of principles, philosophy, ideology and purposes of the unions and give some sense of direction to the otherwise scattered and isolated unions

As per the available records, there are 22 registered trade unions operating in the district. Generally, the workers of registered factories and mines have formed trade unions to safeguard their interest. All these trade unions are affiliated to different All India Trade Union organisations like- INTUC, AITUC, BMS, HMS, CITU.

Weights and Measures

Prior to the introduction of the metric system the unit weight in common use in the district was the seer of 80 tolas. The common measure of volume was mana in all transactions of rice, paddy and other food grains. For measuring length, hatha, gira, yard, foot and inch were in use. The local land measurement was 16 biswas equal to one gunth, 25 gunths equal to one mana and 20 manas equal to one bati in lower Keonjhar, comprising mostly the Anandapur sub-division. In upper Keonjhar, comprising mostly the Keonjhar and Champua sub-divisions, the same measurements were in force but here 20 gunths were equal to one mana. Now land measurements are in feet and yard. The sale / purchase of land are in acres and decimals. The area of land in registration deed and pattas is mentioned in acre and decimals. Apart from the unit of feet and yard for land measurement, the metric system i.e. meter/centimeter is also in use. With a view to overcoming these anomalies, the metric system of weights and measures i.e. gram, metre, litre was enforced as all India standard from 1st April 1962. Initial difficulties were experienced by the consumers and the traders, but after regular practice, the system is now functional. After introduction of metric system, the jewellery stores started the use of digital weighing balance machine. But now the digital weighing machines are being used by all types of traders.

RMC Keonjhar

The Regulated Market Committee, Keonjhar was established by the State Government in July-1966 under statutory provisions of the Odisha Agricultural Produce Markets Act, 1956. The Market area of the Committee is confined to entire revenue Sadar sub-division area of Keonjhar district. In the market area, there are 96 regular periodic markets (weekly/biweekly) & 2 Krushak Bazars generally visited by producers of the surrounding areas and petty traders to exchange buy or sell articles. The market yard at Keonjhar comprises 10.65 acres of land on which stand the office building, godown and shed for cattle. The management is carried on by a Market Committee consisting of 17 members representing agriculturists, traders and members nominated by the Government and the local authorities. The Market Committee collects information regarding the prevailing price in other markets and disseminates the same for the information of the producers. The Regulated Market Committee Keonjhar has been provided with amenities like covered pindies, open pindies, cattle sheds, farmers rest sheds, auction halls, godown facilities, cooling chambers, shop rooms, boundary walls, supply of drinking water & sanitary arrangement, internal & external roads & weighbridge facilities etc. For the regulated market, the commodities are detailed as under :- The commodities regulated by this RMC are Jute (Fibers), Paddy, Rice, Fattend Rice, Maize, Ragi, Bajra, Suji, Atta, Maida (Cereals), Harada, Biri, Mung, Kulthi, Chana Khesary (Pulses), Groundnut, Coconut, Mahuaseed, Linseed, Mustard, Salseed, Caster (Oil seeds), Egg, Poultry, Cattle, Goat, Sheep, Hides and Skins, Bones (Animal husbandry products), Turmeric, Ginger (Condiment and Spices), Fish and Dry Fish (fish product), Mahua flower, Bahada, Harida, Sal leaves, Marketingnut, Amla, Tendu leaves (Grass Fodder, Forest and other miscellaneous)

Legal Metrology in Keonjhar District

The office of the Asst. Controller, Legal Metrology was set up in Keonjhar district on 3.12.1984 to take up verification, enforcement & awareness of weights, measures, weighing & measuring instruments available in the district from the date of commencement of the office.

This organisation plays a major role to protect the interest of consumers of Keonjhar district by means of implementing the Legal Metrology Act & Rules. From the year 2010-11 to 2015-16(till July 15) the traders verification done by this organisation are 16626,16797,4097,16571,5653 and 1762 respectively

Mineral Based Industries

At present, 118 mineral based industries are existing in the district. Most of the units are running in Joda and Barbil area. Engineering and Metal based industry At present, there are 266 light engineering units running in the district with total investment of 1330 Lakhs. The total employment in this sector is 1330.

Chemical and Allied Industries. At present the status of different categories is as follows: -

01. Chemical based	-	75
02. Cement based	-	85
03. Repairing & servicing sector	-	80
04. Agro based	-	130
05. Food based	-	55
06. Electrical & Electronics	-	160
07. Textile based	-	55

There are 28 stone crusher units existing in the district with total capital investment of 350 lakhs and employment generation of 560 workers. Besides, there are 24 fly ash bricks running manufacturing units in the district with total capital investment of 600 lakhs and employment generation of 400 persons.

Maoist Issues

Dense forest, inaccessible terrains and porous borders with Jharkhand State has helped in growing naxal activity in the district. Huge volume of monetary transactions arising out of mining and ancillary activities have also helped breeding of naxals. Maoist activities have been witnessed in areas of Rugudi, Bolani, Barbil and Champua. Daitary, Nayakote, Ghasipura, Telkoi and Kanjipani Police Stations of Keonjhar district. Banspal Out Post, Daitary PS and Sagadapatta Railway Stations had been attacked by the extremists and few police personnel were killed. Construction works by the contractors had been stopped by the naxals. Due to continuous vigil by the security forces, the outfit has not been able to create any problem in the last three years. Of late, their activities are not seen in the district. At present, there are 04 Coys of 64 Bn. CRPF, 03 Platoons of OSAP, 2nd SS Bn and 01 platoon of OSSF presently deployed for Anti- Naxal operations.

Area affected

Out of 25 Police Stations including Energy Police Stations 8 Police Stations area are affected by the Maoist activities. Those Police Stations are 1) Daitari, 2) Ghasipura, 3) Harichandanpur, 4) Telkoi, 5) Kanjiani, 6) Nayakote, 7) Bolani and 8) Rugudi.

Development of Railway Communication

In the fifties and sixties, Railway lines were laid mainly for being used for lifting of iron ore and other minerals from this district. Availability of Railway Services has played an important role in the economy of the district. Iron ore and other minerals are being carried by the Railways to the different plant sites in and around Odisha. But only by the end of 2009, first passenger train ran from Puri to Keonjhar and it was further extended to Rourkela, Barbil and Chakradharpur.

Regional Rural Bank (RRB) i.e. Baitarani GramyaBank which was later known as Odisha Gramya Bank also has a good network in the district with 48 branches in almost all corners of the district. Apart from that 6 private Banks namely Indusind Bank, ICICI Bank and HDFC Bank with 4 branches each, Axis Bank with 3 branches, Kotak Mahindra Bank with 2 branches and ING Viasa Bank with one branch are functioning in the district. Thus as in 2015 the number of commercial bank branches operating in the district is 184 (166 public sector + 18 private sector banks)

The total deposits and advances as in June 2015 were Rs.6641.69 cr. and Rs.2829.95 cr respectively. Out of total advances of Rs.2829.65 cr, the priority sector advance was Rs.1350.36 cr including advances to agriculture sector amounting Rs.739.14 cr.

Keonjhar Central Co-operative Bank Ltd was established on the 18th April, 1950 with head quarters at Keonjhar. It has 15 branches covering all block head quarters. Besides, there are 16 nos. of LAMPS and 25 nos. of SCS and 17 mini banks functioning under the control of KCCB Ltd. in the district. A major technological development in banking sector is the adoption of the Core Banking Solution (CBS). CBS is the step towards enhancing customer convenience through, any-where, any-time banking. The adoption of CBS has led to various technical products like NEFT, RTGS, Mobile Banking, Internet Banking, ATMs, Electronic clearing Service (ECS) etc. As on 30.6.2015 there are 205 ATMs (Automated Teller Machine) functioning in the district covering the rural as well as semi-urban centers. Banking facility availed by Total Households In this district, the total Households are 406629 out of which 349736 are of in Rural area and 56893 are in Urban area. All the Households are availing of banking facilities.

Micro Credit

Micro Credit is the supply of credit to poor people like landless labourers, petty traders, artisans & other persons of very small means. These people do not depend upon money lenders for their immediate credit needs as they find it easier to avail of bank loans. These poor people are organised into Self Help Group (SHG), they save, and borrow from banks and improve their economic conditions which provide social empowerment to fight socio economic injustice meted to them for decades. Micro Credit is defined as the provision of thrift / credit & other financial services and products of very small amount (upto Rs. 50,000/-) to the poor in rural / semi-urban / urban areas for enabling them to raise their income level & improve living standards.

In 1992, NABARD launched a pilot project to form Self Help Groups and provide bank finance to them. 12353 self help groups are functioning in the district. The block-wise figure of these SHGs are Anandapur 821, Banspal 597, Champua 1140, Ghasipura 1117, Ghatagaon 1116, HarichandanPur 832, Hatadihi 1046, Jhumpura 863, Joda 775, Sadar 1284, Patna 966, Saharpada 993, Telkoi 1003.

Mining Activities

For Mining operations, 118 mining leases have been granted for Iron ore, Manganese ore, Chromite ore, Quartzite ore and Pyrophyllite etc. in favour of different private parties and public sector undertakings following the act and rules of MM(D&R) Act, 1957 & M.C. Rules 1960. Out of those, 52 are Iron ore leases, 36. Iron ore & Mn. leases, 15 are Manganese leases, 1 Iron & Dolomite lease, 7 Quartz, Quartzite and Pyrophyllite leases, 6 Chromites leases, 1 Asbestos and Pyroxenes lease. The production of iron ore was not encouraging due to lack of market and industries upto early 1990's. Demand for steel started growing in the national and international market by the end of the century and beginning of the 21st century and mining picked up. Joda Mining circle plays a vital role in collection of revenue to the state amounting to more than 40%. Yearwise collection from 2012-13 is given below 2012-13 Rs 2655,81,21,887. 2013-14 Rs 2528,45,65,691 2014-15 Rs 1867,07,35,976 For easy identification of lease areas and also to avoid dispute of overlapping of lease area in the field, Government have decided to demarcate all lease areas through DGPS survey by ORSAC. Accordingly, DGPS survey of lease areas in Keonjhar district is in progress.

Due to heavy industrialization (Iron based), Government decided to operate an office of Asst. Director of Factories & Boilers in Keonjhar district in 1995. In Keonjhar district, 202 factories have been established till date out of which 12 factories are having their captive power plant. The list of the 12 captive power plants are as follows :-

Sl. No.	Name of the Industry	Generating Capacity	Status
1.	M/s. Pattnaik Minerals Pvt. Ltd.	2 MW	Running
2.	M/s. Odisha Sponge Iron Ltd.	60 MW	Closed
3.	M/s. Jagannath Industries Ltd.	10 MW	Running
4.	M/s. Ganesh Sponge Iron Ltd.	0.5 MW	Closed
5.	M/s. Pattnaik Steel & Alloys	15 MW	Running
6.	M/s. Tata Sponge Iron Ltd.	25 MW	Running
7.	M/s. Jindal Steel & Power Ltd.	9 MW	Closed
8.	M/s. IDCOL Kalinga Iron Ore Works	3 MW	Closed
9.	M/s. Shree Metalick Ltd.	30 MW	Running
10.	M/s. Deepak Steel & Power	30 MW	Closed
11.	M/s. Deepak Steel & Power	10 MW	Closed
12.	M/s. KJS Ahluwalia Steel & Power Dvn.	30 MW	Running

Source: Asst. Director, Factories & Boiler / GM, DIC, Keonjhar

Civil Society

Several NGOs have come up in the district taking up voluntary activities in various spheres, like child care, care of the handicapped, cause of the deprived sections, human rights, women's issues, environment etc. Presently there are more than 300 NGOs operating in different fields in Keonjhar. Particulars of some NGOs are given below :- In the field of child care Manoj Manjari Shisu Bhawan, a Home for orphans, has come up at Keonjhar to take care of destitute children, most of whom constitute the tribal children. The Home was opened in December, 1974 through the pioneering efforts of Shri Narendra Mohapatra. During his visits to Juangpirh and Bhuyanpirh to see the havoc caused by the drought, Shri Mohapatra picked up an orphan and brought him to his house in 1973. He brought more orphans during subsequent visits. He started an orphanage in his house at Keonjhar in May, 1973. Today the Shisu Bhawan stands on an area of 4.67 acres donated by Rajmata Manoj Manjari Devi. The building of the Bhawan was built by donations received from voluntary institutions

and official agencies. More than 100 inmates are housed there. Some other child care institutions are Adruta Children's Home Govindpur, Bishnupriya Balashram Hatadihi, Self Realization Mission Ghasipura, Prakalpa Baniapat, Keonjhar, Home Sweet Home, managed by Manoj Manjari Sishu Bhawan and Saswat Tapoban managed by Self Realization Mission WOSCA- Women's organization for Socio-Cultural Awareness (WOSCA) is a voluntary organization working since 20th December, 1993 with the commitment to serve mankind. It has been registered under the Society Registration Act XXI of 1860 in the year 1993-94 and registered under FCRA in the year, 2000. Since its inception it has been taking up need-based programmes primarily in the areas of livelihood, income generation, environment, health, watershed and human resource development. Most of its programmes are women – focused. WOSCA is a pioneering organisation with its innovative approaches towards developmental efforts for rural poor and is working with commitment for the development of the underprivileged, irrespective of gender, creed, caste, class or ethnicity.

Prakalpa Formally started in the year, 1984 by a group of dynamic young people with a vision to help improving quality of life of the under-privileged & deprived people in inaccessible areas of Keonjhar district.

Swadhar and Helpline 1091 Swadhar, a centre for women in difficult circumstances started functioning in the year 2005 in the district headquarters Keonjhar. This project provides a better and secure life to destitute and distressed women to bring them out of the darkness of pain, torture, hopelessness and take them towards positive attitude towards life. Here they are not only provided with medical, legal and psychological counseling but also some vocational training keeping in mind their aptitude and viability to help rehabilitate them once they are able to do so. 216 women have been rehabilitated starting their new life since 2005. One toll free telephone having no. 1091 works 24X7 handled by professional counselors to take care of the callers in the difficult circumstances. 2038 number of cases have been registered and attended to till date.

Names of some other NGOs (Source Website Keonjhar) There are a host of other NGOs operating in the district and working for the welfare of the general people. There list is given below: -

- 1) Meera Welfare Society Keonjhar
- 2) Baitarini, Keonjhar
- 3) Social Welfare Organisations, Hadgarh
- 4) Anchalik Vikash Samity Ghatgaon
- 5) Integral Rural Development and Training Centre Keonjhar
- 6) Service Association for Rural Progress, Dhenkikote,
- 7) Associated Social Service Agency and
- 8) Kalyan Ghasipura
- 9) Srusti Keonjhar
- 10) Women Organisation for Cultural awareness,
- 11) United Rural Development Organisation, Sainkul
- 12) DISA Keonjhar
- 13) Ideal Development Agency Padmapur
- 14) Rural Development Organisation, Tukuna
- 15) Kudumi Cultural Society Harichandanpur
- 16) Biswa Gyan Chetana Samaj Salpada
- 17) Humanity and Decency International Harichandanpur
- 18) Satyanarayan Yubak Sabgh, Jhumpura.

NGOs with international network like Red cross, UNICEF, Rotary are also engaged in implementing many welfare schemes for the Government. While organizations like Red cross, UNICEF are backed by Government, Rotary is a private body. There has been a paradigm shift in the nature of civil society activities with the formation of Self Help Groups which are working in close partnership with the Government. These groups consisting mostly of women combine voluntarism, entrepreneurship and women empowerment. There are more than 12,000 SHGs working in Keonjhar in the areas of agriculture, animal husbandry, cottage industry, human resource development and many Government sponsored schemes.

Source: D.I.&.P.R.O, Keonjhar

National Informatics Centre (NIC) “ NIC NET”

"Informatics-led-development" programme of the government has been spearheaded by NIC to derive competitive advantage by implementing ICT applications in social & public administration. The following major activities are being undertaken:-

Setting up of ICT Infrastructure Implementation of National and State Level e-Governance projects
Products and Services Consultancy to the Government Departments Research and Development
National Informatics Centre District Unit, Keonjhar

The National Informatics Center, district unit in Keonjhar became operational during the year 1988 and with the installation of Micro Earth Station (MES) on 30th March, 1989, the district became NICNET Node. A Memorandum of Understanding (MOU) has been signed between Government of Odisha and National Informatics Center for proper co- ordination. As per the Memorandum of Understanding, Committees at state and district level are set up for better co-operation and performance. NIC District Co-ordination Committee (NDCC) at the district level, is Chaired by the Collector and District Informatics Officer is the Member Secretary.

The activities in the National Informatics Center, district unit follow a planned approach and can be broadly divided into following categories:

1. Activities which cater to the specific needs of the district administration.
2. National level activities which tie up the district with the national frame work of development.
3. The effective of use of NICNET as an efficient communication infrastructure for data and message inter change. Organising training on computer awareness and data entry for user departments.

Implementation of various e-Governance projects of Central and State Governments in the district.

Since its set up in 1988, the National Informatics Center, district unit has been successful in propagating and integrating the science & culture of informatics with the working of district administration.

OSWAN (Odisha State Wide Area Network)

The objective of OSWAN is to create a state wide area network that will improve government efficiency through connectivity. The Odisha State Wide Area Network (OSWAN) would serve as the backbone network for data, video and voice communications throughout the State which includes district headquarters (DHQ) Keonjhar and 13 block headquarters (BHQ) in Keonjhar district.

Bandwidth Details

Path Present Status Future Provision
SHQ to DHQ 2 Mbps 8 Mbps
DHQ to BHQ 2 Mbps
4 Mbps
Internet 10 Mbps
Already upgraded from 4 Mbps to 10 Mbps

OSWAN connectivity has further extended as Horizontal Connectivity to different offices like all Tahasil offices, DRDA, District Registrar /Sub Registrar Offices, District Hospital/Community Health Centres, Municipality Offices, District Treasury/Sub Treasury.

Road transport, National and State Highways, Major district roads, other district roads, revenue roads, G.P. and Village roads and forest roads

The National Highway NH-6 i.e. Howrah – Mumbai section passed through the district in early sixties through Turumunga, Khireitangiri, Keonjhargarh, Suakati, Kanjipani and Jagamohanpur and Pallalahara in Angul district. In the year, 1999-2000 the road section from Panikoili to Rajamunda (Earlier SH-10A and J.C. Main Road) was declared as NH-215 starting from Jarada, to Anandapur, Ghatagaon–Dhenkikote–Keonjhargarh– Palasapanga–Remuli–Bhadrasahi–Guwali and touches Koida of Sundargarh district.

Due to huge demand of traffic in mining activities, the road NH-215 is under four laning by National Highway Authority of India with a bye pass in Keonjhar town. This road will cater to the movement of mining transportation.

In addition to this, State government have taken up improvement of roads some of which are completed and some in progress. These include, road from Salapada to Anandapur and from Anandapur to Bhadrak on one side and Karanjia on the other side. Besides one road from Dhenkikote to Karanjia via Saharpada has been developed under Vijayawada – Ranchi corridor and after completion would be handed over to National Highway. These roads will provide better communication and help Villagers access to the market areas for sale of their products.

Computerisation of Regional Transport Officers (RTO) Office

After introduction of e-Governance in the state, a company “Smart Chip Ltd.” has undertaken the work of RTO organization w.e.f. 1.2.2007. All the MV Registration records and driving licenses have been computerized excepting the records of other state vehicles. Registration of vehicles, collection of MV tax and fees, grant of driving license and other allied works are being done through online.

Public Transport

Number of Buses Plying on Major Routes of Keonjhar District are given below:-

- | Sl. No. | Route | No. of Buses plying |
|---------|---------------------------------------|---------------------|
| 1. | Keonjhar to Kiriburu via Joda, Barbil | 12 |
| 2. | Keonjhar to Kaliahata via Telkoi | 10 |
| 3. | Keonjhar to Taramakant via Banspal | 11 |
| 4. | Keonjhar to Damaduda via Patna | 10 |
| 5. | Keonjhar to Anandapur via Ghatagaon | 20 |
| 6. | Keonjhar to Daitary via Naranpur | 11 |
| 7. | Keonjhar to Champua via Baunsuli | 10 |
| 8. | Keonjhar to Barbil, Joda | 50 |

Total 134

Inter District Buses Plying from Keonjhar

- | Sl. No. | Name of the Route | No. of Buses Plying |
|---------|-------------------------|---------------------|
| 01 | Keonjhar to Bhadrakh | 03 |
| 02 | Keonjhar to Jajpur Town | 05 |
| 03 | Keonjhar to Sambalpur | 02 |
| 04 | Keonjhar to Baripada | 03 |

- 05 Keonjhar to Cuttack/ Bhubaneswar 30
 - 06 Champua to Bhubaneswar 05
 - 07 Malda to Talcher 01
 - 08 Keonjhar to Tata 04
 - 09 Joda to Tata 06
 - 10 Rairangpur to Keonjhar04
 - 11 Champua to Pallahara04
 - 12 Bhuban to Koida02
 - 13 Duburi to Rairangpur via Patna 04
 - 14 Keonjhar to Rourkela 07
 - 15 Keonjhar to Kankadahad via Kamkhyanagar04
 - 16 Bamebari to Talcher 03
 - 17 Keonjhar to Thakurmunda02
 - 18 Raruan to Barbil05
 - 19 Ghagarbeda to Harichandanpur02
 - 20 Barbil to Khiching03
- Source: RTO, Keonjhar

Forest Roads

There are 16 forest roads covering a length of 153.88 kms. These roads are important means for transportation of forest produce, supervision of departmental work and for checking smuggling, illicit felling and poaching. These roads also serve local people and tribals for their communication. Rural Roads – A list of rural roads is given below :-

Sl No	Name of Block	No of G.P	Total Length (km)
1	Andapur	16	511.82
2	Banspal	21	65.02
3	Chumupa	23	241.77
4	Gashipura	22	207.73
5	Ghatgaon	26	659.6
6	Harichandanpur	25	756
7	Hatadihi	31	378.1
8	Jumpura	22	136.675
9	Joda	15	573
10	KeonjharSadar	21	610.62
11	Patna	20	221.22
12	Saharapada	20	141.525
13	Telkoi	22	802
Total			5557.41

Source: PD, DRDA, Keonjhar

Urban Roads—The roads in the town areas are indicated below:-

Sl. No	Type of Road	Kilo metre
01	Black Topping	128.30
02	Metalloid Road	94.61
03	Earthen Road	264.73
04	C C Road	191.23
Total		678.87

Air Strips

There are two airstrips in the district at Raisuan and Tanto which are used occasionally on emergency situations.

Postal Services

Keonjhar Postal Division

Keonjhar Postal division headed by a Divisional Superintendent comprises 5 (five) Postal sub divisions viz. (1) Anandapur (2) Ghatagaon (3) Keonjhar West (4) Keonjhar East (5) Champua. Now there are 49 Sub Post offices, 2 Mukshya Dak Ghars and 1 Head Post office functioning under this division. Besides there are 389 Branch Post offices functioning in rural areas to provide mail, insurance and financial services to rural people.

3 (three) services mainly provided by Post Offices to people are. Mail services, Insurance and Financial services.

Basic Mail Services

Various types of mail services are available through Post offices viz. letter Mail, parcel mail, registered post and insured post.

Postal articles are classified into two broad categories as first-class mails and second class mails.

First class mails are given air transmission within India, whenever such air conveyance is available.

The delivery of first class mails is expedited thus, without collection of any extra charges from public.

Second class mails are air lifted only if they are marked for air transmission on collection of the requisite air surcharges from the sender. Also services like registration, parcel, insurance and value payable post are available under basic mail services.

Telephone and Cellphone Services

BSNL, Keonjhar

Bharat Sanchar Nigam Limited (BSNL) - a 100% Government owned Public Sector Enterprise (CPSE) is providing voice and data telecommunication services through wireline and wireless technologies in the form of landline, broadband, cellular mobile, WIMAX and other value added enterprise services like VPNoBB, leased Internet services, 3G data services to the common people, institutions, companies and corporate bodies of the district.

Following are the main telecom services provided by BSNL :-

BSNL LandLine:- There are 38 Telephone Exchanges scattered in 5 SDCAs of the district. Out of these 2 MBM exchanges are located at Keonjhar and Joda. Rest are either RSU or AN RAX. The total equipped capacity of all exchanges is 17692 and total working connection is 5564.

WLL (Wire-less in Local Loop):- MSC based WLL technology has been used to provide telephone service to the rural areas of the district. There are 18 numbers of WLL BTS having combined capacity of 8500.

Broadband:- BSNL Keonjhar provides high speed internet service through Broadband in urban and rural areas. Broadband service is provided to customer through DSLAM equipments.

The wireless GSM cellular mobile service is being provided by BSNL in all the sub-divisions, blocks and tehsils of the district and in almost all the 287 panchayats. As on September, 2015 the cellular mobile service is being provided through 172 BTSs (Towers).

All India Radio, Keonjhar

All India Radio, Keonjhar was commissioned on 22th November 1988. All India Radio has been serving to inform, educate and entertain the masses since its inception. The frequency of transmitter is 189.3 m/1854khz. Now there are two transmissions on the air from 5.55 am (morning transmission) and 5.00 PM to 11.05 PM (evening transmission) covering music (including tribal) drama, feature, spoken word, farm & home, health & family welfare, sports, literary magazine, women, children, yuvavani, &programme for senior citizens.

On 14th March 2015, a 10kw FM transmitter was commissioned for better reception quality. As per 2011 census, about 60% population of Keonjhar district are covered by All India Radio programme zone

As per survey conducted by audience by research unit All India Radio, Cuttack 82% of rural population & 74% of urban population normally listen to All India Radio, Keonjhar.

Public Distribution System

In the Public Distribution System (PDS) commodities are being distributed to the consumers through the retailers. The Odisha Civil Supplies Corporation Ltd was established in 1980 and it played a pivotal role in PDS through which the essential commodities like rice, wheat,

sugar, edible oil etc. were being distributed to the consumers, being lifted from FCI and other designated agencies through private storage agents. The Targeted Public Distribution System (TPDS) started w.e.f. 1997 and scheme like Below Poverty Line (BPL), Antodaya Anna Yojana (AAY), Annapurna (AP) and other targeted groups were included under the PDS Stream. Since 1997 the pre-paid system was introduced replacing post-paid system for lifting of PDS commodities by the storage agents. Following the recommendation of Justice Wadhwa Committee, the Private Storage Agency system was abolished and replaced by Departmental storage system w.e.f. 1.4.2012. K.Oil under PDS was being distributed to the consumers through retailers via sub-wholesalers/wholesalers. The wholesalers under the system were being appointed by oil companies after obtaining requisite licence from Collectors. Likewise the sub-wholesalers were being appointed by district administration as per the requirement and convenience of the consumers, like all other PDS commodities. The intermediary system of sub-wholesalers was also abolished as per the recommendation of Justice Wadha Committee w.e.f. 2014.

Employment and livelihood

Around 80% of workforce earn their livelihood through a traditional agriculture and vegetables cultivation such as paddy, wheat, maize, moong, biri, kulthi, til, groundnut, mustard, jute, potatoes, sugarcane, mango, tomato and earn a lot of money both during rabi and kharif season. It has also two major irrigation projects under construction viz. Kanpur Irrigation Project and Anandapur Barrage Project which is likely to be completed shortly which will enhance the irrigational potential. Besides it has three medium irrigation project i.e. Shalandi, Kanjhari, Remala Irrigation Project. As a result the people of these area produce the double crops and enhance their economy. The district has total cultivable land of 192391 hectares out of 649310 hectares of total area. There are also 178896 hectares and 50260 hectares and 54123 hectares of forest land, non agricultural land, barren and non cultivable land respectively. There is also an area of 4978 hectares cover with miscellaneous trees and groves. This district has forest resources/ produced like mahua flowers, kendu leaf, sal leaf, jhuna, kusum, timbers both sal and non-sal in huge quantities. The people make salplate, chaupati and earn their livelihood with good amount of money.

TOURIST & CULTURE

Keonjhar district is an important tourism destination for geological, religious, social and anthropological significance. The eye-catching beauty of Keonjhar is enhanced by the diversity of the natural regions. It is endowed with natural bounties like waterfalls, rivers, perennial springs, wildlife, bewitching landscape, hill ranges, gorges and precious minerals. The district has the distinction of accommodating one of the oldest (3800 million years) rocks in the world covering 100 sq. km. at Asanpat. The discovered inscription at this place (5th Century AD) displays dancing Siva as the earliest specimen in the country.

In addition, sculptures and tempera paintings found various images of God & Deities. Temples District have no corollary in view of delineation, texture, proportion and finesse. Also Terracotta and Tassar handloom of Keonjhar District are worth visiting.

Some of the glimpses of tourist spots of Keonjhar district are as follows:-

MAA TARINI

MaaTarini is one of the embodiments of Shakti and is one of the chief presiding Goddesses in Odia culture. Her chief shrine is in Ghatagaon, Keonjhar District, Odisha which is 50 kms. of distance from district headquarters, Keonjhar. Devotees from all over Odisha and also from outside

Odisha send thousands and thousands of coconuts to MaaTarini temple everyday. In Odisha, after Lord Jagannath Temple of Puri, MaaTariniPitha at Ghatagaon is considered as the most popular place of pilgrimage for the devotees. There is a history and legend attached to the installation of the deity of MaaTarini at Ghatagaon which is described below:-

History of MaaTarini

This has happened a long back in 1475 AD when Odisha was known as Kalinga. King Purusottam Dev ruled Kalinga. Legends galore present Lord Jagannath treat his devotee as a friend, philosopher and guide to his devotee, be he a prince or a pauper. One legend with a delightful association with the car festival concerns King Purusottam Dev (15th century). Travelling through South India, the young king chanced to see Princess Padmavati of Kanchi, and was charmed by her beauty. He sent his emissary to her father proposing marriage. The proposal was welcomed. The minister of Kanchi proceeded to Puri to finalise the arrangements for the wedding. That was the time of the car festival. It began with the king sweeping a part of the chariot where the deity was to be placed. This signified that even the king was a humble servant of the Lord. (The custom continues to this day, the scion of the Raj family of Puri performing the rite.)

Sweeper-King (Chandal Raja)

Unfortunately, the Kanchi minister saw in it an act unworthy of a king and advised the king of Kanchi not to make a sweeper-king his son-in-law. The king of Kanchi withdrew his consent to the marital proposal. The infuriated Purusottam Dev marched upon Kanchi, but returned defeated. He lay before Sri Jagannath for days, praying for victory or death! The Lord assured him, in his dream, that he would win on a second expedition, but with the appointment of new Senapati or commander-in –chief. Lord Jagannath advised King to look out for a house where a red flag will be flying on the roof top. Immediately in the morning, he send his troops to find out this particular house. As his dream suggested, the troops found out a house of a young man name GovindaBhanja. GovindaBhanjha was the son of TrilochanBhanjha, the king of Kendujhar now known as Keonjhar. He had abandoned his Kingdom and was living in Puri as a common man. He went on to fight for King Purusottam Dev to avenge the King's insult. This GovindaBhanja plays a major role in bringing **Maa to Ghatagaon, Keonjhar**.

Journey of Maa from Puri to Ghatagaon (Keonjhar)

That year King TrilochonaBhanja (King of Kedhujhar) died and GovindaBhanja had to return to his kingdom. King Purusottam Dev wanted to give GovindaBhanja something as he had helped him to avenge his insult and marrying Princess Padmavati. GovindaBhanja wanted only one thing for himself. He wanted to bring MaaTarini to his Kingdom. King Purusottam Dev agreed to this and asked him to ask Maa's permission. GovindaBhanja prayed Maa and MaaTarini agreed with one condition that she will go with him as long asGovindaBhanja doesn't look back to see her. With this Condition, Maa went with GovindaBhanjha to Kendujhar (Keonjhar). From Puri to Kendujhar, Maa's horse hoof sounds were audible but on the outskirts of Kendujhar, due to the sand of River Baitarani which flows nearby, the sound of horse hoofs were not audible to GovindaBhanja. He got scared that Maa stayed behind and he turned to look back to see. There and then Maa turned into stone. GovindaBhanjha prayed Maa to forgive him but Maa said she has made the condition with him before coming. She would have to stay in the wild jungle and asked GovindaBhanjha to worship in that place. Till today, MaaTarini is being worshipped in that place which is named afterwards Ghatagaon. It is now a major tourist attraction in Keonjhar district.

Rites and rituals

The practice of Tantra is associated with all manifestations of Shakti throughout the Indian subcontinent. Utkal, a coastal Kingdom which was carved out of the former Kalinga is described to have many important shrines and areas for the practice of Tantra. As MaaTarini is the embodiment of Shakti, her rituals are based upon Tantra. Maa is the presiding deity at this Sakti Pith Ghatagaon.

Temple Management

In the year 1970, the management of the temple was taken over by the Govt. of Odisha and being managed through the Endowment by way of constituting a Board of non-hereditary-Trustees under the provisions of Odisha Hindu Religious Endowment (O.H.R.E.) Act. The Present temple was constructed in the year, 1980 by the-then Trust Board.

Greatness of MaaTarini It is believed by the devotees that if someone being in utter dismay worships sincerely MaaTarini, She will come to the rescue of the devotee and no one will come back with empty hand. Maa would always fulfill the wishes of the devotees. Devotees believe that if one would worship the deity with devotion and offer a coconut, his prayer will definitely be fulfilled by Her. Collection boxes for coconuts can be seen at all big and small transport hubs in Odisha. As a matter of fact, you can hand over a coconut to any public transport vehicle in Odisha and rest assured that the coconut will reach MaaTarini's temple. The trust board of the temple has for the convenience of the devotees / pilgrims, provide safe drinking water, water reservoir for washing feet for entering the temple and a guest house for devotees / pilgrims for rest and night halt etc. Communication Network to MaaTarini Temple at Ghatagaon, Keonjhar

By Air : Bhubaneswar, the capital city of Odisha is the only civil airport in the state connected to different parts of the country through regular flights. From Bhubaneswar very good road transport facility is available to reach the Temple of Maa.

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By Rail : There is no direct train network to Maa's Temple but one can go up to Jajpur Road station and from there plenty of road transport facility available to reach Maa's temple.

By Road : There is a good road network connecting Ghatagaon to different places within the state. Anandpur, Jajpur and Keonjhar are 3 nearby places to Ghatagaon. Regular Bus services are available from major cities of Odisha throughout the day. Buses come from Cuttack, Bhubaneswar, Puri, Berhampur, Rourkela, Bhadrak, Balasore and other major places of Odisha to Ghatagaon. Taxi services are also available from all the cities of Odisha.

BALUNKESWAR: (half km. from N.H.6) No less important is the shrine of Lord Balunkeswar built by King Laxminarayan Bhanja in 17th Century. The self established deity is found in a well designed abode along with niches for Lord Trivikram, Nrusingh, Kartikeya, Sri Rama, Hanumaan, Chandrasekhar, Radha-Krushna, Sarala in an atmosphere of champak trees. People of Saiva and Vaishnava gather during festivals.

DEOGAON: (15km to Anandapur or 9km to Sailang Chowk on N.H.-215) The place is sanctified owing to the presence of a shrine dedicated to Lord Kushaleswar which was built in 900 AD. The temple on the bank of river Kusei is an indispensable holy centre during Siva Ratri and it marked Kosala country of the past. The temple is a precious and unique depository of finished sculptures of various religious

faiths. The superb art pieces throw light on religious activities of Jainism, Buddhism, Vaishnavism, Saivism and Saktism.

Even if it is a Saiva temple, it has accommodated a Mukti Mandap adorned with pictures of incarnations. The master pieces of sculpture include those of Avalokiteswar, Ekapaad Siva, Vishnu, Ganesh, Kartikeya, Nandi, Saiva guards and of Jain Pantheon.

GUNDICHAGHAGI: (12km to Ghatagaon) With a series of attractive waterfalls, the Nature has decorated the forest as a silver garland. River Mudula descends here as a milk line to frame the spot as an alluring picnic spot. It has been appreciated by tourists coming to Ghatagaon.

SANAGHAGARA: (5km to District Headquarters) Situated at the outskirts of Keonjhar town, this decent park has been developed as an ideal picnic spot. Visitors enjoy the fall of 50 ft. high amid ever green forest along with children's park, boating, rose garden, plant research and unparalleled natural beauty.

KANJIPANI: (30kms) The N.H-6 has taken few sharp and steep curves flanked by dense forest. The valley of high Altitude houses tribal people keeping everything cool and in deep silence. The winter temperature goes down zero degree while clouds touch the valley during the rainy season as natural wonder.

KHANDADHAR: (60km) Splashing water like a huge silver screen, the tallest waterfall of the district (152mts) casts a spell over the beholder that Nature could possibly create such an enticing spectacle.

HANDIBHANGA:(50km) Remarkable for its waterfall of 60 mt. high the site is tucked in deep forest cover. Picnickers find the spot ideal for spending time amid copious Nature to loose sight of stress and pollution.

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SAREI: (50 km)Two holes on the bed of river Baitarani attract people to get bath and holy view of Lord Siva on its bank. The landscape provides an exiting framework for picnic and merry making. Brave people dare to enter in one hole to come out through the other to prove righteousness.

RAJNAGAR: (27km)Nestled on the bank of river Baitarani, the small site unveils vestiges of a medieval palace. The destination is visited mostly for darshan of Lord Dadhibaman and Raghunath Math besides Chadheikudoor a resting place of migratory birds.

HADAGARH:(115 km) Raised on river Salandi, the dam encompasses a huge water source. It also accommodates a wild life sanctuary of elephants. A deer park adds beauty to the destination which is visited for picnic and communing with Nature.

BARAHATIPIRA-(30km) Lord Nilakantheswar presides here a shrine on the hill top which is climbed up by 152 steps. The site is approachable from Ghatagaon, Harichandanpur and Dhenkikot.

BHIMAKUNDA- (57km from Keonjhar). Named after the second Pandav, the spot attracts pilgrims and tourists for the gigantic gorge, Ashram, temple of Kundeswar, waterfall on river bed and unique natural beauty. Soon after the fall hits the bed, it goes under ground for 4kms. Tribal people gather for observing TUSU festival, Makar sankranti and paying respect to their god 'Maraamburu.

PUTUGHAR AND TENTEINALI WATERFALLS- (60km from Keonjhar) Situated near Telkoi, these waterfalls attract picnickers and nature lovers. Exciting legends reveal that newly wedded couples throw beetle nuts for obtaining ornaments and alarming bells used to be heard on the outbreak of epidemics. One can meet and talk to tribal people on their life styles.

TenteinaliPutughar

Other noted waterfalls which attracts tourists are Asurkhol, Kundapani water fall under Banspal Block. Gadgadi water fall near Village- Balaniposi under Harichandapur Block, Purunapani water fall in Tala Kadakala G.P under Banspal Block, Rakam water fall under Banspal Block, Jhilipani water fall under Banspal block, Mutapani water fall under Banspal Block Phulabali water fall under JodaBlcok.

DHANAVENI : It is 20 K,Ms away from Keonjhar district headquarters under Harichandanpur Block is noted for Lord Dhaneswar temple. The temple is situated on the top of semi-circled rock of about 5000 SqK.Ms length. Here a week long grand festival is held during “Makar Sankranti” every year. Visitors come to the spot through out the year. The Temple is believed to be constructed during the regime of King of Keondujhar, GobindaBhanja.

CHAKRATIRTHA :Chakratirtha, coming under Hatadihi Block of the district is a beautiful serene picnic spot. A perennial water fall, a Shiv temple and ashram enhance the beauty of the spot. Visitors used to stay in the ashram at night to have chance to watch the movement of elephants from close proximity. Nearest place of stay for the visitors is Anandanpur.

GADACHANDI : The place is famous for the temple of Goddess Chandi, coming under Hatadihi Block of the district established on the bank of perennial stream from nearby Boula mountains. Other attraction is trekking on the hill

PARAMESWAR TEMPLE OF PATNA: The temple is built on the bank of river- The Baitarani is another attraction for tourists. The devotees take bath in the holy river of Baitarani and have darshan of Lord Parameswar. So many other small temples are in the premises of the main temple. Though, the temple has been built in recent past, the sculpture seen in the temple is very attractive. The spot attracts many visitors throughout the year

JHADESWAR TEMPLE: Right to the Anandapur Town, Jhadeswar temple is situated on the bank of the river- Baitarani, amidst scenic beauty where Lord Shiv is worshiped. Though the then King TrilochanBhanj had built a mandap and engaged Pujaks for worshipping Lord Shiv. The mandap was damaged by flood and in the year 1850, King GadadharBhanj re-built the mandap and subsequently, in the year, 1880, King DhanurjayBhanj had built a temple here, but when the temple got damaged in the flood of 1927, ChhotrayLaxminarayanaBhanj had built the present temple. The spot continues to attract the visitors through out the year.

RAGHUNATH JEW TEMPLE OF BIRGOBINDAPUR: Legendary Raghunath Jew temple is situated in the village- Biragobindapur of Gohira Panchayat under Ghasipura Block on the bank of the river- the Baitarani, which is 7 K.Ms distance from Ghasipura. Lord Shree Ram, Goddess Sita and Laxman are worshiped here. Legend speak that after victory in Kanchiwar, the King of KendujharGobindaBhanj carried MaaTarini, Shree Madan Mohan with him from Kanchi and while returning to Kendujhar from Puri, on the way at Biragobindapur, the elephant on which Raghunath Jew sat did not move forward and sat down. The King built temple there for Lord Raghunath Jew. Bir Gobindpur is famous for this.Besides, there are so many other temples exists namely (i) Laxminarayana temple of Tukuna of Anandapur Block (ii) Gopal Jew temple of Anandapur Block (iii) Uttareswar temple of Anandapur Block (iv) Saileswar temple at sailing of Ghasipura Block (v) Balaunkeswar temple under Anandapur Block, (vi) Hatigumpha and Akhandalamani temple at Dhrupada at the outskirts of Keonjhar town (vii) Jogeswartemple of Sadar Block, Chandrasekhar temple at Bodapalsa under Sadar Block (viii) Pateswar temple at Suakati under Banspal Block (ix) Bana Mandira at Brahmamnial of Harichandanpur Block (x) Nilakantheswar temple at Barhatipura under Ghatagaon Block (xi) Sidheswarmatha at Sarasinga at Jhumpura Block (xii) Biswanath temple at Dhenkikote (xiii) Akhandalamani temple at Palaspanga

under Sadar Block (xiv) Kala Mahadev temple at Raisuan of Sadar Block (xv) Ram Mandir and Chandrasekhar temple at Champua, Hanuman temple at Barbil (xvi) Swapneswar temple at Khadikund under Jhumpura Block, Jhadeswar temple at Tangarbantala under Champua Block, Rupeswar Mahadev temple at Rupakund, Kemundia of Unchabali Gram Panchayat under Champua Block, Rama Tirtha at Godhuli under Champua Block etc are the noted tourist spots.

Critical Infrastructure in the District

Anganwadi Centres- Keonjhar has 14 ICDS Projects with a network of 1590 Anganwadi Centres. However, there are 13 Community Development Blocks, 4 Urban Local Bodies and 2125 numbers of Revenue Villages in the district. As per the estimation made in the State Report on Children in Orissa –2006, that there are 120381 numbers of children in the age group of 0-3 years and 63805 numbers of children in the 4-5 years age category.

Schools & Educational Institutions -There are 2127 primary schools established in Keonjhar district average number of teachers get appointed would be 3 per school as well the student teacher ratio is 1 teacher per 38 students. Government given appointment to around 6000 teachers to look after the primary education in the district. As per the data of the 2011 census there are 922 middle schools are established in the district to look the mid level education (5th ~8th) standard in the district the student teacher ratio would be 32 :1, the average number of teacher per school get appointed will be 4 district administration is looking the middle level education carefully. There are 483 secondary schools are established in the district to ensure better, the average number of teacher per schools are 7 as well the student and teacher ratio would be 1 :21. There are total number of 45 colleges established in the district to cater higher education among these colleges – DD College –Keonjhar , Women’s college-Keonjhar is the top most college of the district.

Police and Fire Stations— To maintain the law and order of the district police personnel plays an important role, government has set-up number of police station at the district, block level to maintain the law and order situation. There are total 24 police station, 11 out-post, 5 town out-post, 9 number of beat house has been established in the district, Total there are 431 armed police reserved in the district including Superintendent of Police and Additional Superintendent of Police, total 744 unarmed police force in the district, armed police reserve 431. In the district level there is aOSAP (Orissa state armed police) battalion has been established to look after violence if it occur. There are total 5 fire stations in the district to look after the fire incident in the districts,]

Cooperative Societies—Cooperative societies always plays a predominate role in poverty reduction as well the rural development, by and large women, farmers empowerment in the societies. Always it has been noticed due to lack of proper cooperative societies farmers and poor people has been suffered lot, these people compel to take loan from the landlords with higher rate of interest. Since Keonjhar is one of the poorest district of the state. There are number of cooperative societies are working in the district some are by the state government and some are by the district administration, mainly the Primary Agriculture cooperative society (PACS), Housing cooperative societies, Non agricultural credit societies, Consumer cooperative societies, marketing credit societies etc, All together there are 15 cooperative societies are working in the district, these cooperative primarily involved in supporting the needy people by providing small loan, seeds, fertilizers etc. Among these of

a Postmaster in Higher Selection Grade-I (HSG-I) who is assisted by one Dy. Postmaster and three Assistant Postmasters. This office is fully computerised and works from 0930 hours to 1730 hours.

Road and Railway network- Keonjhar district head quarter is well connected with the rail and road networks, total railway line connected is 164 KM within the district all these lines are coming under the category of broad gauge. National high ways covered within the district are 287 Kilometers, state highway covered 79 kilometres, major district roads are 78 Kilometers, forest roads are 246 Kilometres, Grampanchayat road total covered in the district 2923 Kilometres. Most of the roads are rocky and hilly roads, due to high terrain the roads are passing through forest and rocky lands. Railway network to the district started in late 90s, Kendujhargarh is the main station of the district, through the district limited trains are passing but it is well connected to cities Bhubaneswar and Cuttack. Everyday around 50 buses runs between Kendujhar –Cuttack –Bhubaneswar. There are good bus connectivity from district head quarter to different block head quarters.

Flood Shelters- Out of 13 developmental blocks in Keonjhar district 3 blocks has critically affected by floods, these blocks are Ghasipura, Hatadihi and Anandapur blocks. Each block has 4 number of Multipurposeflood shelters it is under, there are no cyclone shelter in the district. Rain gauge and Automatic Weather Stations In all the blocks there are rain gauge station has been installed by the government the daily rain status information of the blocks has been intimated to the district emergency office through phone and fax

Rain gauge and Automatic Weather Stations: To monitor the weather in the district and disseminate the message to the farmers, and community for their safety life and livelihood .

Chapter- 3

Hazard, Vulnerability and Risk Assessment

Introduction

Hazard, Vulnerability, Risk & Capacity analysis (HVRC) is the most important part of the plan as the entire planning process will be based on its outcome. Any error in identifying the frequency, magnitude and projected impact leads to incorrect identification of major hazard and hence an imperfect plan. The necessary outcomes of the HVRC analysis will be the type of hazards that the district is prone to, history of hazards, impact analysis of the worst case, the area, people and infrastructure that is prone to the risk of these hazards and their vulnerability of being damaged by such disasters due to their vulnerability characteristics. Vulnerability Assessment should deal with the natural, socio-economic vulnerability, housing vulnerability and the environmental vulnerability. The vulnerability atlas has been referred for this purpose. After knowing the existing hazards and potential vulnerabilities, the risk analysis will be carried out. HVRC analysis will also include resource inventory/capacity analysis, preparedness analysis in terms of network of communication systems, public distribution systems, storage facilities, transportation facilities, medical facilities, fire stations, cyclone shelters with their capacity, presence of NGOs and other volunteers etc so as to enable quick response.

Natural Calamities of one description or the other affect nations all over the world. Due to geographical position of our country, India often faces natural calamities like flood, cyclone, Tsunami, Sunstroke and drought. Apart from natural disasters, manmade disasters like fire, bomb blast, communal riot, building collapse, road accident, boat capsize, Industrial hazard are etc. become common disaster in India.

It is now recognized fact that, natural disasters are the acts of God but losses due to these are acts of man. Lots of human suffering and misery from a large number of natural disasters can be mitigated by taking timely actions, setting up mechanisms and undertaking capital works of long and medium term in nature. The social and economic losses of disasters are very high and often immeasurable. Usually the most sufferers are the poor and the marginalized like the small and landless farmers and the agriculture labourers.

At the Point of Entry, four pathways are envisioned to play out and will determine the risk of disease importation and the response to prevent it. The pathways are based on a travel advisory that has been arrived at based on the cumulative number of cases total sample collection till now (13.08.2020)-22902 total positive case – 1110, total active case -152, total recovered 954 case beside this the total test done by 12.08.2020 is 17181 out of that rapid antigen 12167, true net is- 78 RT PCR -17181. Test done within 24 hours is RTPCR- 219, Rapid Antigen-2631, True net- 0 Total case -29426. Any traveller from a state meeting these criteria will be subject to 14 days self-quarantine. The possible pathways have been classified as below and are subject to change and revision depending on the evolution of the disease and the epidemiological discoveries.

☐ **Pathway 1:** No travel history to District with confirmed COVID-19 cases, no symptoms – no further follow up; collection of contact information in case fellow traveller develops disease

☐ **Pathway 2:** Travel history to affected District meeting the travel advisory criteria, but no symptoms – Self quarantine and follow up for 14 days. Advised to contact health officials if they develop symptoms.

☐ **Pathway 3:** Has travel history to any COVID-19 affected country /state with symptoms – Immediate quarantine, conduct investigations to confirm or rule out novel Corona virus.

☐ **Pathway 4:** No travel history but some symptoms – isolated for further investigation to demonstrate any epidemiological link or travel links, and determine cause of symptoms.

Current Scenarios of Covid-19 (1stseptmber 2020)

Emergency Response Capacity Analysis:

Under section 2, 3 & 4 of the Epidemic Diseases Act,1897and under Section 6(2) (i) of the Disaster Management Act, 2005 was enacted by Govt of Odisha to make provision for the coordination and implementation of measures to address the effects of disasters.

☒ Scarce financial resources for maintenance of existing disaster response structures and to ensure effective emergency response;

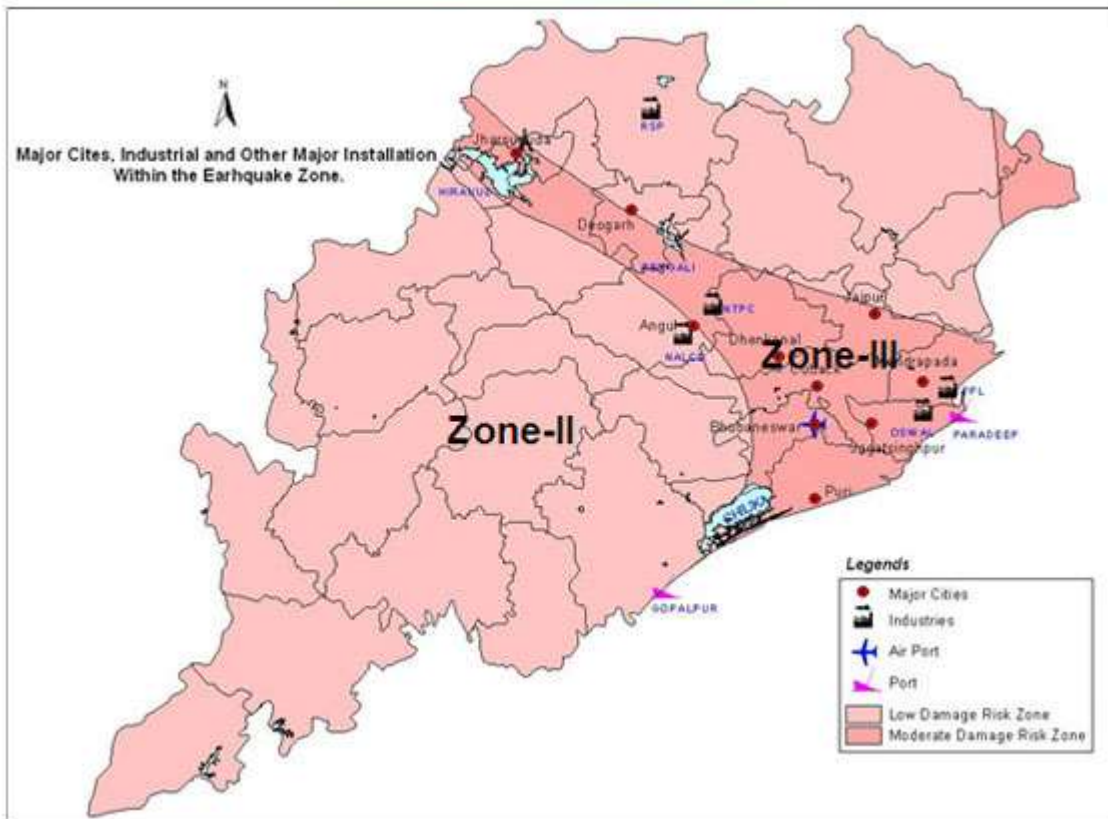
Earthquake

The District is located in Zone-II of seismic vulnerability as captured in the Vulnerability Atlas. Most parts of southern Orissa and parts of Keonjhar come under the zone II,while earthquakes cannot be predicted, a detailed mapping of seismic fault systems and seismic source regions, quantification of probability of experiencing various strengths of ground motion at a site in terms of return period for intensity will be carried out and appropriate regulations put in place to decrease the vulnerability of built environment.

Different types of ground do shake with different severity in an earthquake. Softer soils and those with high water content generally shake more than rocky sites. Wherever possible site structures on firmer ground. Most of the area of the district is rocky and mines this will reduce the severity of vibrations experienced in an earthquake. Capital intensive infrastructure, hazardous facilities and materials, and other important buildings should not be located in the vicinity of a known fault. Since early warning is not possible in case of earthquakes, the best choice is to ensure that seismicity is monitored and integrated with the GIS. Keonjhar District's situation indicates that some parts of the District like:-

JODA, Barbil, Banspal, Telkoi ,Keonjharsadar have been going to provided with the seismic instrumentation. It is necessary that mitigation strategy considers instrumentation of all other areas in order to have a total assessment of the seismic activity. This would enable reconfirmation and upgradation of micro zonation activities.

EARTHQUAKE ZONES OF ORISSA



Super Cyclone-1999: Super Cyclone 1999 (October 28 ~29) Keonjhar district badly affected by this mainly the locks of Ghasipura, Anandapur and Hatadihi blocks were worst affected by the super cyclone. Many houses were damaged, even public infrastructure were damaged severe. In this super cyclone standing crops were perished. Around 1243 houses were damaged, 27 school building were damaged road were severe damaged. Total 1784 hectares of land covered by sand & flood water.

Drought: Drought is very common phenomenon in Keonjhar district around 77 % people of the district depend upon the rainfall for the agriculture activities. In the year 2004 rainfall less than 30 % from the average rainfall of the district average rainfall of the district 1487 MM. In this year hectares of land turned unsown due to drought. Due to 2004 drought all 13 blocks were affected this drought impact fall upon 286 GP of all the 13 blocks total 2122 villages affected. In the year 2017 drought Telkoi block of the district severely affected. Total 2 GP 247.5 hectares of land affected by the drought

Phailin: In 2013 Phailin Keonjhar district partially affected by this Majorly Ghasipura, Hatadihi & Anandapur, Patna blocks were affected. 2 people died in Phailin, 1040 villages were affected, 233 GP also affected by, house damage 10277 in all 13 blocks, total HBA (house building assistance) disbursed amount Rs.2,08,83,800. Livestock population also affected by this; 20156 hectares of agriculture land marooned under flood water.

FANI 2019

The Sever Cyclonic storm Fani has also affected parts of Keonjhar district. The heavy rain and storm have damaged crops and rural houses in different areas of Anandpur and Keonjhar subdivision. The District administration had a preparatory meeting before the cyclonic storm and had evacuated 4507 persons from 126 villages in Hatadihi, Ghatgaon, Anandpur and Ghasipura and

were taken to safe shelters. Immediately after the storm, a review was done to assess the damages and speed up restoration work. According to reports, 657 houses have been damaged in Keonjhar district which includes 630 partially damaged and 27 completely damaged houses Hatadihi block has been most affected with a damage of 390 houses. Apart from houses, 380 electric poles are also reported to have been damaged in the storm. About 11 kilometer Electric wire was cut off in the storm.

Super Cyclonic Storm Amphan – 2020 was a powerful and catastrophic tropical cyclone that caused widespread damage in Eastern India, specifically West Bengal & Odisha in May 2020. The first tropical cyclone of the 2020 North Indian Ocean Cyclone Season Amphan originated from a Low-Pressure area persisting a couple hundred miles (300 km) east of Colombo, Sri Lanka on 13 May 2020. Tracking northeastward, the disturbance organized over exceptionally warm sea surface temperatures the Joint Typhoon Warning Center (JTWC) upgraded the system to a tropical depression on 15 May while the Indian meteorological department (IMD) followed suit the following day. On 17 May, Amphan underwent rapid intensification and became an extremely severe cyclonic storm within 12 hours. At the time, the JTWC estimated Amphan's 1-minute sustained winds to be 155 km/h (100 mph). Amphan rapidly weakened once inland and dissipated shortly thereafter.

Neighboring Odisha saw significant effects, with wind speed reaching 106 km/h (66 mph) and rainfall up to 300 mm (12 in) in Paradip. In Bhadrak, rainfall reached 384.6 mm (15.14 in). Approximately 1,167 km (725 mi) of power lines of varying voltages, 126,540 transformers, and 448 electrical substations were affected, leaving 3.4 million without power. Damage to the power grid reached ₹3.2 billion (US\$42 million). Four people died in Odisha, two from collapsed objects, one due to drowning, and one from head trauma. Across the ten affected districts in Odisha, 4.4 million people were impacted in some way by the cyclone. At least 500 homes were destroyed and a further 15,000 were damaged. Nearly 4,000 livestock, primarily poultry, died. The cyclone was strongest at its northeast section. Crops and thatched houses are worst affected in different blocks of Keonjhar district. Mostly Patana, Banspal, Keonjhar, Anandpur, Champua blocks are affected by Super cyclone Amphan. Rs. 74,800.00 Agriculture input subsidy distributed in Patana block and Rs. 1,36,700 was HBA assistance distributed in Banspal, Keonjhar, Anandpur & Champua Block which was worst affected by super cyclonic storm Amphan.

Super Cyclonic Storm YAAS.2021

Cyclone YAAS, has hit the state but due to its robust evacuation mechanism and preparedness, Odisha has managed to contain the damage by a definitive margin. Cyclone YAAS made landfall in Odisha on May 26 between the north of Dhamra coast in Bhadrak district and Bahanga coast in

Balasore district. According to the Indian Meteorological Department (IMD), the cyclonic storm has weakened into a deep depression over southern Jharkhand and Odisha late on Thursday. So far, only two deaths have been reported due to the cyclone one in Balasore and Keonjhar is the witnessed of one, Odisha has faced as many as six cyclones but the death toll has never exceeded a single digit. Because the only difference the state has made in the last 20 years is 'preparedness'.

Preparedness

As soon as weather experts predicted the approaching of Cyclone YAAS, the State Disaster Management Authority & as well as District Disaster Management Authority was activated immediately and undertook all precautionary measures, including preparatory meeting of District level officials, Assessment of status of Man, Machine, Equipment's at various level, deployment man machine equipment's at strategic points, Identification safe shelters and started evacuation of people to meet the zero-causality target set by Chief Minister Naveen Patnaik.

- ❖ Mobilised & deployed All resources including man and machinery
- ❖ List of Vulnerable patch /Area/People enlisted through a block level action plan.
- ❖ Big Tree's branches, old and unsafe trees are trimmed.
- ❖ MFS & Alternate shelters are identified and equipped.
- ❖ Vulnerable people have been motivated and persuaded to move to safe cyclone shelter in order to avoid any loss of life.
- ❖ Miking was made to make the public aware & message passed to PRI, GRS & RRT in area as early warning
- ❖ Massive Evacuation started to exist shelter and temporary shelters
- ❖ 25462 No. of Persons were shifted to 549 safe shelters.
- ❖ Free Kitchen along with proper water & light arrangement has been done for the evacuees at the Cyclone Shelters.
- ❖ Dry food stuff distributed to people in the shelter.

Multiple teams of ODRAF, NDRF, Odisha Police, fire personnel, energy department personnel and PWD swung into action once the cyclone's landfall was complete. Rescue and restoration operations were on war footing. As a result, roads were cleared within hours and power supply was restored in the entire Keonjhar district within 12 hours. District Administration has managed to evacuate at least 25462 people so far from the low-lying and river side areas with the help of response forces on the ground. The disaster response team includes 1 team of NDRF (20-25 members per team), 2 teams of Odisha Disaster Rapid Action Force (13 members per team), block wise fire service teams (8-13 members per team), Two nos' platoons of Odisha Special Armed

Police, approximately 38 no's power tree cutters from the multiple teams NDRF, ODRAF, Fire & forest department (8 members including 1 officer per team). Besides this other disaster response team has also deployed several teams for the redevelopment of cyclone-affected areas. This includes 45 workers from the public welfare department, 8 teams of rural development department (one junior engineer and 5 labourers per team), 8 no's teams for road cleaning, 8 engineering department teams including officers and labourers. At least 40 members from the energy department were pre-deployed in strategic locations such as hospitals and other important places to help the administration in faster restoration.

The district administration has also deployed 10 diesel generator sets to run water supply systems, 12 mobile tankers for Andapur 20 nos for Keonjhar, adequate safe drinking water tanks to be placed in the villages & shelters. RRT was formed and deployed at different strategic points are massive evacuations, both targeted and blanket, and inter-department coordination. The district administration has a robust institutional structure with a committed workforce of disaster management department that is closely monitored by top level officials i.e ADM general, ADM Revenue & PD, DRDA, EE RD& R&BEE NESCO etc.

Evacuation

Evacuating people from the probable cyclone-affected areas was a challenging task due to the Covid-19 pandemic. In the first phase, the administration opted for targeted evacuation by moving people from Kachha houses and low-lying areas to a safe place. In the second phase, the administration routed for blanket evacuation of villages falling on river belt & low laying areas and as a result, not a single injury or happened in over 69 villages where heavy waterlogging was reported.

Covid management during cyclone

Facing a dual challenge due to the cyclone and Covid-19 pandemic, the restoration teams fortified doors and windows of Covid designated hospitals; adequate drugs, injections, consumables were stocked in hospitals; adequate oxygen cylinders and buffer stock were maintained; food was arranged for patients, doctors, and paramedics inside the hospital. As a result, none of the Covid hospitals in the keonjhar districts reported any untoward incidents.

Despite the landfall of Cyclone YAAS on Wednesday, district administration facilitated unhindered transportation of medical oxygen to the Covid Hospitals & COVID care centres. Besides coordinating the inter district movement of oxygen tankers, the district police also ensured the oxygen supply reached the local hospitals.

The esteemed collectors of the district were asked to **identify every single pregnant woman** with an estimated date of delivery up to first week of June and shift them to hospitals instead of taking them to cyclone shelters. Around 225 women were identified out of which 70 were found to be shifted to the hospital 101 shifted to shelters and 54 shifted to maternity waiting Home.

The district administration also identified people with mental disorders and specially-abled persons bound by wheelchairs and shifted them to different shelter homes with special facilities.

Able leadership of Collector & DM, Keonjhar.

During the preparation for Cyclone “Amphan” last year, Hon’ble CM Naveen Patnaik had put a target of 'zero casualty' before the administration. The district had registered a single-digit death toll due to the cyclone. In order to assess the readiness & preparedness of district administration every year in June 19, the government conducts a state-wide mock drill on how to respond if a storm or Cyclone comes. "The institution you create should not be rigid; it should be flexible, adaptable. How quickly you adapt to the emergency situation, how quickly you change your Plan with change of motion storm according to the need of situation is important,".

Flood: Keonjhar has faced severe floods in 1995, 1997, 1999, 2001, 2003, 2006, 2007, 2008, 2009, 2011. In 2011, a great flood affected Keonjhar. Due to heavy rain in the catchment area of Baitarani. According to the India disaster report 2011, Keonjhar district was partially hit by flood in 2011. Out of 13 developmental blocks of the district severely affected by the flood, Anandapur, Hatadihi, Ghasipura an affected total around 22 GP and 123 villages affected by the flood . 473 villages of 116 Gram Panchayats and two Urban Local Bodies(ULBs) were affected. Human casualties happened during the flood of 2008 total 3 person died. In 2011 flash flood in Champua block affected severely due to sudden rise of flood water on Baitarani river also one person died 2 GP affected severely. Due to flood sericulture activities of the district also affected there are around 300 sericulture farmers in the district.

Regulations would include.

- Not permitting unrestricted new development in the hazard prone areas
- Anchoring and flood proofing structures to be built in known flood prone areas
- Built-in safe guards for new water and sewage systems and utility lines from flooding
- Enforcing risk zone, base flood elevation, and flood way requirements
- Prohibition on development in wetlands
- Prescribing standards for different flood zones on flood maps.

To meet these requirements, local governments will have to adopt specific flood plan Management into zoning and subdivision regulations, housing and building codes, and resource protection regulations.

In low-lying areas, close to the coast, and on flat land in river valleys, there may be a potential for coastal or river flooding. In geologically younger river valleys, in mountains, and foothills there may be a potential for flash-flooding.

It is important to check the history of flooding in the area. Wherever possible

- Map the extent of land covered by past flood waters

- Get an indication of the depth of past flood waters
- Find out about the severity of past floods; how much damage they have caused, how fast they flowed and how much debris they left behind and
- Find out how often flooding has happened, over at least the past 20 years.

Tsunami:

Tsunamis are ocean waves produced by earthquakes or underwater landslides. Tsunamis are often incorrectly referred to as tidal waves, but a tsunami is actually a series of waves that can travel at speeds averaging 450 (and up to 600) miles per hour in the open ocean. However, waves that are 10 to 20 feet high can be very destructive and cause many deaths or injuries. Tsunamis are most often generated by earthquake-induced movement of the ocean floor. Landslides, volcanic eruptions, and even meteorites can also generate a tsunami. Areas at greatest risk are less than 25 feet above sea level and within one mile of the shoreline. So far as Keonjhar District is concerned there is less impact of Tsunami because the district is not adjacent to any sea coast area of Odisha.

Lightning: Keonjhar district is very much prone to lightning death and injuries due to lightning per year 60 ~70 persons are dying many persons and children's are injured by this natural catastrophe. If we analyse last 10 year lightning death then it would be more than 1000 over the district alone in Keonjhar district. Lightning is a sudden electrostatic discharge that occurs during a thunder storm. This discharge occurs between electrically charged regions of a cloud (called intra-cloud lightning or IC), between two clouds (CC lightning), or between a cloud and the ground (CG lightning). During last six years, Keonjhar district has lost 58 precious lives due to lightning.

(Refer Table No. Vol-II)

Fire Accident: Fire accident is very common in the Keonjhar district in last 11 years more than 1250 fire accident cases have been reported, fire is the rapid oxidation of a material in the exothermic chemical process of combustion, releasing heat, light, and various reaction products. During last two years, Keonjhar district has lost 7 precious lives due to fire accident. If we analyse the SRC (Special Relief Commissioner) Odisha annual report fire accident is very common in Keonjhar district, there are multiple factors responsible for this, in last 10 years more than 1400 fire accidents alone happened in the district, there are incidents of life loss in fire accidents, the livestock and household property damaged to a great extent due to fire accidents.

(Refer Table No. Vol-II)

1. Forest Fire –Detail Chapter discussed Below Page No -334

“Fire is a good servant but a bad master” the saying is true for forest fire too. Limited and controlled forest fires have been very useful and essential for healthy forest growth. But uncontrolled forest fire may engulf and destroy healthy thick forest cover within no time. Besides direct loss to forest cover, forest fire also kills wildlife, damages environment, degrades soil quality and retrogrades forest regeneration. Since historical times, forest throughout the world has been adversely affected by fire. Fire always causes many direct or indirect effects on the forest ecosystem. They may merely be beneficial but at most of the times these effects are deteriorating. The damage to a forest by fire depends mainly on the size of the fire. The main adverse impact of the uncontrollable forest fire includes damage to growing stock of forests, loss of biodiversity, increase in soil erosion, scorching of soil and reduction in its permeability and water retaining capacity and volatilization of the nutrients like Nitrogen. Not only for forest vegetation and

environment, the forest fire causes direct loss to human being also in the form of damage to life and property. Extreme forest fire burns thousand of houses and kills many human beings and cattle throughout the world.

Mining & Industrial Disasters:

Growth of Mining, Chrome Industries, chemical process industry in Keonjhar district has received a dramatic accelerated momentum in last one decade. More than 137 villages of 22 G.Ps of Six Blocks including, Joda, Banspal, Hatadhi, Sadar Jhumpura, Harichandanpur have been in the district, Barbil is reportedly the most polluted town in the state, sophisticated technology complex processes and a wide range of iron generation products have emerged to provide better standards and improved way of living to millions of people.

Barbil, Joda, Sadar, Hatadhi, & Jhumpura, district has specific chrome Mines, Power plant factories. However the disaster preparedness as precautionary measures have envisaged by involving all the major Departments who are directly or indirectly responsible for Mining and Industries hazard.

Epidemics:

The Public Health Department is the nodal agency responsible for monitoring and control of epidemics. Local governments and municipal authorities also have a responsibility for taking appropriate steps in this context. Therefore, success of mitigation strategy for control of epidemics is depending on the type of coordination that exists between the Health Department and local authorities. Mitigation efforts for control of epidemics would include

1. Surveillance and warning

2 Preventive and Primitive measures

1. Strengthening institutional infrastructure like...

- Promoting and strengthening community hospitals with adequate network of Para-professionals will improve the capacity of the Health Department for surveillance and control of epidemics.
- Establishing testing laboratories at appropriate locations in different divisions within the State will reduce the time taken for diagnosis and subsequent warning.
- Establishing procedures and methods of coordination between Health Departments and local authorities.

Nuclear Disaster:

In the Past no nuclear disaster was occurred.

Heat wave: In May of 1998, the heat waves caused sun-stroke which blew over coastal Odisha including Keonjhar during this period; the temperature of Keonjhar was between 42-48 degree Celsius. Total 17 people died of sunstroke in Keonjhar district in 1998. During last year on 11.04.2016 maximum temperature in Keonjhar district was 43.7 ° C. During last four years Keonjhar district has lost 35 precious lives due to sunstrokes and heat wave.

(Refer Table No. Vol-II)

Snake Bite: Snake bite is a very common in Keonjhar district, large portion of land covered under forest area so forest dwellers are mainly victims of snake bite while they went to forest to collect

forest produce for their life and livelihood. Out of 13 blocks 5 blocks are severely affected by the flood during flood period poisonous snake are usually flows in flood water so snake bite is a very common in the flood affected areas, many life & livestock loss due to snake bite. In last year alone 90 people died due to snake bite, more than 1000 people died in last 10 years in snake bite, snake bite is very common in the district, Sometimes people belief on the person witchcraft (Magical skill) so they used to go to the person to get cure from poison but it became dangerous.

Hailstorm: Hail is a form of solid precipitation. It is distinct from ice pellets (sleet), though the two are often confused.[1] It consists of balls or irregular lumps of ice, each of which is called a hailstone. Ice pellets (sleet) falls generally in cold weather while hail growth is greatly inhibited during cold surface temperatures. Unlike grapple, which is made of rime, and ice pellets, which are smaller and translucent, hailstones consist mostly of water ice and measure between 5 millimetres (0.2 in) and 15 centimetres (6 in) in diameter. The METAR reporting code for hail 5 mm (0.20 in) or greater is GR, while smaller hailstones and grapple are coded. Sometime hailstorm brings measurable conditions to the life of the farmers standing crops became destroyed by this. Keonjhar district Champua subdivision badly hit by hailstorm in the year 2011 around 2123 ha of land affected.

Landslide

A landslide is defined as "the movement of a mass of rock, debris, or earth down a slope". Landslides are a type of "mass wasting" which denotes any down slope movement of soil and rock under the direct influence of gravity. So far Keonjhar district concern and as per the history of the district disaster one stamped has happened in district this year 3 casuality has been happened in SadarBlock .

Stamped

A **stampede** is uncontrolled concerted running as an act of mass impulse among a crowd of people in which the group collectively begins running, often in an attempt to escape a perceived threat. Stampedes" (and "panics") rarely occur except when many people are fleeing in fear, such as from a fire, and trampling by people in such "stampede" conditions rarely causes fatal injuries. So far Keonjhar district concern and as per the history of the district disaster no stamped has happened in district till date. The district administration takingmo precautionary measure during Chaitiparaba of Ma Tareni and Rathajatra at baladevjew temple Keonjharsadar.

Ranking and Probability of Disaster Episodes in the District:

Sl.No	Block	Flood	Flash Flood	Cyclone	Tornado	Heavy Rai	Drought	Sunstroke	Total Population
01	Keonjhar		✓	✓	✓	✓	✓	✓	116724
02	Harichandanpur	✓	✓	✓	✓	✓	✓	✓	103382
03	Patna			✓	✓	✓	✓	✓	81221
04	Ghatgaon			✓	✓	✓	✓	✓	87826
05	Saharpada			✓	✓	✓	✓	✓	70902
06	Telkoi		✓	✓	✓	✓	✓	✓	74210
07	Banspal		✓	✓	✓	✓	✓	✓	70647
08	Anandapur	✓	✓	✓	✓	✓	✓	✓	83731

09	Hatadihi	✓	✓	✓	✓	✓	✓	✓	121757
10	Ghasipura		✓	✓	✓	✓	✓	✓	123727
11	Champua	✓	✓	✓	✓	✓	✓	✓	85851
12	Jhumpura		✓	✓	✓	✓	✓	✓	83445
13	Joda		✓	✓	✓	✓	✓	✓	86040

A. Major Disasters/ Incidents during 2010 ~2022

A brief profile of major disasters/ incidents occurred in the district during last10 years (2010 to 2022):

Table No.: 10

Sl. No.	Disaster/ Incident	No. of incidents during (2010-2022)	No. of Deaths	Affected Population	Livestock Loss	Houses Damaged	Damage to Infrastructure				Damage and loss of Crop Area (in Hectares)
							School/ AWC Buildings	Hospitals	Road in Km.	Other Critical Infrastructure	
Disasters as approved under SDRF/ NDRF Guidelines.											
1	Flood	7	7	75000	149	6345	106	4	1411 KM		15784
2	Drought	2	Nil	1692	Nil	Nil	Nil	Nil	Nil	Nil	3001471 HA
3	Fire	8612	1	12045	25			1			
4	Hail Storm	1	0	567	0	9	0	0	0	0	
5	Cyclone	5	01	1,801,733	No report	50	7	Nil			
6	Earth Quake	Nil	NIL	NIL	Nil	NIL	NIL	Nil	NIL	NIL	Nil
7	Tsunami	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	Landslide	Nil	NIL	NIL	Nil	NIL	NIL	Nil	NIL	NIL	Nil
9	Avalanche	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
State Specific Disasters as per Notification No.1936 Dt. 01.06.2015											
13	Lightning	279 cases									
14	Heat wave	No	No	No	No	No	No	No	No	No	No
15	Whirlwind	3	01	500 Approx.	NA	NA	NA	NA	NA	NA	NA

16	Tornado	No	No	No	No	No	No	No	No	No	No
17	Heavy Rain	No	No	No	No	No	No	No	No	No	No
18	Boat Accidents (Other than during Flood)	Twice	2	No	No	No	No	No	No	NA	NA
19	Drowning (Other than during Flood)		437		No	No	No	No	No	No	No
20	Snake Bite(Other than during Flood)	Regular	363		----	-----					
Other Disasters											
21	Animal Menace	No	No	No	No	No	No	No	No		
22	Building Collapse	No	No	No	No	No	No	No	No		
23	Stampede	No	No	No	No	No	No	No	No	No	No
24	Epidemics	No	No	No	No	No	No	No	No	No	No
25	Industrial/ Chemical Accidents	1	1(2012) Aditya Steel	No	No	No	No	No	No	No	No
26	Road Accidents	No	No	No	No	No	No	No	No	No	No
27	Railway Accidents	No	No	No	No	No	No	No	No	No	No

28	Hooch Incidents	No	No	No	No	No	No	No	No	No	No
29	Communal Riot	No	No	No	No	No	No	No	No	No	No
30	Dam Break/ Spill Way related flood.	No	No	No	No	No	No	No	No	No	No
31	Soil/ Coastal erosion	No	No	No	No	No	No	No	No	No	No

A. Major Disasters/ Incidents in the District during 2022:

Table: 11

Sl. No	Disaster/ Incident	No. of incidents during 2020	No. of Deaths	Affected Population	Live stock Loss	Houses Damaged	Damage to Infrastructure				Damage and loss of Crop Area (in Hectares)
							AWC/ School Buildings	Hospitals	Road in Km.	Other Critical Infrastructure	
1	Flood	2	2	NO	NO	NO	NO	NO	NO	NO	
2	Drought (TelkoiBlock)	No	NO			NO	NO	NO	NO	NO	
3	Lightening	18	18								
4	Snake bite	69	69								
5	Drowning	119	119								
6	Fire	10	10								

[Only the Disasters held in the district during 2019 to be mentioned in the table. The NDMA approved disasters to be mentioned first followed by State Specific Disasters and Others]

A. Vulnerability and Risk Assessment related to disasters:

[Note: The Hazards towards which the district is more vulnerable to be discussed in detail]

2. Cyclone:

During the super cyclone 1999 the keonjar district partially affected around 40 villages of Ghasipura and Hatadihi block got marooned, The National Highway from Keonjhar to Cuttack was cut-off due to overflow of water on the NH. All the paddy field of the 3 blocks (Anandapur, Hatadihi and Ghasipura) was submerged under flood water. After 99 super cyclone there are no other cyclone in the district reported.

Table No. 12: Cyclone vulnerable areas of the district.

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Hatadihi	10 GP	40~50 Villages	12000	NA	NA	10	2	30 KM	NA
2	Banspal	5(Flash flood)	25	1200	NA	NA				
3	Champua	5(Flash flood)	30	1500						
4	Ghasipura	4 GP	18 Villages	1500	NA	NA	10	2	NA	NA
5	Ghatgaon	No	No	No	No	No	No	No	No	No
6	HC Pur	No	No	No	No	No	No	No	No	No
7	A.Pur	4 GP	16	1500	NA					
8	Jhumpura	No	No	No	No	No	No	No	No	No

9	Joda	No	No	No	No	No	No	No	No	No
10	Keonjhar	No	No	No	No	No	No	No	No	No
11	Patna	No	No	No	No	No	No	No	No	No
12	Saharpada	No	No	No	No	No	No	No	No	No
13	Telkoi	No	No	No	No	No	No	No	No	No

[Note: Based on historical data the table to be filled up. Only concerned Blocks/ ULBs to be mentioned.]
(Detailed list of vulnerable Villages/Wards is at table No. 3.2 of Volume II of the DDMP.)

Electrical Infrastructure and cyclone Vulnerability:

Sometime electrical infrastructure of the district became more vulnerable due to cyclone, whirlwind in the district.

Table No. 13

Sl. No.	Name of the Block/ ULB/Division	No. of Grid Stations	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor/ Electrical lines-11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
				11 KV or Less	11 KV < and <60KV	60 KV and above				
1	Keonjhar	OPTCL	9	3657	16	-	6377.96	106284	OPTCL	OPTCL
2	Joda	OPTCL	7	2285	18	-	3215.24	53587	OPTCL	OPTCL
3	Anandapur	OPTCL	7	3327	19	-	4468.33	74472	OPTCL	OPTCL

Table No.14: Drinking water facility in the Cyclone prone areas:

Sl. No.	Name of the Block/ ULB	Total No. of Tube Wells	No. of Wells	PWS Schemes				Other Drinking Water Sources If any
				Total No.	Length in Mtrs.	No. of Over Head tanks	No. of Stand Points	
01	Anandapur	1559	0	21	0	8	485	Solar –Pws 14
02	Banspal	467	06	10	0	5	210	NA
03	Champua	1235	0	20	0	5	512	NA
04	Ghasipura	1249	0	20	0	7	940	Solar –Pws-54
05	Ghatgaon	1501	11	21	0	20	550	Solar –Pws 24
06	Harichandanpur	1237	50	22	0	7	335	Solar –Pws 26
07	Hatadihi	1363	0	20	0	8	513	Solar –Pws 09
08	Jhumpura	1164	11	18	0	7	543	NA

09	Joda	397	12	21		7	221	NA
10	Keonjhar	1420	09	18		7	702	NA
11	Patna	1233	10	17		7	821	NA
12	Saharpada	1252	4	16		26	401	Solar –Pws26
13	Telkoi	1073	11	19		9	612	NA

3. Tsunami: (NOT Applicable for the District)

Tsunami threat is not applicable for the district, since the district situated far away from the seacoast. the average elevation of the district is 500 mts from MSL since it is one of the hiliarea it is more than 500 mts of MSL in some places, so it is not prone to any type of Tsunam, the distance of sea coast from the would more than 150 Km.

(Detailed list of vulnerable Villages/Wards is at table No. 3.2 of Volume II of the DDMP.)

4. Flood:

Flood is the severe natural disaster to Anandapur Sub-Division of the Keonjhar district, in this sub-division 3 blocks are severely affected by flood. All the villages situated on the bank of River Baitarani are more threts to flood. Each year around 123 villages of 3 blocks affected by the flood by this thousands heactares of paddy filed marronned, many poor families lost their houses & livelihood due to flood. So keeping the eyes of regular flood water influx in this area state government constructed 4 flood shelters in 2 blocks.

Table No. 15: Flood vulnerable areas of the district in general.

Sl. No.	Name of the Block/ ULB	No. of Susceptible Gram Panchayats	No. of susceptible villages/ Wards	Populati on in Nos.	Milch and Draught animals	Hous es	Vulnerable Infrastructure			
							School / AWC Buildin gs	Hospit als	Roa ds (in Km)	Other Critical Infrastruct ure
1	Anandapur	6	38	7000	6000	2200	ICDS 37 AWC	3	22	Banks & post offices
2	Ghasipura	5	40	8000	3600	2700	40	5	50	-do-
3	Hatadihi	10	50	10000	4000	1200	45	4	34	-do-
4	Patana	NA	NA	NA	NA	NA	NA	NA	NA	NA
5	Harichanda pur	NA	NA	NA	NA	NA	NA	NA	NA	NA
6	Saharpada	NA	NA	NA	NA	NA	NA	NA	NA	NA
07	Keonjhar	NA	NA	NA	NA	NA	NA	NA	NA	NA
08	Jhumpura	NA	NA	NA	NA	NA	NA	NA	NA	NA
09	Joda	4 GP	NA	1600 Aprox	Data not available					
10	Champua	5 GP	24	2500 Aprox	Data not available					
11	Patna	NA	NA	NA	NA	NA	NA	NA	NA	NA
12	Saharpada	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	Telkoi	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table No. 16: Causing agent wise flood vulnerable areas of the district:

Sl. No.	Causing agent- Rivers/ Water bodies/Tidal Wave/ Others	No. of Susceptible Blocks/ ULB	No. of Susceptible GPs	No. of Susceptible Villages/ Wards	Vulnerable Population	Milch and Draught animals	Houses	Vulnerable Infrastructure				
								School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infra.	
1	River-1 (Baitarani)	Anandapur	6	23	29012	NA	5802	20 AWC	0	0	0	
2	River-1 Baitarani	Ghasipura	5	43	4500	NA		10				
03	River -1, Baitarani	Hatadihi	6	56	6000	NA		15	2			
3	Tidal Wave											
4	Flash Flood - Baitarani	Champur	5	30	5000	NA	NA					
5	Others											

Note: Based on historical the tables to be filled up. Only relevant blocks to be mentioned. The causing agents outside district boundary, having vulnerability should also be mentioned]

Table No. 17: Agriculture and Flood Vulnerability

Sl. No.	Name of the Block	Cultivable Area (Hectares)		Area susceptible to Flood (Hectares)	
		Paddy	Non Paddy	Paddy	Non Paddy
1	Anandapur	10000	8442	10000	8442
2	Ghasipura	13940	7009	13940	7009
3	Hatadihi	20460	8744	20460	8744
4	Telkoi	10500	6141	6300	3685

Anandapur electrical division are flood prone area under this subdivision Ghasipura, Hatadihi, Anandapur all these blocks are marooned under the flood water during the rainy season. All the high tension wire became threat to the life of people and livestock during the flood period, there are no proper safety measures has been taken by the department to address this issue. It has been noticed that in last flood seasons farmers were died due to electrical shocks. The electrical poles are erected in the agriculture land and passing through cultivable land.

Table No. 18: Electrical Infrastructure in the Flood Prone Area

Sl. No.	Name of the Block/ ULB	No. of Grid Stations	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor / Electrical lines-11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
				11 KV or Less	11 KV < and <60KV	60 KV and above				
1	Ghasipura	1	1	187	189	241	620.431	6241	NA	
2	Hatadihi	2	2	175	210	231	740.123	6785	NA	NA
3	Anandapur	1	1	241	187	341	674.560	765	11	
4	Harichandapur	1	2	210	194	242	789.215	7892	0	18
5	Saharpada		2	162	235	259	795.221	7952	0	8.55
6	Keonjhar		1	141	265	211	861.482	8615	0	19
7	Jhumpura	1	1	606	0	0	740.90	12384	0	1.20
8	Joda		2	321	0	0	636.80	10613	0	27.00
9	Champua		3	882	0	0	1059.50	18825	2	24.00
10	Patna	3	20	3012	1245	1403	789.09	91640	4	209.75
11	Saharpada		2	44	0	0	636.80	10613	0	27.00
12	Telkoi		3	783	0	0	1129.50	725	2	24.00
13	Banspal		20	2012	0871	0	6528.06	7165	2	105.67

Table No. 18(A)

Sl. No.	Name of the Block/ ULB/Division	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor/ Electrical lines-11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
			11 KV or Less	11 KV < and <60KV	60 KV and above				
1	Keonjhar		397		-	741	12350	OPTCL	OPTCL
2	Joda		255		-	425	7084	OPTCL	OPTCL
3	Anandapur		570		-	850	14166	OPTCL	OPTCL

Table No.19 : Drinking water and Flood Vulnerability:

Sl. No.	Name of the Block/ ULB	Total No. of Tube Wells	No. of Tube Wells with raised platforms	No. Sanitary Wells	PWS Schemes				Other Drinking Water Sources If any
					Total No.	Length in Mtrs.	No. of Over Head tanks	No. of Stand Points	
01	Anandapur	1559	36	0	21	NA	8	485	These are main crisis area of the district
02	Ghasipura	1249	43	0	35	NA	12	940	
03	HATADIHI	1363	30	0	26	NA	8	513	
03	Champua								Flash flood
04	Joda								Flash flood

Events/ Festivals/ Functions organized in the district where mass gathering occurs:

[The events where the strength of population gathering is 5000 or above is to be mentioned in the table]

Table No. 20

Sl. No.	Name of the Event/ Festival/ Function	Place (Block & Gram Panchayat)	Duration of the event (in No. of days)	Month (as per English Calendar)	Strength of population gathering (Approx.)	Remarks (other vulnerabilities associated with the place/ event, if any to the mentioned)
1	Kali Puja (Anandapur)	Anandapur/Gayalmunda	4 Days	October	5000	Fire and stampede
2	Marang Buru (Anandapur)	GP-Dhakotha Vill-Amaranga	2 Days	December	10000	-do-
3	Makar Mela	Salania village, Daanar GP	15 days	January	15000	-do-
4	Makar Mela	Gadachandi GP, Sadha	3 days	January	7000	-do-
5	Laxmipuja	Hatadihi Market	5 days	October	10,000	-do-
6	Kalipuja	Anandapur Market	5 days	October ~ Nov	10000	-do-
7	Rathyatra	Ananapur Main Road	2 days	July	15000	-do-
8	Kalipuja	Keonjhar Market	4 days	October	40000	-do-
9	MaaTarini Chaitra Mela	Ghatagaon	7 days			-do-
10	Jagar mela	Deogaon, ghasipura	15 days	March	5000	-do-
11	Baruni mela	Jhadeswar temple, Ghasipura	07 days	March	5000	-do-
12	Makar mela	Saladei, Ghasipura	07 days	January	5000	-do-
13	Makar mela	Barhatikura – Ghatagaon block	15 days	January	20000 abo	-do-
14	Makar Mela	DhrupadaRaikaraSadar Block	7 days	January	10000	-do-
15	Makar Mela	Banspal Town			10000	-do-
16	Shivratri	DeogaonKuselswar of Ghasipura block	12 days	March	20,000	-do-
17	Shivratri	GhatagaonatGhatekeswar	3 days	March	10000	-do-
18	Shivratri	Balunkeswar Mahadev Keonjharsadar	4 days	March	10000	-do-
19	Shivratri	Patana town	4 days	March	10000	-do-
20	Shivrratri	MurgaMahadeve of Joda block	3 days	March	7000	-do-
21	Shivratri	Champua, Chnadraseskar Mahadev	3 days	March	7000	-do-
22	Dolapurnima	Jhumpura	8 days	March	15,000	-do-
23	Baruneisnan Mela	Gonasika of Banspal Block	10 days	April	15000	Stampede and drowning
24	BaruniSnan	Jhadeswar Mahadev on river bank of Baitrani of	7 days	April	7000	Stampede and drowning

		Ghasipura				
25	Basanti Durga	SirjuddinChhack, Keonjhar	5 days	April	10000	Fire and stampede
26	Basanti Durga	Kanpur village of Ghasipura	5 days	April	1000	-do-
27	Raja Parba	Sita Binj of Ghatagaon Block	7 days	June	15000	-do-
28	Raja Parba	Ghasipura	5 days	June	10000	-do-
29	Rath Yatra	Keonjhar town	10 days	July	100000	-do-
30	Makar Meal	Murga Mahadev of Joda block	5 days	January	7000	-do-
31	RathaYatra	Saal Paada, Ghasipura Block	10 days	July	9000	-do-
32	Rath Yatra	Keshdurapala, Ghasipura	10 days	July	7000	-do-
33	Rath yatra	Birgovindpur, Anandapur	9 days	July	8000	-do-
34	Rathayatra	Ghatagaon	9 days	July	10000	-do-
35	Rath Yatra	Patana	9 days	July	9000	-do-
36	Rath Yatra	Rajanagar of Patana Block	9 days	July	10000	-do-
37	Rath yatra	Raaisuan, KeonjharSadar	9 days	July	8000	-do-
38	Rath Yatra	Joda town	9 days	July	15000	-do-
39	Rath Yatra	Champua	9 days	July	15000	-do-
40	Rath Yatra	Bolani – Joda block	9 days	July	12000	-do-
41	Ganesh Puja	Keonjhar town	4 days	Sep	10000	-do-
42	Durga Puaja	Anadapur	7 days	October	15000	-do-
43	Durgapuja	Ghasipura	7 days	October	9000	-do-
44	DurgaPuja	Rudranayranpur, Ghasioura	7 days	October	10000	-do-
45	DurgapujaSaain kula	Ghasipura	7 days	October	10000	-do-
46	Dugrapuja	Balarampur, Ghasipoura	7 days	October	5000	-do-
47	Durgapuja	Ghatagaon	7 days	October	10000	-do-
48	Durgapuja,Aaat apurandPuruna Bazar	Keonjhar town	7 days	October	20000	-do-
49	Durgapuja	Jhumpura	7 days	October	15000	-do-
50	Durgapuja	Joda and bolani	7 days	October	15000	-do-
51	Laxmipuja	Joda –Barbil	5 days	October	7000	-do-
52	Rabanpodi	Champua	2 days	October	7000	-do-
53	Laxmipuja	Padmapur,KeonjharSad ar	3 days	October	7000	-do-
54	Kalipuja	Kalitirtha filed, Keonjhar town	7 days	October	50,000	-do-
55	Kalipuja	Nahangi, Ramchandrapur,	7 days	October	15,000	-do-

		Ghasipura				
56	Kalipuja	Ghasipura Bus stand	7 days	October	10,000	-do-
57	Kalipuja	Harichandapur, pandapanda	7 days	October	10,000	-do-
58	Rathyatra	Telkoi	7 days	October	20,000	-do-
59	Rasa Purnima	Baliuytatramahaostav, Ghasiopura, Baripal	7 days	October	10,000	-do-

Boat operation points: -

Table No. 21:

Sl. No.	Name of the Block	Name of the ghat/ boat operation point	Name of the water body	No. of Panchayats/ villages connected	Daily to and fro movement of people in Nos. (Approx.)	Type of boats operating in Nos.	
						Mechanised	Non-Mechanised
1	Anandapur	Anandapur	Baitarani	20 Villages	200	No	Non Mechanised
2	Hatadihi	Amboghat	Baitarani	3 GP	500	No	Non Mechanised
3	Hatadihi	Samanaghat	Baitarani	2 GP	400	No	Non Mechanised
4	Hatadihi	Hadagada	Salandni	2 GP	300	No	Non Mechanised
5	Ghasipura	Batto	Baitarani	3 GP	500	No	Non Mechanised
6	Ghasipura	Saladei	Baitarani	3GP	400	No	Non Mechanised
7	Ghasipura	Balibaruan	Baitarani	2GP	300	No	Non Mechanised

5. Land Slide Vulnerability:

Land Slide Vulnerability: (landslide in Keonjhar district)

Table No. 22

Sl. No.	Land Slide Zone/ Area/ Location	Area in Sq. Km	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Houses	Vulnerable Infrastructure			
						School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Anandapur	NA	NA	NA	NA	NA	NA	NA	NA
2	Ghasipura	NA	NA	NA	NA	NA	NA	NA	NA
3	Hatadihi	NA	NA	NA	NA	NA	NA	NA	NA
4	Telkoi	NA	NA	NA	NA	NA	NA	NA	NA
5	Patana	NA	NA	NA	NA	NA	NA	NA	NA
6	Harichandapur	NA	NA	NA	NA	NA	NA	NA	NA
7	Saharpada	NA	NA	NA	NA	NA	NA	NA	NA

8	Keonjhar	NA	NA	NA	NA	NA	NA	NA	NA
9	Jhumpura	NA	NA	NA	NA	NA	NA	NA	NA
10	Joda	5	15	1800	70				
11	Keonjhar	NA	NA	NA	NA	NA	NA	NA	NA
12	Champua	5	20	2200	60	NA	NA	NA	NA
13	Baanspal	4		NA	NA	NA	NA	NA	NA

[Note: Detailed list of villages, School, Hospitals and Roads are given in the Volume II of the DDMP]

6. Lightning:

Lightning: 2015 -2019

Sl. No.	Name of the Block/ ULB	Identifiable incidents of lightning hit in last 5 years		No. of Lightning events	No. fatality/ Deaths	Injured Persons
		GP	No. of Villages/ Wards			
1	Anandapur	2	7	7	3	NA
2	Ghasipura	3	8	8	6	NA
3	Hatadihi	2	4	4	2	NA
4	Telkoi	4	9	9	7	NA
5	Patna	2	7	7	4	3
6	Harichandanpur	2	10	10	7	NA
7	Jhumpura	3	5	5	4	NA
8	Joda-Barbil	4	7	7	3	NA
9	Keonjhar	2	16	16	10	NA
10	Saharpada	2	5	5	2	NA
11	Ghatagaon	2	7	7	9	NA
12	Banspal	1	4	4	2	NA
13	Champua	2	1	1	1	NA

7. Drought:

In last year entire state badly suffered due to scanty rainfall, much land turned to barren & crop failure due to poor rainfall. Farmers were turned to hapless by this situation. Out of 30 districts around 18 districts of the state declared as the drought affected district in the state. Keonjhar district one block (Telkoi badly affected by this drought). In Telkoi block 10 Panchayat affected by these 32 numbers of village affected

Table No.- 24

Sl. No.	Name of the Block	Average Annual Rain Fall	Ground Water Level	Cultivated Area (In Hectares)			
				Paddy		Non- Paddy	
				Rain fed Area	Irrigated area in ha	Rain fed Area	Irrigated area
1	Anandapur	3688		10997	2208	NA	NA
2	Banspal	1284		7776	585	NA	NA
3	Champua	1820		18308	2852	NA	NA
4	Telkoi	2215		10406	1394	NA	NA
5	Patana	1633		13373	2621	NA	NA
6	Harichandapur	1439		15581	1423	NA	NA
7	Saharpada	1226		15589	1424	NA	NA
8	Keonjhar	1871		13980	4966	NA	NA
9	Jhumpura	1700		15700	1865	NA	NA
10	Joda	2796		4410	1372	NA	NA
11	Hatadihi	1501		20958	2331	NA	NA
12	Ghasipura	1373		17468	1324	NA	NA
13	Ghatagaon	2282		16955	2916	NA	NA

(Information to be given for previous 4 drought years and the relevant blocks are to be mentioned in the table. The detailed list of drought prone)

Table No. 25: Drought Vulnerability.

Sl. No.	Name of the Block	Year- 2015				Year – 2016				Year-2017				Year- 2018			
		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)		No. of GPs experienced drought	No. of Villages	Agricultural Crop Area lost (in Hectares)	
				Paddy	Non-Paddy			Paddy	Non-Paddy			Paddy	Non-Paddy			Paddy	Non-Paddy
1	Anandapur		111	46406.39	NA	NA	NA	NA	NA	NA	NA	NA					
2	Ghasipura		129	28113.17	NA	NA	NA	NA	NA	NA	NA	NA					
3	Hatadihi		30	11492.87	NA	NA	NA	NA	NA	NA	NA	NA					
4	Telkoi		145	19521.33	NA	NA	NA	NA	10	50							
5	Patana		143	29749.13	NA	NA	NA	NA	NA	NA	NA	NA					
6	Harichandapur		Nil	Nil	NA	NA	NA	NA	NA	NA	NA	NA					
7	Saharpada		138	35434.91	NA	NA	NA	NA	NA	NA	NA	NA					
8	Keonjhar		199	46406.39	NA	NA	NA	NA	NA	NA	NA	NA					
9	Jhumpura		150	45153.68	NA	NA	NA	NA	NA	NA	NA	NA					
10	Joda		85	18038.69	NA	NA	NA	NA	NA	NA	NA	NA					
11	Patna		143	29749.13	NA	NA	NA	NA	NA	NA	NA	NA					
12	Saharpada		138	35434.91	NA	NA	NA	NA	NA	NA	NA	NA					

[Villages is at Table No.3.3 of Volume II of the DDMP]

8. Drinking Water Crisis:

Table No. 26:

Sl. No.	Name of the Block/ ULB	Villages/ Wards without proper source of		Villages/ Wards having crisis of drinkingwater during summer season		Fluoride Contamination		Others Arsenic/ Saline/ Iron If any
		No. of Villages/ Wards	Population	No. of Villages/ Wards	Population	No. of Villages/ Wards	Population	
1	Anandapur	No	No	18	2700 Aprox	No	No	No
2	Ghasipura	No	No	2	300 Aprox	No	No	No
3	Hatadihi	No	No	8	1200	No	No	No
4	Telkoi	No	No	9 villages	1300	No	No	No
5	Banspal	No	No	12	1500	No	No	No
6	Harichandapur	No	No	12	1200	No	No	No
7	Saharpada	No	No	06	700	No	No	No
8	Ghatagaon	No	No	34	3000 Approx	No	No	No
9	Jhumpura	No	No	11	1600 Approx	No	No	No
10	Joda	No	No	21	3200 Approx	No	No	No
11	Keonjhar	No	No	68	10000 Approx	No	No	No
12	Patna	No	No	86	7000	No	No	No
13	Saharpada	No	No	06	750 Approx	No	No	No

[Block wise village list is at Table No. 3.2 of Volume II of the DDMP]

9. Railway Line Exposed different Hazards: As per the station manager of Kendujhargarh station they don't have such type of information only it could be obtained from Khurda division.

Table No. 27-

Sl. No.	Hazard	Length of Railway line exposed(in Km.)	Location
1	Flood	NA	NA
2	Land Slide	NA	NA
3	Storm Surge	NA	NA
4	Tsunami	NA	NA

10.Road Accidents:

[For national and state highways only. The total network of state and national highways in the district to be discussed in detail followed by the table]

Table No- 28:

Sl. No.	Stretch of Road (From - to)	Length in Kms.	No. of Traffic Congestion Areas	No. of Accident Prone Areas	No. of villages/ habitations adjacent to accident prone areas
1	KanjipaniGhati –NH 06	22 Km	4	Complete Ghat areas	13
2	JudiaGhat –NH 06	2 KM	1	Complete ghat	4
3	Thakuranigahti –NH-06	4 Km	1	Complete ghat	3
4	Kolimatighati near Ghatagaon NH-215	2 Km	2	Complete ghat area	4
5	Bypass near Ghasipura NH 216	1 KM	2	Complete ghat area	3
06	Pitapitghat on Naranpur&Harichandanpur road	5 Km	3	Complete ghat area	4
07	Turning near Railway over bridge at Sagadapata on Harichandapur and Brahmanipal bridge	1 KM	0	Complete tunnel	3
08	Turning near Remal Dam	1 KM	0	Near the dam road	2
09	Sharp turning on canal near tangiriapal station	½ KM	0	Near the turning only	1
10	KuajharanGhat Near Manoharpur, Harichandanpur	1 KM	0	The entire ghat	2
11	DaitariGhat	5 Km	0	The entire ghat	4
12	SatokosiaGhata	2 km	0	The Entire ghat	
13	KirburuGhat	5 KM	0	Entire ghat	
14	BarabankGhat, Telkoi	12 Km Ghat	0	The complete Ghat	

11. Population Requiring Special Care:

Table No: 29-

Sl. No	Block/ ULB	No. of HHs headed by Women	No. of HHs headed by PWD	No. of Persons With Disability	No. of Widows	No. of Children		No. of Orphans		No. of Aged Persons (60 and above)		No. of Pregnant and lactating mothers
						0-5 Yrs	6-14 Yrs	M	F	M	F	
01	Anandapur	1050	804	1854	NA	NA	NA	NA	NA	NA	NA	NA
02	Banspal	420	840	1260	NA	NA	NA	NA	NA	NA	NA	NA
03	Champua	665	940	1605	NA	NA	NA	NA	NA	NA	NA	NA
04	Ghasipura	722	522	1244	NA	NA	NA	NA	NA	NA	NA	NA
05	Ghatgaon	613	481	1094	NA	NA	NA	NA	NA	NA	NA	NA
06	H.Ch.Pur	510	529	1039	NA	NA	NA	NA	NA	NA	NA	NA
07	Hatadihi	789	1386	2175	NA	NA	NA	NA	NA	NA	NA	NA
08	Jhumpura	549	644	1193	NA	NA	NA	NA	NA	NA	NA	NA
09	Joda	666	1309	1975	NA	NA	NA	NA	NA	NA	NA	NA
10	Keonjhar	1309	1044	2353	NA	NA	NA	NA	NA	NA	NA	NA
11	Patna	404	712	1116	NA	NA	NA	NA	NA	NA	NA	NA
12	Saharpada	395	574	969	NA	NA	NA	NA	NA	NA	NA	NA
13	Telkoi	497	761	1258	NA	NA	NA	NA	NA	NA	NA	NA

[The table is the block wise abstract of population requiring special care. Village wise details are at Table No. 3.16 of Volume II of the DDMP]

Climate Change scenario of Odisha :

Rainfall patterns in Odisha have been more erratic since the 1960s, with below-normal rainfall across all districts being recorded for most years. The "normal" 120 days of monsoon rain has shrunk to 60–70 days, and unusual spikes in rainfall, with torrential rainfall of over 200–250 millimetres/day, are more frequent during the monsoon, frequently resulting in floods. This situation has had a strong influence on agriculture, especially during the season, because of the reduced residual moisture.

By 2100, the mean annual temperature globally is projected to increase by one to five degrees Celsius (24.5°C in 1970 to 28.5°C in 2080), depending on the A2 scenario in IPCC AR5 and location. Coastal Odisha will remain relatively less warm than the rest of the state, even though it clearly breaches the 2°C barrier. Northwestern, western, and southwestern Odisha show the highest rise in temperature. This temperature rise is certainly at an unsustainable level, assuming the current challenges of global warming are not mitigated. This factor will have an increasingly larger impact on terrestrial and marine ecosystems.

12. Earthquake Vulnerability:

As per Earthquake Hazard Zoning Atlas-2016 issued by the National Disaster Management Authority (NDMA) and Building Materials and Technology Promotion Council (BMTPC)

- The Keonjhar District is coming under Zone-II (low damage risk zone)/
- The total District is under Zone- III (Moderate damage risk zone)/
- % of the District is coming under Zone- III (Moderate damage risk zone)/
- Kendujhar district is coming under Zone- III (Moderate damage risk zone) and the other are under Zone-II (low damage risk zone)/86°0'E 85°30'E 85°30'E 22°0'N 22°0'N 21°30'N 21°30'N 21°0'N 21°0'N Ip 4.0 - 4.9 KENDUJHAR DISTRICT Earthquake Hazard Zoning Map (showing faults, thrusts and earthquakes of magnitude ≥ 4) (ODISHA) 0 5 10 15 20 25 km Total No. of Houses : 5,74,298 Population : 18,01,733 NDMA - BMTPC Earthquake Hazard Zoning Map; Map is Based on digitised data of SOI; Sub-Division Boundary as per Census of India 2011; Seismic Zones of India Map IS: 1893 (Part I) - 2002,BIS; Earthquake Epicentre from IMD; Seismotecton

N.B. Earthquake Vulnerability Map is in Volume II

Land Slide Vulnerability:

Table No. 14

Sl. No.	Land Slide Zone/ Area/ Location	Area in Sq. Km	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Houses	Vulnerable Infrastructure			
						School / AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1									

14.1 Identified Old and depleted Buildings in the District (if any)

Sl. No.	Block/ ULB	No. of Vulnerable Buildings	Population at Risk (inhabitants and the neighbouring)	Remarks
01	Keonjhar Municipality	12	300 Approx	Annexure-I
02	Anandapur Municipality	Not available		
03	Champua	Not available		

Annexure-I

Serial No	Municipality	Building Name	Location	Height	Total no of Rooms	Remark
01	KeonjharMunicipality	Town Hall Market	Telephone Exchange Square	12 ~15 Feet	49	Unsafe declared by R&B
02	-do-	Gnadh Market	Gandhi Chhack	12 ~15 Feet	71	Unsafe declared by R&B
03	-do-	Old town Market	Old Town	12 ~15 Feet	15	Damage condition
04	-do-	Collectorate Compound wall	DRDA Road	12 ~15 Feet	19	Damage condition
05	-do-	Private Bus Stand	Ghatagaon Road	12 ~15 Feet	19	Damage condition
06	-do-	Kashipur Market	Kashipur	10 ~12 Feet	9	Damage condition
07	-do-	Dharmasala Bazar		12 ~15 Feet	36	Damage condition
08	-do-	Near DFO Office	Near DFO Office	12 ~15 Feet	1	Damage condition
09	-do-	Gandhi Market 2	Near daily Market	12 ~15 Feet	9	Damage condition
10	-do-	Dhobadiha Old Gate	Dhobadiha	12 ~15 Feet	1	Damage condition
11	-do-	Kelly Tank Reach	Near SBI	12 ~15 Feet	9	Damage condition
12	-do-	Durga Bazar	Near Government Bus stand	12 ~15 Feet	3	Damage condition

[The list of the buildings to be given in Volume II]

13.Forest Fire: Detail Chapter discussed Below Page No -334

Forest Fire Incidents:

Sl. No.	Name of the Division	Range	No. of Fire Incidents Reported during last----- 5years	Area Affected in Ha.	Loss of life/ property if any
1	Keonjhar	NA	3 times	96.59 Ha	No

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Forest fire vulnerability:

Sl. No.	Name of the Division	Range	Area (in Sq. Km)	Total Notified Forest Area (in Sq. Km)	High Risk Zone (Area in Sq. Km)	No. of Villages/habitations inside/adjacent to the High Risk Zone	Medium Risk Zone (Area in Sq. Km)	No. of Villages/habitations inside/adjacent to the Medium Risk Zone	Low Risk Zones (Area in Sq. Km)	No. of Villages/habitations inside/adjacent to the Low Risk Zone
01	Keonjhar	Keonjhar			26.7	33	NA	NA		NA

N.B.The name of the vulnerable villages along with population details under different risk zones is in Volume II.

14.Fire and Life Safety of High-Rise Buildings (buildings having a height of more than 15 meter)-

15.The world over, those responsible for Building Codes formulation recognize the need for a modern, up-to-date Fire Code, addressing conditions hazardous to life and property from fire, explosion, use of hazardous materials and the occupancies buildings and premises of late, building design, especially for high rise and special buildings has become a complex process, integrating many skills, products and techniques into its system. An intelligent building design is required to cater to various potential emergency situations. The main objective of fire safety design of buildings should be assurance of life safety, property protection and continuity of operations or functioning. The designer must recognize the type of danger posed by each component and incorporate effective counter-measures. Fire Protection Engineering has made substantial strides in its professional development. At present knowledge is available that can confine a hostile fire to a room or area of its origin. However, the new concept of composite construction, which is being increasingly adopted in North America and in some parts of Europe, has thrown up fresh challenges. Likewise, there has been tremendous advancement in the use of various kinds of plastics in the building industry and new types of roofings, walls, doors and false ceiling panels, core panels for walls and interior finish materials are being increasingly used. These have brought in their wake new fire and life safety

problems. The need for all such products to be tested and evaluated for their behaviour in fire and flame propagation properties cannot be overemphasized in the interest of fire and life safety requirements. In the Keonjhar district different municipality and NAC has ruled out a guideline to construct the high building in Keonjhar, Joda, Anandapur and Barbil area under Municipality.

Seasonality of Hazards

H: Human, C: Crop, A: Animals, I: Infrastructure

Type of Hazards	Jan-Mar				April-June				July-Sep				Oct-Dec			
	H	C	A	I	H	C	A	I	H	C	A	I	H	C	A	I
Flood									←	→						
Cyclone					←	→							←	→		
Earthquake	←															→
Heatstroke					←	→										
Drought									←	→						
Hailstorm				←	→											

16. Embankments:

Danger Level of Major Rivers in Keonjhar

Serial No	River Name	Station	Zero gauge level (mtr)	Danger Level (mtr)	Danger height (mtr)	Warning level (mtr)	Warning Height (mtr)
01	Baitarani	Anandapur	28.00	38.360	10.360	37.445	9.445
02	Kusei	Belabahali	35.32	39.70	39.70	4.380	4.380

17. Irrigation Division Wise Embankments in the District:

Sl. No.	Division	Name of the Embankment	Type Embankment/ Agricultural/ Saline)	(Capital Other Relief/ Test	Length (in Km.)
01	Baitarani Division	Flood Protection embankment on Baitarani left at Sarangi	NA		1.306
02	Baitarani Division	Flood Protection embankment on Baitarani	NA		1.256

		left as at Balia		
03	Baitarani Division	Flood Protection embankment on Baitarani left as at Abdula	NA	0.585
04	Baitarani Division	Construction of FP Embankment cum Ring road on Baitarani left from Anandapur Bus stand to Baitarani Bridge.	NA	2.110
05	Baitarani Division	Flood protection embankment on Baitarani left from Anandapur to Tarava Bareswar.	NA	4.800
06	Baitarani Division	Flood protection embankment on Baitarani left from Fakir to Singdov	NA	1.400
07	Baitarani Division	Flood protection embankment on Baitarani left from Singdov to Sibanarayanpur	NA	2.780
08	Baitarani Division	Flood protection embankment on Baitarani left from Sibanarayanpur to Mugupur	NA	2.350
09	Baitarani Division	Flood protection embankment on Baitarani left from Mugupur to Bareswar	NA	1.500
10	Baitarani Division	Flood protection embankment on Baitarani left from Govindapur to Agiria	NA	3.120
11	Baitarani Division	Flood protection embankment on Baitarani left from Agiria to Habaleswar	NA	3.400
12	Baitarani Division	Flood protection embankment on Baitarani left at Habaleswar	NA	2.200
13	Baitarani Division	Flood Protection embankment on Baitarani right from Khaparakhai to Panchupalli	NA	9.690
14	Baitarani Division	Flood Protection embankment on Baitarani right from Panchupalli to Chatra	NA	3.810

15	Baitarani Division	Flood Protection Embankment on Kusei left at Daradipal	NA	1.067
16	Baitarani Division	Flood Protection Embankment on Kusei left at Rekutia	NA	0.510
17	Baitarani Division	Flood Protection Embankment on Kusei left at Deogaon	NA	0.552
18	Baitarani Division	Flood Protection Embankment on Kusei left from Hatisila to Sarei	NA	1.105
19	Baitarani Division	Flood Protection Embankment on Kusei left from Sarei to Belabahali	NA	3.393
20	Baitarani Division	Flood Protection Embankment on Kusei left from Belabahali to Chatra	NA	4.410
21	Baitarani Division	Flood Protection Embankment on Kusei left from Chatra to Panchupalli	NA	1.313
22	Baitarani Division	Flood Protection embankment on Kusei right from Siapada to Jalasuan	NA	3.650
23	Baitarani Division	Restoration to Flood Protection Embankment on Batto to Ranapur	NA	10.000
24	Baitarani Division	O.A. Embankment No. 5(a)B on Baitarani left from Mareigaon to Manjuriroad (ChhatabarChhak)	NA	19.400
25	Baitarani Division	T.R Embankment on Baitarani right from Saladei to Odapada	NA	0.260
26	Baitarani Division	T.R. Embankment on Kusei right near village Bhaganai	NA	0.510
27	Baitarani Division	T.R. Embankment on Kusei right near village Satatira	NA	0.272
28	Baitarani Division	T.R Embankment on Sendhei right near village Toraniapal	NA	0.820
29	Baitarani Division	T.R. Embankment Phapudia nallah left near village Ostapura	NA	0.160
30	Baitarani Division	T.R Embankment on Phapudia Nallah left & right near village Khaliamenta	NA	0.914
31	Baitarani Division	T.R Embankment on Phapudia Nallah left & right	NA	2.000

		near village Nanduan&Sarei		
32	Baitarani Division	T.R Embankment on Muhan Left near village Bhalukuma	NA	2.000
33	Baitarani Division	T.R Embankment on Muhan Left near village Kanto	NA	1.000
34	Baitarani Division	T.R Embankment on Remal right near village Balipal.	NA	0.285
35	Baitarani Division	T.R Embankment on Jarada Nallah right near village Oriya	NA	0.118
36	Baitarani Division	T.R. Embankment on Samakoi right near village Kamalangi	NA	0.150
37	Baitarani Division	Flood protection embankment on Aradei right near Teliorsala.	NA	0.690

Division wise list of Vulnerable Points:

Sl. No.	Name of the Division	Name of the Embankment/ River	Location of the Vulnerable Point	Affected Length (in Mtr.)	Name of the Block	Name of the Villages to be affected
1	Baitarani Division	Baitarani	Village Tukuna	150 Mtr.	Anandapur	Tukuna, Puskura, Guhalia, Panchupalli
2	Baitarani Division	Baitarani	Village Habaleswar	250 Mtr.	Hatadihi	Habaleswar, Dimiria, Jambhira

DAM Burst plan

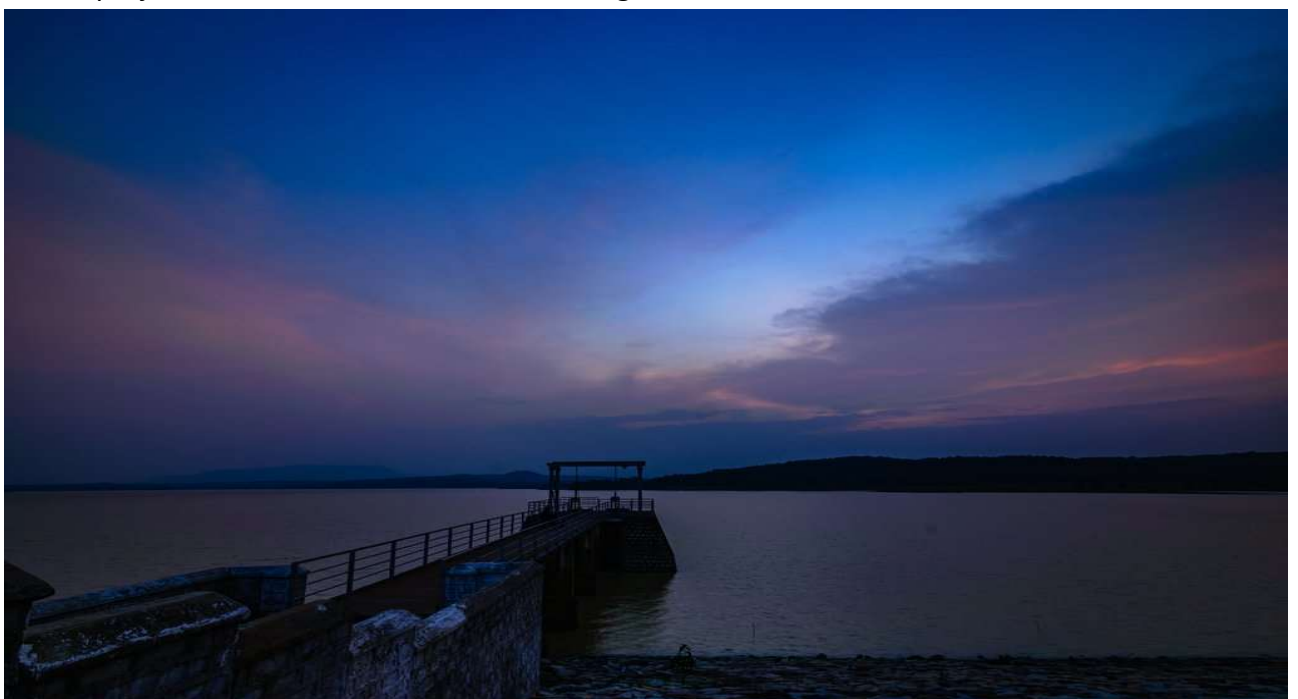


Keonjhar district is rich in water resources. A series of check dams have been constructed across Aradei nallah, Sanmacchhakandana nallah and Bhaluka nallah and other distinct nallahs for in stream storage, ground water recharge, incidental irrigation during late Khariff and Rabi by storing water at the end of monsoon mainly through lifting devices, and other uses like drinking water, bathing, washing, fishing, recreation etc. Minor Irrigation division, Keonjhar has taking up construction work of 318 check dams in different Blocks out of which 197 have been completed. Hadagada Reservoir has been raised on the river Salandi in Anandapur Sub-division of Keonjhar district. The dam encompasses huge water source for the area for irrigation purpose. An splendid natural environment with high mountains range beautify the reservoir which is eye catching for natural lovers. It is an ideal place for picnickers and holidayers around the year. Scenic beauty of the reservoir and flowing stream offers a number of picnic spots attracting visitors throughout the year. This spot is just 35 km away from Anandapur. A huge dam located inside Hadagadh wildlife sanctuary. It is about 105km from Keonjhar town. The water looked enticingly emerald in colour. Tribals were ferrying tourists on country made boats which can be very risky. Boat ride is not recommended. It can get very hot and humid in summer season. Winter would be best time to visit.



Kanjhari Dam

Kanjhari Irrigation Project is a reservoir scheme across Kanjhari nallah, a tributary of river Baitarani to provide irrigation to an ayacut of 9800 ha. The project is located at Latitude 21°-35'-30"N and Longitude 85°-43'-30"E near village Chaka in Keonjhar block of Keonjhar district. Construction of the project commenced during 1980 and completed in 1989. It comprises of homogeneous rolled fill earth dam of 1135m length with ogee shaped gated central spillway. The spillway is provided with 7 nos. of 12 x 6 m radial gates. There exists masonry non-over flow section of 13.50 m length between the spillway and right earth dam. There are two head regulators one on left and the other on right having design discharge of 5.74 and 6.75 m³/sec respectively. The catchment area of the reservoir is 358 km² The adopted design inflow flood for the project is 2286 m³/sec. The revised design flood is 3157 m³/sec



Kanjhari Dam

Kanjhari Irrigation Project is a Medium Irrigation project constructed across the River Kanjhari near Revenue Village Chakka of Keonjhar Block. At present the dam is providing irrigation to 9,740 ha during khariff & 2800 ha during rabi in Keonjhar, Ghatagaon & Patna Blocks of the district. The project was taken up under World Bank assistance in the year 1978-79 and completed in the year 1990-91 at a cost of Rs 3319.20 lakhs. The length of two main canals are 36.20 km and one distributaries with 60 minors and subminors are 138.73 km. There is an inspection bungalow at Kanjhari dam site. Water supply system to Keonjhar municipality from this dam, is under progress.

18. Dam- Burst Scenario: (For large Dams)

Sl. No	Name of the Dam	Location & Water body	Type (Major/ Medium/ Minor)	Storage Capacity	Full Reservoir Level	Maximum Water Level	Dam Break Model /	Pre and Post Monsoon Inspection of Structural Measures done? (Yes/ No)	No. of Villages to be affected/ needs to be evacuated in case of a possible scenario	Remarks
1.	Hadagarh – Dam	Salandi – Hadagarh	Major	56500	N A	N A	No	Yes conducted prior to monsoon	Balasore - 30 Villages Bhadark - 150 Villages Keonjhar - 20 Villages	
2.	Kanjhari	Kanjhaririver a tributary of Baitarani river	Medium	4052	N A	N A	No	Yes in June and December	9 Villages of Ghatagaon, Keonjhar and Patana Block	

Contingency Planning for Dam bursts scenario:

1. For Dam – A

Sl. No.	District	Block	Name of the Village	Evacuation Route for the village/s	No. of HHs	Population	Safe Shelter Identified	Remarks
01	Keonjhar	Hatadihi	Downstream villages of Dam	Through afflux Bandh of Bidyadharpur Villages	NA	NA	Bidyadharpur High School	

2. For Dam - B

Sl. No.	District	Block	Name of the Village	Evacuation Route for the village/s	No. of HHs	Population	Safe Shelter Identified	Remarks
02	Keonjhar	Keonjhar	Chaka Village	RD Road & Canal Road	NA	7500 Approx	Village forest of Dhagotha, Toranipokhari etc	

ii. Formation and Subsequent Bursting of Landslide Dams:

Sl. No.	Land Slide Area/ Location Vulnerable for formation of land slide Dams	No. of Villages likely to be affected	Population to be affected
1	NA	NA	NA
2	NA	NA	NA

19. Cultural Heritage Sites and Precincts:

Culture & Heritage

The people of the district observe a number of festivals all the year round. These festivals are broadly divided into two categories viz. domestic festivals and public festivals.

Dance and music are an integral part of tribal life. Most tribal Villages have akhara where the youth, both men and women, assemble almost every evening to dance to the tune of indigenous music. Now there is official encouragement to tribal dance and music. This has given an impetus to these arts. Description of some dances is given below: -

CHANGU Dance -The **Changu** dance derives its name from a kind of drum called changu which invariably accompanies the dance. This dance is common to almost all the tribes, but it is more

popular among the Bhuyans. The peculiar feature of this dance is that men confront the girls with song and music and then recede backwards when the girls confront them. The girls dance standing in a row generally holding each other's hand.

Chhau dance is prevalent in the district and is usually performed during fairs and festivals. It is a dance with strong folk character. Almost like a dance-drama, this dance is famous for its colourful and heroic character. The themes are taken from Indian mythology or folk tales. The vigorous beating of the battle drums, such as Dhumsa, Nagra, Dhol and Chadchadi which accompany the dance create a thrilling sensation in the audience. The Chhau dance is performed during the Chaitra Parab festival in the month of Chaitra. The dance owes its origin to Mayurbhanj in Odisha and Sareikela in Jharkhand. While masks are used in the Sareikela Chhau, in Mayurbhanj and Keonjhar they have been discarded. In this dance the foot work and body movements of the dancers are artistic and virile. Facial expressions are usually absent.

Juang dance-The Juang dances are performed to the accompaniment of tambourines. Although the days when they danced with the primitive leaf dress are gone, Colonel Dalton has given an interesting account of Juang girls dancing in their leaf garments when he witnessed them almost more than a century ago. "They made their first appearance at night and danced by torch light; it was a wild weird-like sight. The men sang as they danced, accompanying themselves on deep-sounding tambourines, the girls holding together and circling round them in a solemnly grotesque manner. There was a want of spirit in the performance, for they were shy and timid creatures and the dancing by torch light before so many strange spectators was evidently no pleasure to them. When they returned arrayed in fresh leaves, we induced them to give us not only the solemn measure of the evening before, but to perform a variety of sportive dances, some quite dramatic in effect, and it was altogether a most interesting 'ballet'. In one figure, the girls moved round in single file keeping the right hand on the right shoulder of the girl in front, in another with bodies inclined, they wreathed their arms and advanced and retreated in line. In this movement, the performance bore a strong resemblance to one of the **Kol dances**. Then we had the bear dance. The girls acting independently advance with bodies so much inclined, that their hands touch the ground; thus they move not unlike bears, and by a motion from the knees to the bodies wriggle violently, and the broad tails of green leaves flap up and down in a most ludicrous manner".

The **Hos** who are a purely agricultural tribe have dances and celebrations particularly during the **Magh festival** which is held in January when the granaries are full. The chief beverage taken during the celebrations is a kind of home-brewed rice-beer called Illi, whose making is a fine art which every accomplished Ho girl knows. The Magh celebrations are one in which all restraints are set aside. The Hos indulge in dance and music with gay abandon.

The **Hindus** of the district observe a number of festivals all the year round. These festivals may broadly be divided into two categories, viz., domestic festivals observed in each household, and public festivals and fairs where people congregate in large numbers on some auspicious days. The domestic festivals are confined to the worship of family deities, observance of **ekadashis**,

various vratas, etc., most of them being guided by phases of the moon. The public festivals are usually religious ceremonies attended by a large number of men, women and children who come for worship as well as entertainment. An account of some of the important festivals in the district is given below.

There is the annual **hunting festival** of the **Bhuyans**. It is observed on the 3rd day of the bright fortnight in the month of Chaitra (March-April). The day is fixed by the **Dehuri**. He also leads the hunting party. After the game is bagged, the Dehuri takes a little blood of the game and offers it to the Village deities. They believe that good or bad harvest depends on the quantity of game bagged.

The Bada Osha is observed on the 14th day of the bright fortnight in the month of Karttika (October-November). On this day people worship Lord Siva. They observe fasting for the whole day and prepare a special type of Bhoga consisting of rice, milk, coconut, plantain and spices and offer it to Lord Siva.

The BaruniJatra is observed on the 13th day of the dark fortnight in the month of Chaitra (March-April). On the day of Baruni many people take their holy dip in the sacred Rivers.

In Keonjhar district this Jatra is held at Gonasika near Brahmeswar Mahadev temple. Large number of people from different parts of the district as well as from outside come to this place on that day to take bath in the Brahma Kunda, just near the temple of Brahmeswar Mahadev. People regard this as a sacred place as the Baitarani flows from Gonasika through this Kunda.

BisriThakurainJatra is observed in many Villages in Keonjhar, Telkoi and Champua tehsils of the district. It is held in a common place in the Village where almost all the communities take part. The temple is generally situated near the common house (Manda Ghar). The presiding deity of the temple is Goddess Bisri who is represented by a wooden pole fixed on the floor at one corner. The Goddess Bisri is worshipped every year in the month of Margasira for the general welfare of the Villagers. It is performed on a Thursday in the bright fortnight. Before the festival, a terracotta idol of the deity is brought from a potter. The idol is then installed over the wooden plank. For eight days from the date of installation, the Goddess is propitiated with offering of rice, clarified butter, molasses, plantains, etc. On the last day, goats and fowls are sacrificed before the deity. Later in the day, the Villagers carry the idol in a procession and immerse it in the nearby stream. Dehuri, the Village priest, gets possessed by the deity, wears the wooden slippers with nails and sits on the stool with pointed nails projecting on it holding the cane sticks. It is believed that the priest is not hurt by the pointed nails as the man is in a trance and he is then the embodiment of the Goddess.

Bodam is celebrated by all communities in general, and the Adivasis in particular, before the eating of new fruits of the season. On a Thursday in the bright fortnight of Pousha, some new fruits and flowers are collected. The Dehuri, the Village priest, prepares porridge in a new pot and offers the same along with curd, milk, new fruits and flowers to the goddess of the Village.

Chaitra parba falls on the last day of Chaitra and continues for 3 to 4 days. The people worship goddess Basuli. The festival is celebrated in a grand scale in Jyotipur, Asanpat and Chamakpur in Champua Sub-Division. On this occasion people perform Chhau dance.

The **Chandan Jatra** is observed at Raitola, Anandapur and Rajnagar of the district. It starts from Akshaya Trutiya, the third day of the bright fortnight in the month of Basisakha (April-May), and continues for five or seven days. Of the places, Anandapur attracts more people from far and near.

The **Durga Puja and Dasahara** festival is celebrated during the bright fortnight in the month of Aswina (September-October). People worship their vocational implements on the days and stop work. Images of goddess Durga are worshipped in many places of the district while the celebrations are held at Keonjhar, Jhumpura, Joda, Barbil,

Champua and Anandapur attract more people. The tenth day of the festival is called Dasahara. On this day the idols are taken out in procession for immersion in tanks or Rivers.

Durga Puja is also celebrated at the Sakta Shrine at Sidhamatha near Keonjhar and Tarini at Ghatgaon. Animals are sacrificed at these places.

Dasahara has a special significance for the warrior's caste. They worship their old weapons of war and exhibit physical feats on the occasion. Their heroic forbears used to start fresh military expeditions during this season of the year.

Dolajatra is observed in two different ways. One is called Raja Dola. It is observed from the day of phagudasami up to phagupurnami. The other is called **PanchuDola**. It is observed from the next day of phagupurnami to chaitrakrushnapanchami. This is the main festival of the people belonging to the Gauda caste. They worship cow and play Naudi by singing songs relating to Radha and Krishna. It is observed in a grand scale in Patana, Harichandapur, Pandapara, Telkoi, Anandapur, Sainkula, Soso, Champua and Chamakpur of the district. The HingulaJatra or Parab is observed in a few Villages under Telkoi and Ramchandrapur police-station in March-April. The Kali Puja is observed in almost all the places of the district on the 14th day of the dark fortnight of the month of Kartika (October-November). On this occasion people worship clay images of goddess Kali and also perform Puja at Shakta Shrines. The new-moon day of Kartika is known as DipavaliAmabasya or PayaAmabasya. On this day the Hindus perform Sradha in memory of the dead ancestors and bid farewell to them with lighted sticks (kaunria) in the first watch of the night. They decorate the house with dipas (clay lamps) in the evening. Display of fireworks is an important part of the celebration. In the urban areas of the district it is celebrated with great pomp and show.

The **Karama Puja** is celebrated mostly by the Adivasis in the Keonjhar and Champua Sub-Divisions. The festival commences on a Thursday in the month of Margasira (November-December) and is celebrated for eight days. The festival culminates with offerings to the presiding deity, while the preceding seven days are spent in preparation. On the first day, two unmarried young boys collect new pulses like green gram, black gram, mustard, gingelly, horse gram, etc., almost a handful from each household and keep the collected pulses on the bank of the stream in a bamboo basket. These two young men cook their food

themselves and eat it untouched by others till the end of the festival. Every day they sprinkle water on these pulses after taking bath in the stream. On the eighth day, they plant two branches of karama tree in front of the Mandaghar (dormitory). The grains, by now germinated, are brought and placed beside the branches of the Karama tree. The youngsters of the Village then dance around the Karama twigs. Next day two fowls are sacrificed there and the baskets containing grains along with the branches are carried in a procession to the nearby River or Nala and are immersed there. Makara Sankranti- People take their holy dip in River or pond in the morning and go to the nearby Siva temple to have a darshan. They worship Lord Siva to have their desires fulfilled.

On this day Makara Jatra or Mela is held at many places in the district. But this is observed in a grand scale in the Villages Baratipara, Deogan, Kasira, Sarei, Balibandha, Bhandra, Tangarbantala, Deojhar, Mirigasinga, Gobindapur and Chamakpu.

Magha Parab- It is also called Diga Puja. It is observed on the Thursday after Makara Sankranti in the month of Magha. The Villagers of Daanla in Banspal Block collect seven logs of sal wood and some bundles of hay in the southern corner of the Village and set fire to it early in the morning before sunrise. The Dehuri of the Village performs Puja on the spot with a handful of rice, one egg, jaggery, milk, ghee and a fowl. He puts all these items on the logs of wood and sets fire to it. The assembled Villagers, mostly drunk, sing and dance around the bonfire.

Nuakhia- The festival means ceremonial eating of new grains. It is observed on a Thursday in the month of Bhadrab. In the morning, new paddy is collected from each household. The rice prepared out of this grain is used for preparing porridge which is then offered to the Gram Devati. Goats are also sacrificed before the deity and a feast is held in the Village for which each household contributes. On the following day, i.e., Friday, new paddy grains are again collected from each household and the same is kept at the Mandaghar. This paddy is distributed to the Villagers with pieces of gourd. The sanctified paddy is pounded and mixed with rice to be cooked for the day. In this festival all the communities take part except the Kolhas. The Kolhas celebrate it in a different manner. They on this day, cook new rice in a new pot, prepare fowl curry, brew rice beer and offer it all to their Dharam Bonga or Sun god on one leaf and to their ancestors on another. This is done by men alone.

Raja- Raja is an important agricultural festival. It is observed in the district for three days i.e., from the last day of the month of Jyaistha called **Pahili Raja** up to the second day of the month of Asadha, known as Bhuindhahan or Bhumidahan. The first day of the month of Asadha, known as Bhuindhahan or Bhumidahan, is called Raja Sankranti. During these three days the Mother Earth is supposed to be rajaswalla or under menstruation and all agricultural operations are suspended for the period. For this festival various kinds of dishes, pithas or rice cakes and sweets are prepared. The people pass the time in feasting and merry making. The boys play various kinds of indoor and out-door games. The girls spend the time by singing mellifluous songs on swings fastened to the tree branches. The festival ends on the day following Bhumidahan when Mother Earth is given a ceremonial bath. This is called BasumatiSnana. Rama Navami is observed on the ninth day of the waxing moon in the month of Chaitra (March- April) in memory of the birthday of Rama, the celebrated hero

of the Ramayana. They also stage “Ramalila” for entertainment. Ras Purnima or Kartika Purnima is observed to commemorate the Rasalila performed by Lord Krishna. Many devout Hindus, especially women, observe Kartika as a sacred month and live on habishanna or strictly vegetarian food. A light or lamp called akasdip is also kept on a high pole every evening in the month of Kartika. A distinctive feature of this festival on the full-moon day is to commemorate the ancient maritime glory of Odisha.

People take their holy bath in the Rivers or ponds in the early morning and float mini boats made of the outer layer of banana trees or sola-pith. RathJatra- The Hindus celebrate many festivals in a year in honour of Lord Jagannath. Of these, RathaJatra or Car festival is the most important. It is also called Shri GundichaJatra. It takes place on AsadhaSukla Dwitiya, i.e., the second day of the bright fortnight of the month of Asadha (June-July). The three deities are brought from the main temple and placed in the wooden chariot. After due ceremony, the chariot is pulled by thousands of devotees to the Shri Gundicha Mandira where the deities stay for a week. The return car festival or BahudaJatra is performed on AsadhaSuklaDasami, i.e., the tenth day of the bright fortnight. This festival is celebrated at Anandapur, Keonjhar, Champua, Joda, Barbil, Jyotipur and at other places in the district. Many people gather at these places to see the deities on the chariot. Sivaratri-This festival is observed in all the Siva temples on the 14th day of the dark fortnight in the month of Phalguna (February–March). The devotees remain awake throughout the night and worship Lord Siva. This festival is observed with great pomp and splendour in the Siva temples at Kusaleswar, Gonasika, Bodapalasa, Baratipara, Champua and Deojhar. Sarhul is a tribal festival of flowers. In the month of March- April sal flowers are brought to the sarna or sacred grove. The priest (pahan) propitiates all gods of the Mundas. The celebration goes on for several days. Sohrai is celebrated in the month of October- November. The Munda cattle owners fast for the whole day. In the night lamps are lighted. On the following morning the cattle-shed is washed and sprinkled with rice- beer. The cattle are fed in plenty. In addition to these fairs and festivals people of the district also observe Chait Parba, TariniJatra, Pana Sankranti Jatra, Pahudi Puja, AtheiJatra, BanrupatJatra, **PithiPhodaJatra**, Lakshmi Puja, Janmastami, Id and Sunia. In this backdrop District Festival (Keonjhar Mahotsav) is organized under the aegis of district administration & District Council of Culture. Organisation of District Festival has been started in the year, 1992. This occasion is a multidimensional confluence of Art, Craft, Culture & development. Local artists, reputed troupes of different districts and artists of different states participate in this Mahotstava. Besides, noted regional Mahostavs like AnandapurMahostav at sub divisional headquarters Anandapur, GhatgaonMahostav at Ghatagaon, BarbilMohostav at Barbil are organised.

20.Human Animal Conflict:

- i. Loss of Human Lives and Property due to animal attack-

Sl. No.	Vulnerable Place (Village/ Panchayat etc.)	Causing Agent/Animal (Elephant, Bear, Crocodile etc.)	Number of Human Lives lost during last 5 years	Damage to House and Property during last 5 years	Crops Damaged
1	Keonjhar Div.	Elephant & Bear	46	630	2759.11 Ac.

ii. Animal Lives due to man-made causes

Sl. No.	Vulnerable Place/ Location	Causing Agent (Railway line/ Electric transmission lines etc.)	No. of Incidents	Number of Animal Lives lost
1	Nuapani&Saradapanka	Electrocutions	02	02(Elephants)

Chapter – 4: Institutional Arrangement

4.1 National Disaster Management Authority (NDMA)

The National Disaster Management Authority (NDMA) was constituted under the Sub-section (1) of Section (3) of National Disaster Management Act 2005. NDMA is the apex body for Disaster Management in the country headed by the Hon'ble Prime Minister of India to lay down policies, plans and guidelines to manage disaster and coordinating their enforcement and implementation for ensuring timely and effective response to disaster.

The Chairperson of the NDMA is the Hon'ble Prime Minister of India (*ex-officio*) and others members not exceeding than nine may be nominated by him. The Chairperson may designate one of the members to be the Vice-Chairperson.

4.2 National Executive Committee (NEC)

The central government has constituted a National Executive Committee (NEC) under sub-section (1) of Section (8) of DM Act-2005 to assist the National Disaster Management Authority in the discharge of its function and also ensure compliance of the directions issued by the central government.

The Union Home Secretary is the Chairpersons (*ex-officio*) of NEC. The Secretaries to the Government of India in the ministries/departments having administrative control of the agriculture, defense, drinking water supply, environment and forests, finance (expenditure), health, power, rural development, science and technology, space, telecommunication, urban development, water resources and chief of the integrated defence staff of the chief of staffs are other members of NEC.

NDMA (Section 3 to 13)

<p>Constitution (Sec 3 & 4)</p> <ul style="list-style-type: none"> • Chairperson : PM (Ex officio) • Other nine members (Nominated by Chair person) • Vice Chairperson (Nominated by Chair person) 	<p>Function (Sec 6)</p> <ul style="list-style-type: none"> • Lay down policies • Approve plan (nation &deptt) • Lay down guidelines • Recommend provision of funds • Others.
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National Executive Committee

Constitution (sec 8 to 9)

Chairperson: Secy -GOI, DM dept.

<ul style="list-style-type: none"> • Other members <ul style="list-style-type: none"> • Secy. – Agcl • Secy.- Atomic Energy • Secy.- RWSS • Secy.- Forest & Env • Secy. – Health • Secy.- Power • Secy.- Rural Development • Secy. – Science & tech • Secy.- Space, Tlecomm • Secy.- Urban Devp 	<p>Functions (Sec 10)</p> <ul style="list-style-type: none"> • Coordinating & Monitoring body for DM • Prepare National plan • Coordinate & Monitor implementation of national plan • Lay down policies • Approve plan (nation &deptt) • Lay down guidelines • Recommend provision of funds
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<p>Section 11 – NDMP</p> <ul style="list-style-type: none"> • Measures for Prevention, & mitigation of disaster • Integration of mitigation measures into devpprogrammes • Measures for preparedness & CB • Roles & responsibilities of Deptt& ministries • Financing measures 	<p>Section 12 : Minimum Standard of Relief</p> <ul style="list-style-type: none"> • Minimum requirements • Special provisions for destitute • Ex-gratia assistance on account of loss of life or damage of property& restoration of livelihoods.
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(Please refer Figure__of Volume –II (Page no.) for Central Government Notification on constitution of NEC)

4.3 State Disaster Management Authority (SDMA)

The OdishaState Disaster Management Authorities (SDMA) has to be constituted by every state government under the sub-section (1) & (2) of section 14 of Disaster Management Act 2005. The Hon’ble Chief Ministers of the state are the Chairpersons (ex-officio) of SDMA and other members not exceeding than eight may be nominated by the Chairpersons. The Chairman of the State Executive Committee (SEC), Chief Secretary of the State is a member and Chief Executive Officer (ex-officio) of SDMA.

The State Disaster Management Authority shall:-

Lays down policies and plans for disaster management in the State.

- Approves the State Plan in accordance with the guidelines laid down by the NDMA, Coordinates the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures.
- Review the developmental plans of different departments of the State to ensure the integration of prevention, preparedness and mitigation measures.
- Lay down guidelines to be followed by the departments of the State Government for the purpose of integration of measures for prevention of disasters and mitigation in their development plans and projects and provide necessary technical assistance there for.
- Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government & issue such guidelines as may be necessary.

- Lay down detailed guidelines for providing standards of relief (Not less than the minimum standard of relief in the guidelines of NDMA) to persons affected by disaster in the State.

4.4 State Executive Committee (SEC)

The State Executive Committee (SEC) has been constituted by the State Governments under sub-section (1) & (2) of section (20) to assist the State Disaster Management Authority (SDMA) in the performance of its function and to coordinate action in accordance with the guidelines laid down by the SDMA and ensure the compliances of directions issued by the State Government under the DM act. The Chief Secretaries of the States are the Chairman of SEC (ex-officio). Four Secretaries of State Government are the other member's ex-officio. The Chairperson of SEC use powers delegated by SDMAs and state Governments.

The State Executive Committee shall-:

Coordinate and monitor the implementation of the National Policy, National Plan and State Plan.

Examine the vulnerability of different parts of the State to different forms of disaster and specify measures to be taken for their prevention and mitigation.

Lay down guidelines for preparation of disaster management plans by the departments of the Government of the State and the District authorities and monitor the implementation of the plans.

Evaluate preparedness at all government and non-government levels to respond to any threatening disaster situation or disaster and give all directions where necessary for enhancing such preparedness.

State Disaster Management Authority

Section 14 to 24

<p>Constitution (Sec 3 & 4)</p> <ul style="list-style-type: none"> • Chairperson : CM (Ex officio) • Other eight members (Nominated by Chair person) • Vice Chairperson (CEO) (Nominated by Chair person) 	<p>Function (Sec 6)</p> <ul style="list-style-type: none"> • Lay down policies • Approve plan (State & deptt. & Dist) • Lay down guidelines • Recommend provision of funds • Coordinate the imp of State plan • Review the devp. Plans <p>State Executive Committee</p>
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Section 20 to 24

<p>Constitution (sec 20 & 21)</p> <ul style="list-style-type: none"> • Chairperson: Chief Secy. –Govt. • Other members • Four Secy. to Govt. (All Ex officio) 	<p>Functions (Sec 22)</p> <ul style="list-style-type: none"> • Prepare state plan • Coordinate & Monitor implementation of national plan • Lay down policies, guidelines • Evaluate preparedness at all level
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<ul style="list-style-type: none"> • Can constitute one or more subcommittees 	<ul style="list-style-type: none"> • Coordinate response • Give direction in the matter of Disaster Management
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<p>Section 23 – SDMP</p> <ul style="list-style-type: none"> • Vulnerability profile • Measures for Prevention, & mitigation of disaster • Integration of mitigation measures into devp. programme • Measures for preparedness & CB • Roles & responsibilities of Deptt& ministries • Financing measures 	<p>Section 12 : Minimum Standard of Relief</p> <ul style="list-style-type: none"> • Control vehicular traffic • Search & rescue operations • Provide shelter, food, drinking water, & other minimum requirements • Special provisions for destitute • Ex-gratia assistance on account of loss of life or damage of property& restoration of livelihoods
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(Please refer Figure__of Volume –II (Page no. _)for Odisha Government Notification on reconstitution of SDMA)

4.4 State Executive Committee (SEC)

The State Executive Committee (SEC) has been constituted by the State Governments under sub-section (1) & (2) of section (20) to assist the State Disaster Management Authority (SDMA) in the performance of its function and to coordinate action in accordance with the guidelines laid down by the SDMA and ensure the compliances of directions issued by the State Government under the DM act. The Chief Secretaries of the States are the Chairman of SEC (ex-officio). Four Secretaries of State Government are the other member’s ex-officio. The Chairperson of SEC use powers delegated by SDMAs and state Governments.

The State Executive Committee shall:-

- a) Coordinate and monitor the implementation of the National Policy, National Plan and State Plan.
- b) Examine the vulnerability of different parts of the State to different forms of disaster and specify measures to be taken for their prevention and mitigation.
- c) Lay down guidelines for preparation of disaster management plans by the departments of the Government of the State and the District authorities and monitor the implementation of the plans.
- d) Evaluate preparedness at all government and non-government levels to respond to any threatening disaster situation or disaster and give all directions where necessary for enhancing such preparedness.

*(Please refer Figure__of Volume –
II (Page no._) for Odisha Government Notification on constitution of SEC)*

4.5 Revenue and Disaster Management Department:

The Revenue and Disaster Management Department is responsible for providing immediate relief to the people affected by various calamities like floods, droughts, cyclones, hailstorms, earthquakes, fire accidents, etc. It also takes initiatives for relief, rescue, rehabilitation and restoration work. The Department is headed by the Principal Secretary/Addl. Chief Secretary, Revenue and Disaster Management Department who exercises all administrative and financial powers.

4.6 Special Relief Organization:

The Special Relief Organisation was established under the Board of Revenue in 1965-66 for carrying out relief and rescue operation during and after various disasters. Since its inception, the scope of Relief Organisation has been diversified. Now it deals with disaster management i.e. response, relief and rehabilitation. It coordinates with districts/departments for quick relief and rescue operation, reconstruction and rehabilitation work. It also promotes disaster preparedness at all levels in the State with the assistance of Odisha State Disaster Management Authority (OSDMA). Quick response in the natural calamities is the hall-mark of Special Relief Organisation.

4.7 Odisha State Disaster Management Authority (OSDMA):

Odisha State Disaster Mitigation Authority (OSDMA) was established by the Government of Odisha as an autonomous organization vides Finance Department Resolution No. IFC- 74/99-51779/F dated the 28th December 1999 (in the intermediate aftermath of the Super-cyclone in 1999). It was registered under the Societies Registration Act, 1860 on 29.12.1999 as a non-profit making & charitable institution for the interest of the people of Odisha, with its headquarters at Bhubaneswar and jurisdiction over the whole State.

The Authority has the mandate not only to take up the mitigation activities but also the relief, restoration, reconstruction and other measures. These activities cover the entire gamut of disaster management including preparedness activities and also include:

- Coordination with the line departments involved in reconstruction,
- Coordination with bilateral and multi-lateral aid agencies,
- Coordination with UN Agencies, International, National and State-level NGOs,
- Networking with similar and relevant organizations for disaster management.

4.8 State Level Committee on Natural Calamity (SLCNC)

A State Level Committee on Natural Calamity (SLCNC) has been constituted under the Chairmanship of the Hon'ble Chief Minister to oversee disaster preparedness and response activities.

The Function of the SLCNC is :-

- a) To advise the State Government regarding precautionary measures to be taken in respect of flood, drought and other natural calamities.
- b) To assess the situations arising out of the calamities.
- c) To recommend to Government the nature and quantum of relief; and
- d) To recommend to Government the Policy to be adopted in giving such relief in areas affected by such calamities.

(Please refer Figure__of Volume –II (Page no.__)for Odisha Government Notification on reconstitution of SLCNC)

4.9 District Disaster Management Authority (DDMA)

Under the sub-section (1) of section 14 of DM act 2005. District Disaster Management Authority has been constituted by the State Government.

The District Disaster Management Authority (DDMA) consists of the Chairperson and such number of the other members, not exceeding seven, as may be prescribed by the State Government, and unless the rules otherwise provide, it shall consist of the following namely:-

- a) The Collector or District Magistrate or Deputy Commissioner of the District is the Chairperson (*ex-officio*) of DDMA.
- b) The elected representative of local authority is the Co-chairperson (*ex-officio*) of DDMA.

Provided that in the Tribal Areas, as referred to in the Sixth Schedule to the Constitutions, the Chief Executive Member of the district council of autonomous district, shall be the co-Chairperson, *ex officio*

- c) The Chief Executive of the District Authority ,*ex officio*;
- d) The Superintendent of Police, *ex officio*;
- e) The Chief Medical Officer of the district, *ex officio*;
- f) Not exceeding two other district level officers, to be appointed by the State Government

The State Government appoints an officer not below the rank of Additional Collector or Additional District Magistrate or Additional Deputy Commissioner, as the case may be of the District to be Chief Executive Officer of DDMA.

(Please refer Figure ___ of Volume –II (Page no. _) for Odisha Government Notification on constitution of DDMA)

4.7 District Disaster Management Authority (DDMA)

Under the sub-section (1) of section 14 of DM act 2005. District Disaster Management Authority has been constituted by the State Government.

Table 35- Structure of District Disaster Management Authority

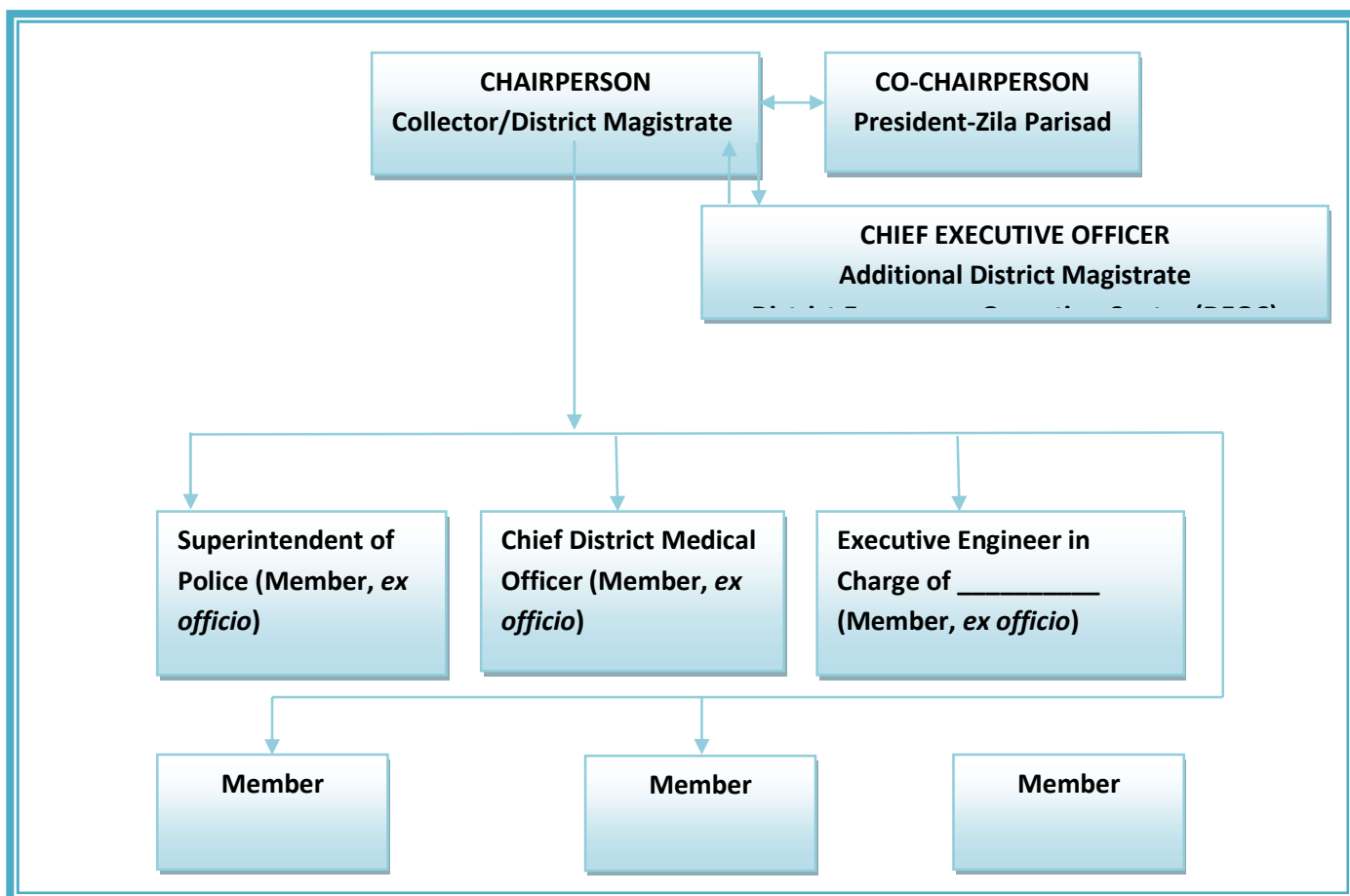
Structure of District Disaster Management Authority

Table – 4.1:

Sl No.	Name of the Officer	Designation	Position in DDMA	Contact No.
01	Mr.AshsisThakre (IAS)Collector and District Magistrate	Collector & District Magistrate	Chairperson, EX-Officio	87630-90000
02	Mrs. Sagarika Sahoo	Chairman, Zilla Parishad	Co-Chairperson, Ex-Officio	9861138383
03	Mr.MitrabhanuMahaptra(IPS) Superitendentof Police	Superintendent of Police	Member, EX-Officio	9437052115
04	Sri BishnuPrasadaAcharaya	Project Director, DRDA	Member	9777142555
05	Mrs.SushamaBilung OAS(S)	Additional District Magistrate	Chief Executive Officer, EX-Officio	9437172548
06	Dr Kishore Kumar Prusty	Chief District Medical Officer& public Health Officer	Member, EX-Officio	94399-87004
07	Pranav Nayak	Executive Engineer, Irrigation,	Member, EX-Officio	
08	Binod Bihari Das	Executive Engineer, Rural Works	Member	9437255361
09	Ramakrushna Panda	CDAO	Member	8895000389

(Note: The above table should be District Specific)

Figure__ : Organogram of District Disaster Management Authority



specific organogram to be incorporated in every DDMP

(Note: The above organogram of DDMA is an example; the organogram may be district specific, the District specific organogram may be incorporated)

The DDMA acts as the district planning; coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in the district in accordance with the guidelines laid down by the NDMA and SDMA.

The District Disaster Management Authority (DDMA) shall:-

- a) Prepare Disaster Management Plan including District Response Plan of the District.
- b) Coordinate and Monitor the implementation of the National DM Policy, State DM Policy, State DM Plan and District DM Plan.
- c) Ensure that vulnerable areas of the districts are identified and prevention and mitigation measures are being undertaken by the departments of the Government both at district level and at local level.
- d) Ensure that guidelines for Prevention and Mitigation measures, Preparedness and Response as lay down by NDMA and SDMA are being followed by all departments of Government both at district and local level.

- e) Monitor the implementation of Disaster Management Plans prepared by the departments of the Government at the district levels.
- f) Lay down guidelines to be followed by different Government departments both at district level and local level for integrating disaster prevention and mitigation measures in their development plans and projects and provides necessary technical assistance therefor;
- g) Review the state of capability for responding to any disaster or threatening disaster like situation in the district and give directions to the relevant departments or authorities at the district level for their up gradation.
- h) Review the preparedness measures and give directions to the concerned departments at the district level for bringing the preparedness measures to the levels required for responding effectively to any disaster.
- i) Organize, coordinate and facilitate specialized training programmes and awareness programmes for different level of officers, employees, voluntary rescue workers and community members for prevention and mitigation of disaster with support of governmental and non-governmental organization and local authorities.
- j) Set up, maintain, review and upgrade mechanism for early warning and dissemination of proper information to public.
- k) Review development plans prepared by the departments of the government at the district level, statutory authorities with a view to make necessary provisions therein for prevention of disaster or mitigation.
- l) Examine construction in any area in the district an ensure standards for prevention of disaster or mitigation laid down for such construction to be followed by the concerned departments and authorities.
- m) Identify buildings and places which could be used as relief centers or camps in the event of any disaster or disaster like situation and make arrangements for water supply and sanitation in such buildings and places.
- n) Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at short notice;
- o) Encourage the involvement of Non Government Organization and Voluntary social –welfare institutions working at the grass root level in the district for disaster management.
- p) Ensure communication systems are in order and disaster management drills are carried out periodically.
- q) Perform such other functions as the State Government or State Authority may assign to.

Section 25 to 35

Constitution(Sec 25 & 29)	Function (Sec 6)
<ul style="list-style-type: none"> • Chairperson : District collector (Ex officio) • Co Chairperson: ZP 	<ul style="list-style-type: none"> • Prepare DDMP & DDRP • Coordinate the imp of Nation /State/Deptt. plan

<ul style="list-style-type: none"> • Other Seven members (Nominated by Chair person) • SP • CEO • CDMO <p>Two other Dist. Officer</p>	<ul style="list-style-type: none"> • Ensure implementation of policies & guidelines laid down by nation & state • Give direction to sub dist& local authorities for DM
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Specific task assigned to members of DDMA by the Chairperson

Member 1: The DDMA will act as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will, inter alia prepare the District DM plan for the District and monitor the implementation of the National Policy, the State Policy, the National Plan, the State Plan and the District Plan.

Member 2: The DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures lay down by the NDMA and the SDMA are followed by all the Departments of the State Government at the District level and the local authorities in the District.

Member 3: The DDMA will also ensure that the guidelines for prevention of disasters, mitigation of its effects, preparedness and response measures as laid down by the National Authority and the State Authority are followed by all departments, lay down guidelines for prevention of disaster management plans by the department of the Government at the districts level and local authorities in the district

Member 4: The DDMA will also monitor the implementation of disaster management plans prepared by the Departments of the Government at the district level. The DDMA will also ensure lay down guidelines to be followed by the Departments of the Government at the district level for purposes of integration of measures for prevention of disasters and mitigation in their development plans and projects and monitor the implementation of the same.

Member 5: The DDMA will review the state of capabilities and preparedness level for responding to any disaster or threatening disaster situation at the district level and take steps for their up gradation as may be necessary. The DDMA will organise and coordinate specialised training programmes for different levels of officers, employees and voluntary rescue workers in the district, facilitate community training and awareness programmes for prevention of disaster or mitigation with

the support of local authorities, governmental and non-governmental organisations, set up, maintain.

Member 6: The DDMA will further identify buildings and places which could, in the event of any threatening disaster situation or disaster, be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places, establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice. The DDMA will encourage the involvement of non-governmental organisations and voluntary social-welfare institutions working at the grassroots level in the district for disaster management ensure communication systems are in order, and disaster management drills are carried out periodically

4.10 District Level Committee on Natural Calamity (DLCNC)

The Codal provision of Odisha Relief Code envisages the constitutions of District Level Committee on Natural Calamity (DLCNC) which is the apex committee at the district to monitor preparedness and suggests improvement in the response mechanism and finalizes the district disaster management plans. The members of DLCNC are as follows:

Table 36: Structure of District Level Committee on Natural Calamity

Sl No	Name of the Member	Designation	Contact No.
1	Miss Chandranimurmu	Hon'ble MP,Keonjhar	8480712480
2	Sri Badri Narayan Patra	Hon'ble MLA,Ghasipura	8455819666
3	Sj Bhagirathi Sethi	Hon'ble MLA,Anandapur	9437200481
4	Sj Mohan Charan Majhi	Hon'ble MLA,Sadar	9437008254
5	SmtMinakshiMohanta	Hon'ble MLA, Champua	9438052213
6	Sj.Jagannath Naik	Hon'ble MLA,Patna	7008799298/ 9938844020
7	SjPremananda Naik	Hon'ble MLA,Telkoi	8908942272
8	Mr. Ashish Thakre, I.A.S,	District Magistrate,Keonjhar	8763090000
9	Mr. Pratap Pritimaya	Sub-Collector, Champua	9437250473
10	Sri Rama ch.Kisku, OAS(I) S.B	Sub-Collector, Keonjhar	99371-70271
11	Sj.Saroj Kumar Datta	Sub-Collector, Anandapur	9438166647

	(OAS -1(SB)		
12	Dr. Kishore Kumar Prusty	C.D.M.O,& P.H ,Keonjhar	9439987004
13		C.D.V.O, Keonjhar	
14	Mrs. Suranjika Behera	Dy. Collector Emergency, Keonjhar	8895214073

Role of DLNCC: District Level Natural Calamities Committee on used to sit once in a year to review the preparedness activities taken up at different level by different line departments under the chairmanship of the Collector and District Magistrate. In the DLNCC forum different departments used to present their preparedness level, status of stock, alertness at grass root level, planning and the required budget to face any sort of natural exigencies. All the members present used to raise area specific issues or gaps if any in the house so that adequate attention could be given to those issues.

The usual agenda for the DLCNC meeting is:

- Preparation of flood contingency plan of all line Departments.
- Control Room functioning
- Rain Recording and timely reporting
- Joint verification of weak embankments and repairing of the same
- Identification of cyclone and flood shelters
- Deployment of boats at different vulnerable places
- Functioning of telephone lines
- Cleaning of drainage to avoid water logging
- Stock piling of medicines and dry foods inaccessible pockets
- Steps taken in flood areas for agriculture
- Health measures
- Veterinary measures
- Deputation of higher officials at the flood circles
- Coordination among the offices
- Cooperation of NGOs
- Deployment of NDRF / ODRAF Teams

1.11 (Any other existing committees for Disaster Management at District/Block/Panchayat and Village level may be incorporated in tables.)

District Crisis Group:

In accordance with Rule – 8 of Chemical Accidents (Emergency Planning, Preparedness and Response) Rule 1996, the District Crisis Group (DCG) has been formed in district. The District Crisis Group is the apex body in the district to deal with measures to prevent Chemical Accidents.

The members of DCG are given below:

Sl No.	Members	Position
1	Collector, Keonjhar	Chairperson
2	Assistance Director of Factories and Boilers, BBSR Zone-II	Member Secretary
3	District Emergency Officer, Keonjhar	Member
4	District Fire Officer, Keonjhar /Deputy Fire Officer, Keonjhar	Member
5	District Information and Public Relation Officer, Keonjhar	Member
6	Civil Defence	Member
7	Controller of Explosives	Member
8	Deputy Superintendent of Police, Keonjhar	Member
9	Commandant National Disaster Response Force	Member
10	Chief District Medical Officer, Keonjhar	Member
11	Executive Officer, KeonjharMunicipality	Member
12	Executive Officer, AnandapurMunicipality	Member
13	Executive Engineer, (RWSS),Keonjhar	Member
14	District Pollution Control – Keonjhar	Member
15	District Agriculture Officer, Keonjhar	Member
16	Representative of Oil Industry Safety Directorate	Member
17	Director of Factories and Boilers, Odisha	Member
18	Secretary, National Safety Council Odisha Chapter	Member
20	Regional Transport Officer,	Member
21	All Sub-Collector of Keonjhar (Chairperson local Crisis Group)	Member
22	District Civil Supply Officer, Keonjhar	Member

Role & Responsibility:

- Responsible to provide guidance for handling the Chemical Accidents.
- Prepare and update the Dist. Off-Site Emergency Plan
- Review all the on-site Emergency plans prepared by MAH installations for the preparation of the District off-site Plan.

- Assist the District Administration in the management of Chemical accidents.
- Monitor every chemical accident.
- Ensure continuous information flow from the Dist. to State and Central Crisis Group regarding accident situation and mitigation efforts as and when required.
- Forward report of the Chemical accident within 15 days to the SCG.
- Conduct at least one full scale mock drill of a chemical accident as a site each year and forward a report on the strength and weakness of the plan to the SCG.
- Educate the population likely to be affected in a chemical accident about the remedies and existing preparedness on the subject. Respond to all the public enquires on the subject

4.12 National Disaster Response Force (NDRF)

The Disaster Management Act 2005 has made the statutory provisions for the constitution of the National Disaster Response Force (NDRF) for the purpose of specialized response to natural and man-made disasters. The NDRF comprises of 12 units of Central Paramilitary Forces (CPMF) that includes 3 units each from Central Reserve Police Forces (CRPF) and Boarder Security Forces (BSF) and 2 Unit each from Central Industrial Security Forces (CISF), Indian Tippet Boarder Police (ITBP) and Sahastra Seema Bal (SSB). Each battalion has 18 self-contained specialists Search and Rescue teams of 45 personnel. The NDRF team includes Chemical, Biological and Radiological Disaster (CBRN) emergency responders, S&A element, engineers, technicians, electricians, dog squads and paramedics. The NDRF battalions are strategically located at 8 different locations in the country based on the vulnerability profile to cut down response time for their deployment. During the threatening proactive deployment of NDRF is being carried out by NDMA in consultation with the State Governments.

4.13 Odisha Disaster Rapid Action Force (ODRAF)

The Government of Odisha formed Odisha Disaster Rapid Action Force (ODRAF) vide notification no.939/CD dated 07.06.2001. ODRAF is a multi-disciplinary, multi-skilled, high-tech force for all types of disasters. ODRAF aims at reducing casualties, clearance of communication channels, quick deployment of personnel and equipments and minimize expenditure and time lag and support institutional arrangement. In 3 phases, ten units of ODRAF have been set up. The ODRAF units are strategically located throughout Orissa. Locations of these units are identified on the basis of vulnerability profile to cut down the response time for their deployment. The ODRAF Units do not have any geographical /territorial restrictions in terms of area of operation.

10 new units of ODRAF have been set up at different locations like Sambalur, Boudh, Kalahandi, Nawarangpur, Gajapati, Berhampur, Puri, Khorda, Kendrapada and Jajpur

Table __: Location of Odisha Disaster Rapid Action Force with contact details

Sl. No	ODRAF Bn.	Raised in the Year	Location (District)	No. of Persons in each BN.	Contact Details (Commandant)
--------	-----------	--------------------	---------------------	----------------------------	------------------------------

1	OSAP 6th Battalion, Cuttack	2001-2002	Cuttack	49	Phone:0671-2442148 (O), 2442442 (R) Fax: 0671- 2442148 comdt6thbn.odpol@nic.in
2	OSAP 2nd Battalion, Jharsuguda	2001-2002	Jharsuguda	48	Phone: 06645-270096 (O),270038 (R) Fax: 06654 -220370 comdt2ndbn.odpol@nic.in
3	OSAP 3rd Bn. Koraput	2001-2002	Koraput	38	Phone: 06852-251344 (O), 151335(R) Fax: 06852- 251344 comdt3rdbn.odpol@nic.in
4	APR Balasore District	2003-2004	Balasore	41	Phone: 06782-262004 (O), 262005 (R) Fax: 06782 -262584 spbls.odpol@nic.in
5	OSAP 8th Battalion, Chhatrapur	2003-2004	Ganjam	40	Phone: 06811-260375 (O) Fax: 06811 -254011 comdt8thbn.odpol@nic.in
6	APR Jagatsinghpur District	2008-2009	Jagatsinghpur	48	Phone: 06724-220115 (O),220015 (R),Fax: 06724-220370,spjss.odpol@nic.in
7	OSAP 7th Battalion, Bhubaneswar	2008-2009	Khurdha	44	Phone: 0674-2301055 (O),2303426 (R),Fax: 0674 -2301055 comdt7thbn.odpol@nic.in
8	OSAP 5th Battalion, Baripada	2008-2009	Mayurbhanj	40	Phone: 06792-278232 (O),254402 (R) Fax: 06792- 278232 comdt5thbn.odpol@nic.in
9	APR Bolangir District	2008-2009	Balangir	43	Phone: 06652-232020 (O) - 133063 (R) Fax: 06652- 232375 spbgr.odpol@nic.in
10	OSAP 4th Battalion, Rourkela	2008-2009	Sundergarh	46	Pho : 0661 -2600980 (O),- 2600434 (R) Fax: 0661 -2600980 comdt4thbn.odpol@nic.in
11	IR Battalion, Boudh	2015-2016	Boudh	47	Phone: 06841-222238 7684872156 (M) 9437232275 (M) comdt5thirbn.odpol@nic.in
12	4th IR Battalion, Deogarh	2015-2016	Deogarh	52	Phone: 0664-3242130 (O),comdt4thirbn.odpol@nic.in

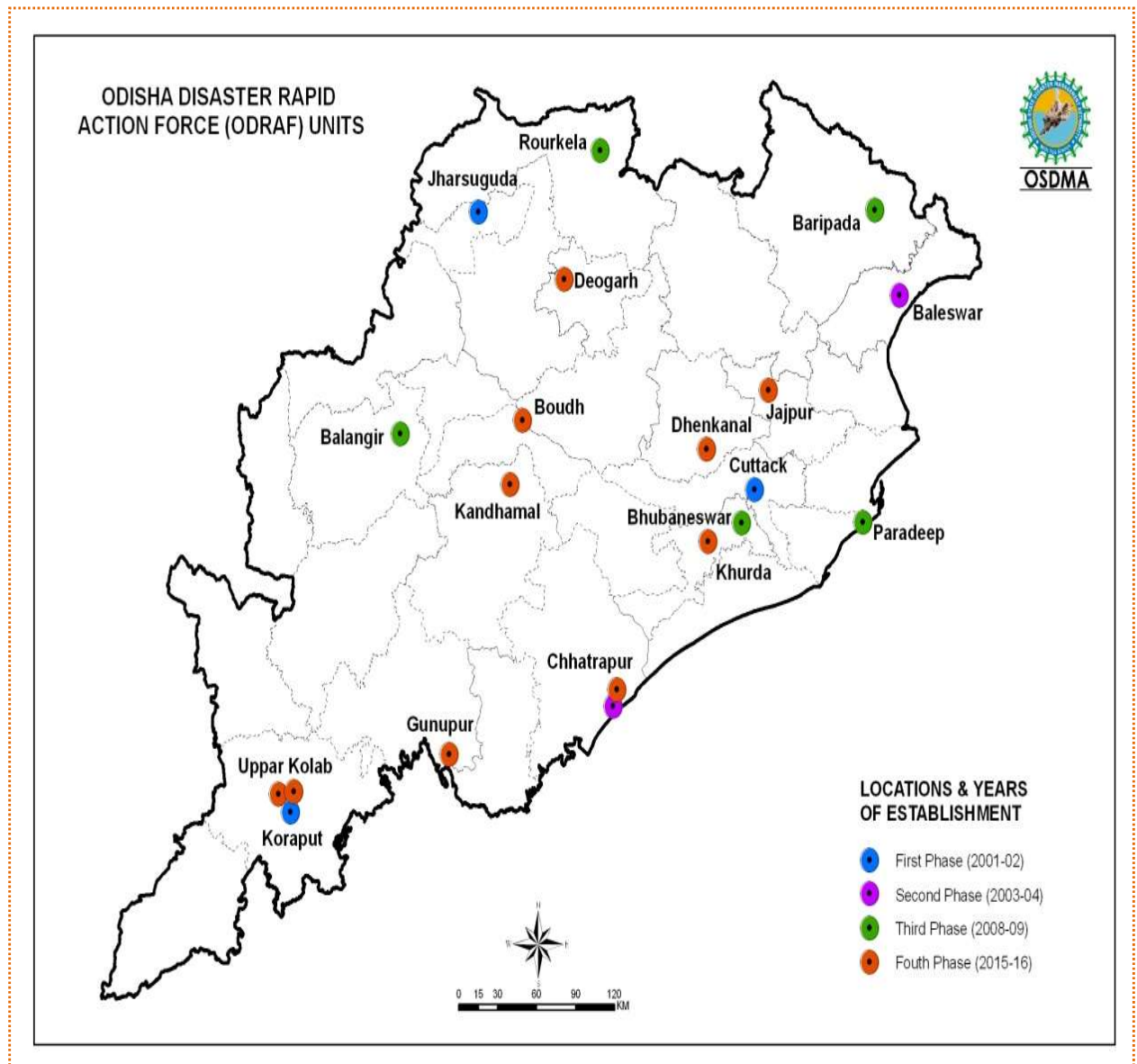
13	OSAP 1st Battalion, Dhenkanal	2015-2016	Dhenkanal	46	Phone: 06762- 226229 (O) 06762- 226291 (CR) Fax: 06762-226291 comdt1stbn.odpol@nic.in
14	OSAP 8th Battalion, Chhatrapur	2015-2016	Ganjam	48	Phone: 06811-260375 (O) Fax: 06811- 254011 comdt8thbn.odpol@nic.in
15	3rd IR Battalion, Kalinganagar	2015-2016	Jajpur	49	Phone: 0672-6244602 (O)0672- 6244610 (CR) Fax: 0672- 6244610 comdt3rdirbn.odpol@nic.in
16	8th Special IR Battalion, Kandhamal	2015-2016	Kandhamal	43	Phone: 06842-2533017 (O),8763616282 (M) comdt8thsplirbn.odpol@nic.in
17	6th IR Battalion, Khurda	2015-2016	Khurdha	50	8895856633 (M) comdt6thirbn.odpol@nic.in
18	1st IR Battalion, Upper Kolab, Koraput	2015-2016	Koraput	43	Phone: 06852-252167 (O) 06852-211320 (CR) comdt1stirbn.odpol@nic.in
19	7th Special IR Battalion, Upper Kolab, Koraput	2015-2016	Koraput	44	Phone: 06852-251067(O): 06852-229007 (CR) comdt7thsplirbn.odpol@nic.in
20	2nd IR Battalion, Rayagada, Gunupur	2015-2016	Rayagada	48	Phone: 0658-725110 (O),Fax: 0685- 725110 (CR),comdt2ndirbn.odpol@nic.in

Unit wise ODRAF Team – Contact Numbers

Sl No.	Place	Personnel drawn from	Name of the Commandant	Contact No.	Name of Subedar	Contact No.
1	Cuttack	OSAP6 th Bn, Cuttack	Mr.LingarajParida	9861039267 0671- 2442148	MahatangHansda	9439457443
2	Jharsuguda	OSAP2 nd Bn, Jharsuguda	Mr Mohammed Zahid	9437176264	Sri.Kul Bahadur Thapa	9658630354
3	Koraput	OSAP3 rd Bn, Koraput	Sri. Subash Chandra Nayak, OAPS-(I)	9437250194	Sri. Ramesha Chandra Hati	9938406905
4	Chatrapur	OSAP8 th Bn, Chatrapur	B.N Mishra	9437087055	CR. Bisoe	8280033508
5	Balasore	Armed Police Reserve (APR), Balasore district	Sri Nitin Sekhar	9438153309	P.K Ranasingh	9439379619
6	Bhubaneswar	OSAP7 th Bn, Bhubaneswar	Sri Biren Ku. Samal	9437081266	D.K dehury	9437185548
7	Baripada	OSAP 5 th Bn,Baripada	Abinashkumar IPS	9438153308	Niranjan Samal	9437442537

8	Rourkela	OSAP4 th Bn, Rourkela	Khageswar Goud	9437358292	Ashok Behera	9437419436
9	Balangir	Armed Police Reserve (APR), Balangir district	Ashish Kumar Singh, IPS	8895046814	M Laxmiranjan	9439268154
10	Jagatsinghpur at Paradeep	Armed Police Reserve (APR),Jagatsinghpur district	Sri J.N Pankaj	9437102020	P.K Routray	9438436188

Figure 01: Location of ODRAF Units



Other Disaster Response Teams in the District

Table 39: List of other Disaster Response Teams in the District

Sl. No.	Name of the Institutions	Name of the Chief Coordinator of the Organization	Designation	Contact Number	Alternate Contact Number	Number of Volunteers
1	Civil Defense/ Fire	Mr. AAchraya	DR			20
2	Home Guards	Kalichanran Behera	Asst Commandt	9178838363	06766-285306	470
3	National Service Scheme (NSS)	Is not available in the district				
4	National Cadet Crops (NCC)	Mr. Joseph Antony	Coomanding Officer	06766-158120		39
5	Nehru Yuva Kendra (NYK)	Mr.Anshuman Dash	DC	06766258464		60
6	Red Cross	Mr. AR Khan	DR	9437086122		
7	NGOs	Dharitri Rout, Wosca	MD	06766-253490 9437055864		70

4.15 Emergency Communication System:

The district machinery used to follow the following methodology to communicate the down line.

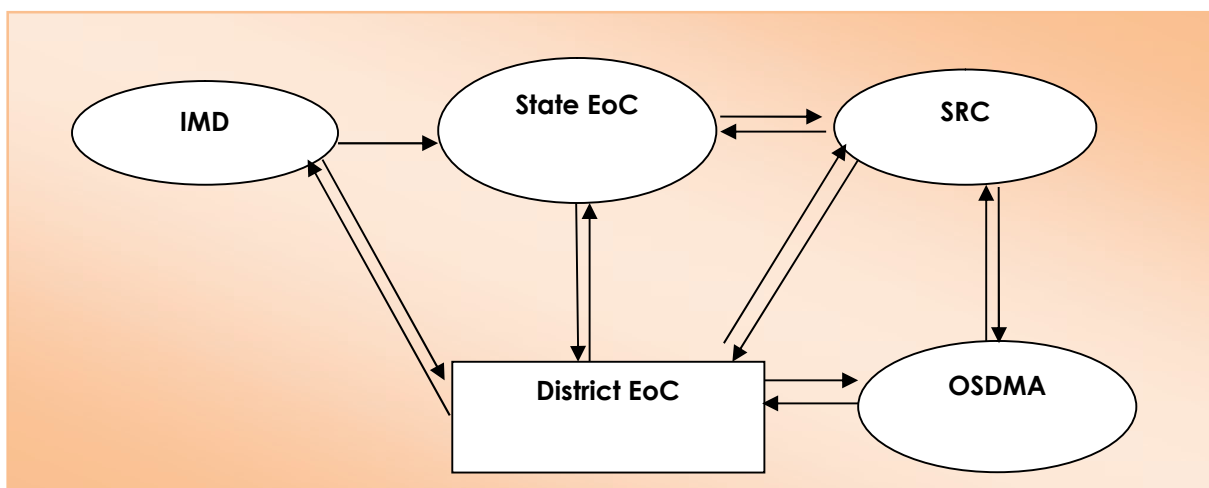
- SRC / IMD provide the warning message to the District Administration / DEOC from the SEOC.
- DEOC immediately pass it to the all line departments / BDOs / Tahasildars via cell phone, email or incase required through police VHF message.
- BDOs / Tahasildars used to disseminate the message through their local channel such as VLWs, VAWs, RIs, PRIs etc.
- Sometimes Public address System used to reach the last mile i.e. community at risk.
- Local News channels also used to disseminate the warning depending upon its gravity of the calamity.

4.15.1 State Emergency Operation Center (SEOC)

The State Emergency Operation Centre has been made operational at Rajiv Bhawan, Bhubaneswar with state of art communication net-work. The State EOC functions round the clock throughout the year. The Organisation is headed by the Special Relief Commissioner (SRC) who exercises all administrative and financial powers. He is assisted by a group of experienced

officers and staff. During any natural disaster, the office functions round the clock in an emergency mode.

Figure __: Information flow chart from SEOC to Districts



4.15.2 District Emergency Operation Centers (DEOC)

STANDARD OPERATING PROCEDURE (SOP) OF DEOC

DISTRICT EMERGENCY OPERATION CENTER (DEOC), Keonjhar

TEL: 06766- 255437 Fax- 06766-256911

Email id: deockeonjhar508@gmail.com, sddma.keonjhar@gmail.com

LOCATION: Collectorate –Keonjhar

The primary functions of DEOC are:

- Coordination – Establish better coordination and relation with all the line departments and organization for the effective management of the disaster in the district.
- Analytical decision making – Take lead decision which should be rational and logical for the district pertain to the disaster management
- Policy-making – Lobby and persuade with district administration for the policy making which should be favorable and effective for the district with regard to disaster management.

- Operations management – Total operation management in the district during the emergency and post emergency situation so that any onward situation could be avoided.
- Information gathering and record keeping- regular collection of information and its proper dissemination to the field
- Reporting to higher quarter- On a periodically and daily basis report to the higher officer to apprise the field situation
- Resource management- proper resource management as per the rules of the government

PRE-DISASTER

Officer in charge of DEOC:

The first most critical component of an EOC is the individuals who staff it. They must be properly trained, and have the proper authority to carry out actions that are necessary to respond to the disaster. They also must be capable of thinking outside the box, and creating a lot of "what if" scenarios. The local DEOC's function during an emergency is to support the incident commander.

The second most critical component of an EOC is its communications system. This can be from simple word of mouth, to sophisticated encrypted communications networks, but it must provide for a redundant path to ensure that both situational awareness information and strategic orders can pass into and out of the facility without interruption. For continuity of operations considerations, backbone components of the communications system are not normally located at the DEOC. A number of EOC facilities are incorporating radio over IP technology to provide a coherent assembly of various radios, interoperability with various radio technologies, and integration with telephone systems. The DEOC shall be in overall charge of Collector & District Magistrate. In the absence of Collector in the district the ADM, PD, DRDA, Keonjhar will be in-charge and Assistant Collector; Emergency shall be the focal point for the DEOC. The officer in charge of District Emergency Operation Center (DEOC) shall be personally responsible for implementing the SOP. S/he shall take all decisions as outlined below and sign for the Collector on all reports mentioned below. S/he shall not wait for orders from anybody. The existing staffing pattern of the DEOC:

Serila No	Name	Designation	Contact number
01	Mrs. Suranjika Behera	Emergency Officer DEOC –Keonjhar	8895214073
02	Mr. Mahendrakumar Swain	DPO –OSDMA DEOC –Keonjhar	9438115903
03	MrDaya Sethi	Head Clerk – DEOC	9438388896
04	MrSkSahanawaz	Senior Revenue Ast, DEOC	9438244190
05	Miss SatyabatiLaguri	Senior Revenue Ast, DEOC	8018418491

06	Mr. Manash Ranjan Jena	Junior Revenue Ast – DEOC	9658138189
07	Mr. Ajaya Kumar Sethy	Junior Revenue Ast – DEOC	9776577256
08	Mr. Sandeep Ku Pattanayak	DEO-DEOC ,Keonjhar	9439677999
09	Mr. JayadevTamulia	Peon	7894970324

Role of DEOC During disaster:

1. Dry food, fuel storage at that block headquarters, with storage agents and other inaccessible pockets will be carried out by CSO, Keonjhar and report compliance to the Chairman, DDMA. The food stuff placed in different inaccessible pockets should be done in consultation with BDOs concern.
2. Health sector: CDMO will take stock of the following items through Health Emergency Operation Center.
 - 2.1. Medicines, bleaching powder, and halogen/chlorine tablets.
 - 2.2. Movement of medicines, bleaching powder, etc. to PHCs/CHCs if not done early.
3. Ensure Medical officers are in place at the PHCs and CHCs throuAssembly in District EOC: Following staff and officers shall assemble in the DEOC on getting any information from any reliable source about any upcoming emergency / urgency. Apart from this, any other officer or staffs who get the information from any source will reach the DEOC. Control Room duty staff must be present during the duty period.
 - 3.1. Collector, ADMs, PD, DRDA, Sub-Collector, Keonjhar , DSWO, DSSO, DCPO, CDMO / AMDO (PH), DEO, CSO, DIPRO, District Education Officer, DPC, SSA and ARTO.
 - 3.2. All staffs of Emergency Section.
4. Getting the DEOC ready: DEOC need to be kept in readiness from all aspects during normal period and the following preparatory steps needs to be taken up for keeping the DEOC functional during emergency.
 - Telephone & Internet Connections
 - Electrical Installations
 - Gensets / inverters for Back Up Power Supply
 - District Disaster Management Plan (DDMP)
 - Communication Equipments like Satellite phone, cell phones
 - Information and allied equipments
 - Warning Procedures Check List.
 - Different reporting formats
5. Alert message to be given to field officers like BDOs, Tahasildars, MOs, VAS, Police, Fire stations, Industries, Telephone, Agriculture, RWSS, RD, R&B, DSWO / ICDS, Irrigation, CESU, , National Highways, PHD, Municipality / ULBs , DEO, Station Director, All India Radio, through VHF / Telephone / e-mail / if required local print and electronic media shall be used.

- 5.1. Civil Supplies Officer (CSO) shall ensure availability of food stuff (Rgh police stations, blocks and Tahasildars).
- 5.2. CDMO shall decide the locations of camps.
6. District Social Welfare Officer (DSWO) to ensure that all CDPOs shall be teamed up with the MO of PHC / CHC with their vehicles and supervisors.
7. District Social Security Officer (DSSO) to ensure that all PWDs under his/her jurisdiction will be shifted to safe shelters.
8. Veterinary measures: CDVO will take stock of Cattle feeds and will contact immediately to MD, OMFED after verifying the stocks within the district.
9. Boats: Requisition of boats within district through the Tahasildar Chilika and Tangi along with the Asst. Engineer, IWT, Balugaon.
10. Make a thorough assessment of relief items available in stock at different places.
11. Functional distribution of work: Following functional distribution of works shall be done. Each team will have staff and resources. The team leader will have full powers to take decisions
 - 11.1. Transportation team
 - 11.2. Stock and store team
 - 11.3. Finance team
 - 11.4. Information and office documentation team
 - 11.5. Food and other relief items team
 - 11.6. Civil Society and International Organisations co-ordination team
12. ORDAF, NDRF & Fire Service shall be in close contact to assist the administration in clearing the relief lines.
13. Civil Society Organisations: Get in touch with civil society Organisations. Allot them areas or functions. Get them introduced to the field functionaries. Ask them to prepare a list of volunteers. Make a quick inventory of their resources. Contact UN agencies & other international relief agencies (if possible). Make a quick assessment of district needs and expectations from different agencies.
14. Press briefings: Press briefings if required will be carried out by the competent authority, decided by the Collector. DIPRO to handle the press related issues.
 - 14.1. Message to public over local cable or alternative networks.
15. Regularly contact required with R.D.C., S.R.C., OSDMA, IMD, Water Resources Deptt. & Dam Safety Divisions for updates.
16. Orders for identifying places for starting free kitchens with the BDOs and Local PRIs. Issue of instruction by looking into the severity of the hazardous event and damage.
17. Regularly checking up the following websites :

www.imd.gov.in ,	Indian Meteorological Deptt.
www.imdbbsr.gov.in	Indian Meteorological Deptt.
www.osdma.org ,	Orissa State Disaster Management Authority
www.odisha.gov.in	Govt. of Odisha
18. Refer the website www.idrn.gov.in for resource mobilization.

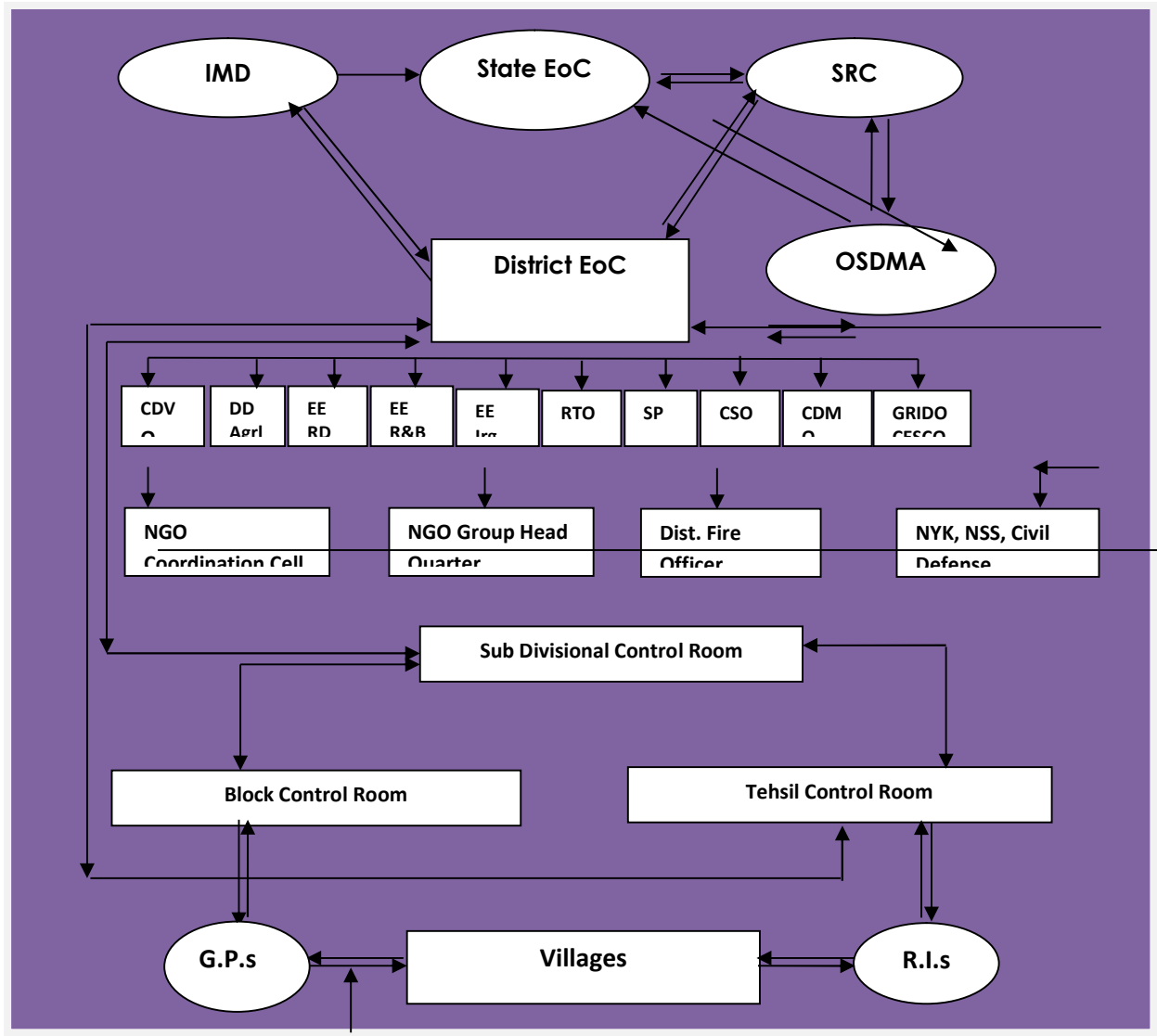
19. Keep spare copies of district maps. Jurisdiction maps of all irrigation divisions shall be kept ready in good numbers.
20. Requisition School/ College for army/ police forces staying and movements.
21. Looking at the onset of emergency and after making quick preparations, convene Emergency meeting of important official and non-official agencies. Give them clear instructions.

Table: 40 Equipments provided to DEOC and their operational status

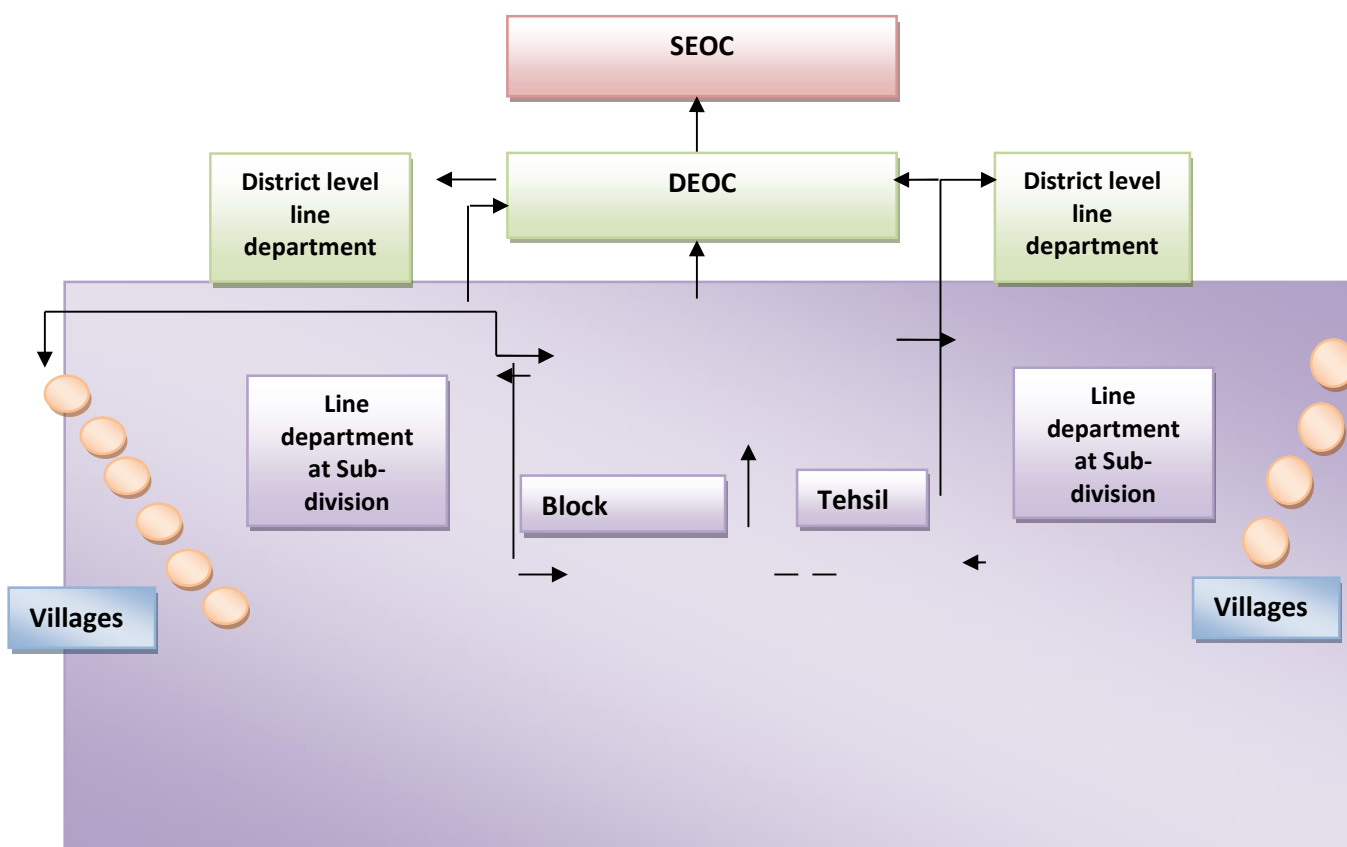
Sl No	Equipments	Unit	Status		Remarks
			Operational	Non-Operational	
1	Desktop Computer	3	1	2	2-Out of Order
2	Laser Printer	Nil			
3	UPS	3	1	2	2-Damaged
4	Scanner	2	1	1	1-Damaged
5	Fax	2			
6	Ink Jet Printer	3	2	1	1-Defunked
7	Multi Utility Machine (Printer, Scanner, Fax, copy)	1	1		
8	Laptop	Nil			
10	LCD Projector	1	1		
11	Photocopier				
12	GPS Unit				
13	Satellite Phone	2	1	1	1-Out of Order
14	VHF Sets	2		2	Damaged
15	VHF Mobile Station	1			
16	Walkie-Talkie (VHF hand Set)				
17	Portable Diesel Generator	1		1	
18	Inverter with Battery	1	1		
19	Inflatable Tower Light	2	2		
20	Power Saw				
21	Life Jacket	2	2		
22	Life Buoy	2	2		
23	Aluminum Ladder				
24	Fire Extinguisher	2	2		
25	Siren				
26	Megaphone				
27	Colour TV/Stand	1	1		
28	Mobile Phone				
29	Display Board				
30	White Broad				
31	Computer Table/Chair	1		1	

32	Rack				
33	Book Case	1		1	
34	GI Trunk	2		2	
35	Commando Search Light	1	1		
36	Steel Almirah	1	1		

Figure__: Information flow chart from District Emergency Operation Center (DEoC) to Villages with early warning

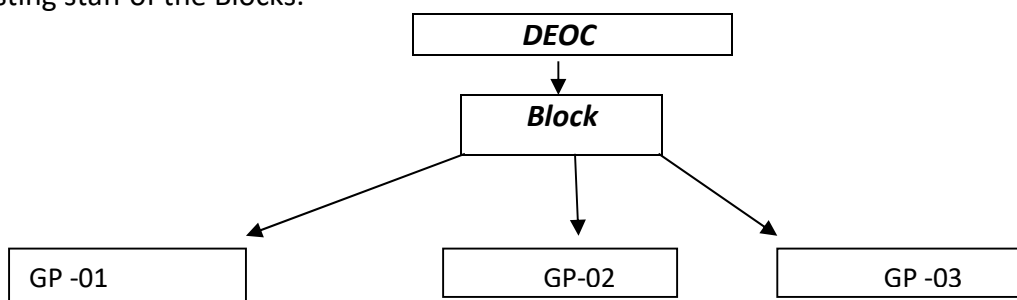


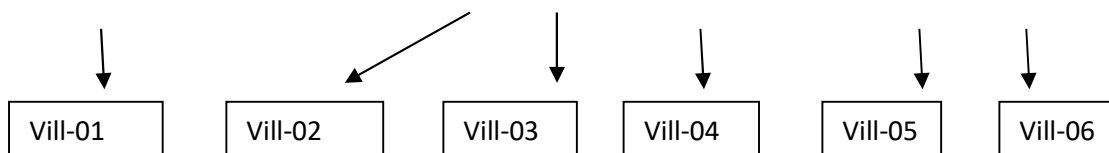
Figure__: Information flow chart from Villages to District Emergency Operation Center (DEoC) without early warning



4.15.3 Block Emergency Operation Center (BEOC)

As per the standing instruction of Dist. Administration the Control rooms at Block Office shall operate from the month of April and continued up-to November. Control room operates from April & May for Heat wave condition where as from June to November for Flood like situation. The staff assigned for the control room duty to look after the situation and report compliance if required. Similarly control room operates in Tahasil offices too. There is no institutional arrangement for BEOC at the block level, only control room and report return done by the existing staff of the Blocks.





4.15. Any other Alternative Emergency Operation Center in the district

To tackle the disaster situation in the district effectively all the department usually work in the district. The following are the details of the same –

Serila No	Department	Control room number	Incharge details
01	Baitarani Irrigation division	06731-220258,220259	EE
02	CDMO	06766-255426	CDMO
03	CDVO	06766-220216	CDVO
	Sub-Div.Anandapur CDVO	06731-220218	
	Sub-Div.Champua CDVO	06767-240247	
	Sub-Div.Keonjhar CDVO	06766-255511	

4.16 State Crisis Group (SCG)

The State Government has constituted a State Crisis Group for management of chemical accidents as per provision of the chemical accidents (Emergency Planning, Preparedness, and Response) rules, 1996 on 1st August 1996.

- a. The State Crisis Group shall meet at least once in three months and follow such procedure for transaction of business as it deems fit.
- b. Notwithstanding anything contained in sub-rule (2), the State Crisis Group may co-opt any person whose assistance or advice is considered useful in performing any of its functions, to participate in the deliberation of any of its meetings.

4.16.1 Composition of the State Crisis Group

The State Crisis Group comprising of the following members in pursuance of the Rule-6 of the chemical accident (Emergency Planning, Preparedness and Response) Rules, 1996.

Table_ Composition of State Crisis Group

Sl No.	Members	Designation
1.	Chief Secretary, Odisha	Chairman
2.	D,C-cum-A.C.S & Chairman, SPCB	Member
3..	Secretary to Government, Labour & ESI Department	Member Secretary

4.	Secretary to Government, Home Department	Member
5.	Secretary to Government, Forest & Environment Department	Member
6.	Secretary to Government, Health & FW Department	Member
7.	Secretary to Government, Industries Department	Member
8.	Secretary to Government, H&UD Department (PH Engineering)	Member
9.	Special Relief Commissioner, Odisha	Member
10.	Secretary to Government, Transport Department	Member
11.	Labour Commissioner	Member
12.	D.G.Police, Odisha	Member
13.	D.G. of Police, Fire Services	Member
14.	Director of Factories and Boilers	Member
15.	Head, NDRF, Odisha, Bhubaneswar	Member
16.	Head, Tata Steel Ltd. Kalinga Nagar	Member
17.	Head (safety), IOCL, Paradeep	Member
18.	Prof. G.K.Roy, Ex-Director and HOD (Chemical Engg.), N Rourkela	Member
19.	Director, RLI, (Directorate General of Factory Advice , Kolka Gol	Member
20.	Regional Director, Mines Safety (DGMS, Bhubaneswar, Gol	Member

4.16.2 Functions of the State Crisis Group

The State Crisis Group is the apex body in the State to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents. Without prejudice to the functions specified under sub-rule (1), the State Crisis Group shall,

1. Assist the State Government in managing chemical accidents at a site;
2. Review all district off-site emergency plans in the State with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals, Rules and forward a report to the Central Crisis Group once in three months;
3. Assist the State Government in the planning, preparedness and mitigation of major chemical accidents at a site in the State;
4. Continuously monitor the post accident situation arising out of a major chemical accident in the State and forward a report to the Central Crisis group
5. Review the progress report submitted by the District Crisis groups;
6. Respond to queries addressed to it by the District Crisis groups;
7. Publish a list of experts and officials in the State who are concerned with the management of chemical accidents.

4.17 District Crisis Group

As prescribed in the chemical accidents (emergency planning, preparedness, and response) rules, 1996, the District Crisis Group has to be constituted.

The District Crisis Group is the apex body in the district to deal with major chemical accidents and to provide expert guidance for handling chemical accidents. Without prejudice to the functions specified under sub-rule (1), the District Crisis Group shall,-

1. Assist in the preparation of the district off-site emergency plan;
2. Assist the district administration in the management of chemical;
3. Continuously monitor every chemical accident;
4. Review all the on-site emergency plans prepared by the occupier of Major Accident Hazards installation for the preparation of the district off-site emergency plan;
5. Ensure continuous information flow from the district to the Central and State Crisis Group regarding accident situation and mitigation efforts;
6. Forward a report of the chemical accident within fifteen days to the State Crisis Group;
7. Conduct at least one full-scale mock-drill of a chemical accident at a site each year and forward a report of the strength and the weakness of the plan to the State Crisis Group.

4.17.1 Composition of the District Crisis Group

Table 4.17.1 - Composition of District Crisis Group

Sl No.	Member	Designation
01	Member- 01	District Magistrate
02	Member -02	Additional District Magistrate
03	Member -03	Superintendent of Police
04	Member -04	Commandant Homeguard
05	Member -05	EE –PWD
06	Member 06	EE-RWSS
07	Member -07	EE-PhED
08	Member -08	DFO
09	Member 09	CDMO

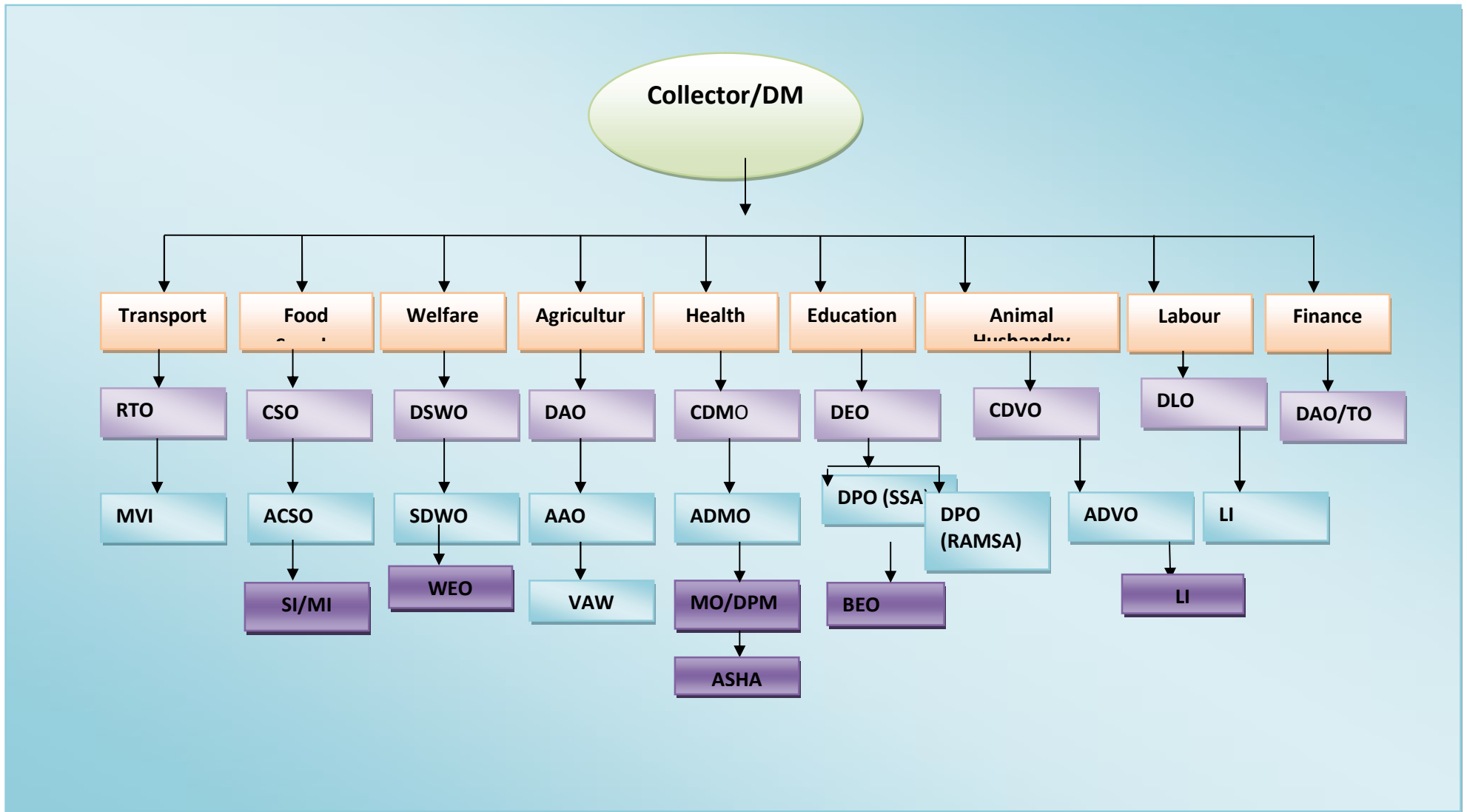
4.18 Local Crisis Group

The Local Crisis Group shall be the body in the industrial pocket to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident. Without prejudice to the functions specified under sub-rule (1), the Local Crisis Group shall,

1. Prepare local emergency plan for the industrial pocket;
2. Train personnel involved in chemical accident management;
3. Ensure dovetailing of the local emergency plan with the district off-site emergency plan;
4. Educate the population likely to be affected in a chemical accident about the remedies and existing preparedness in the area;
5. Conduct at least one full scale mock-drill of a chemical accident at a site every six months forward a report to the District Crisis Group;
6. Respond to all public inquiries on the subject.

4.16 Coordination structure at the District level and down the line

Figure 4: Coordination structure at the District level and down the line



4.19(Elaborate on GO-NGO coordination cell in the district, if any)

The DM Act 2005 recognises that sometimes the development patterns that do not recognize disaster risk and vulnerability in the specific geographic areas may induce disasters. The proactive approach in the DM Act 2005 to address disaster risk and vulnerability through predisaster preparedness and mitigation activities also envisions accountability and multi stakeholder participation, including coordination of the activities of the NGOs at various levels. Sections 30 (2) (xix) of the Act mandate the DDMA for collaboration with stakeholder agencies including NGOs for the purpose of improving the effectiveness of DM. As on date, role of NGOs/CBOs has not been explore in Keonjhar . Hence, a district level NGO Coordination Cell to be set up with the following points. The following work should be carried out in GO –NGO coordination .

- The DDMA should develop a complete database of all the NGO in the district, the thematic working areas should be documented. NGO's working on Disaster management should given priority the eper person phone number and email id should be documented.
- Time to time coordination meeting should be organized at the district level the theme should be disaster management
- Establish protocols for cooperation and ensure access to the affected areas with support from government agencies at respective levels like NDRF and SDRF that have good logistics base to reach inaccessible areas
- Conduct community centric hazard and vulnerability analysis at all levels, and develop disaster management plans in accordance.
- Make women's as well as men's concerns and experiences an integral dimension in the design, implementation, monitoring and evaluation of policies and programs such that inequalities between men and women are not perpetuated through the routine operations of DM.
- Focus National level: Advocate with all actors to reach out to gap areas State level: Coordinate among actors to identify gap Areas District and Local level: Ensure targeting with equity and outreach to all excluded areas.
- National level: Develop minimum standards for India State level: Develop minimum standards for the state District and Local level: Develop capacities for adherence to minimum standards through collective and coordinated efforts of all stakeholders
- Develop an agreed framework of accountability for all levels and mechanisms to bring in transparency.

Serial No	Name of the NGO	Contact Person	Mobile numbers
01	WOSCA – Keonjhar	Mrs. Dharitri Rout	9437025119
02	TADASHA –Keonjhar	Mr.JyotiSrichandan	8280219709
03	KRIDITI –Keonjhar	Mr. Duskar Barik	9437326475
04	IDS –Keonjhar	Mrs. Sebati Singh	06766-231788
05	PRAKALAP –Keonjhar	Mr. BiplabaMishara	9437056514

06	DREAMS –Keonjhar	Mr. S Pattanayak	9090919102
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Role of Corporate Sector in the district relating to Disaster Management (1 page)

Historically, the corporate sector has been supporting disaster relief and rehabilitation activities. However, the involvement of corporate entities in disaster risk reduction activities is not significant in Keonjhar district. PPP between the Government and private sector would also be encouraged to leverage the strengths of the latter in disaster management. The DDMA would need to network with the corporate entities to strengthen and formalise their role in the DM process for ensuring safety of the communities. The role of corporate sector for awareness generation and local capacity building would be also important and efforts would be made to involve corporate sector in this effort. Besides, the media plays a critical role in information and knowledge dissemination in all phases of DM. The versatile potential of both electronic and print media needs to be fully utilised. Effective partnership with the media will be worked out in the field of community awareness, early warning and dissemination, and education regarding various disasters. The use of vernacular media would be harnessed for community education, awareness and preparedness at the local level. The DIPRO in consultation with the DDMA would take appropriate steps in this direction. There are big mining companies in the district like – TATA, Jindal, IMFA, Rungta, Pattnaik Mining etc they used play key role during the disaster period. Since the district administration has a good relation with these company they voluntarily support in rehabilitation and restoration program. Unlike the bounty of nature, its fury is a great level. Natural disasters affect everyone alike although the nature of impact varies from region to region and sector to sector with the coping capacity of an individual sector being the differentiating factor. The catastrophic fallout of natural disasters on the community and the people is very well documented by now. At the same time, it is their impact on the existence, survival and viability of the economic muscle of a nation, community and region, i.e. the corporate sector, which also merits equally focused attention. The critical and catalytic role the corporate sector can play in mainstreaming disaster management into not only its own functioning but also in other sectors and among the community is now being appreciated and duly recognized as an inalienable part of corporate social responsibility. India has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. In view of India’s high vulnerability profile, the recurrent phenomena of a range of geophysical as well as hydro-meteorological hazards impact millions across the country leaving behind a trail of heavy loss of lives, property and livelihoods. In many areas of the country, disaster losses tend to outweigh the development gains. The economic and social costs on account of losses caused by natural disasters continue to mount year after year as disasters occur with unfailing regularity encompassing every segment of national life including the industrial and corporate sector. Traditionally, India had been ‘reactive’ in its approach towards disasters – with precious resources being spent on relief, rehabilitation and reconstruction efforts. Today, after considerable and meticulous planning and a concerted effort, a paradigm shift in the approach of the

Government departments and agencies as well as of other stakeholders including the community, the corporate sector and others has been brought about for building holistic capabilities for disaster management. The focus has shifted to a balanced approach including pre-disaster aspects such as disaster prevention, mitigation and preparedness since it is felt that appropriate mitigation measures can substantially, if not wholly, reduce the heavy toll of lives and property, the dissipation of developmental, industrial and infrastructural gains and the hard-earned socio-economic infrastructure. For long, the corporate sector had been viewed as a separate entity perennially ranged at the other end of the spectrum vis-à-vis the society. Over the past few decades, this perception has undergone a complete metamorphosis and the existence of corporate sector is today intimately intertwined with the safety and well-being of the society. Rather the community today is the very *raison d'être* of its being. It is the crux lending credence and substance to the world view of the corporates. The corporate sector and the society are being seen as complementary to each other – heavily dependent upon each other for mutual existence and prosperity. The high vulnerability profile of India also enhances the susceptibility of the corporate sector to multiple disasters and impacts it similarly. The rising ferocity and magnitude of natural disasters and the expanding human and The Indian Perspective 1 Disaster Risk Management and The Role of Corporate Sector economic infrastructure over the last few decades has led to a greater exposure of the same to hazards of nature. The only way of safeguarding the precious physical infrastructure is to integrate disaster prevention, mitigation and preparedness measures into them. While hazards belong to nature and cannot be wished away, the risks can definitely be reduced and the vulnerabilities can definitely be tackled – and this belongs to us. The involvement and association of the corporate sector with national risk reduction and risk management initiatives and with dissemination of appropriate and practical structural and non-structural disaster prevention and mitigation measures necessary for their safe and disaster-free functioning has been accorded priority as part of a strategy to systematically mainstream holistic disaster management into the functioning of the corporate sector. The ever-expanding extent, sweep and scale of natural disasters has made it imperative for the corporate sector to initiate and integrate disaster risk prevention and mitigation measures in all facets of their functioning and operations with the objective of safeguarding the painstakingly built industrial assets from the impact of natural disasters. During the last decade, the frequency and fury of disaster occurrences in different parts of the country has imposed a colossal economic cost in terms of financial losses, disruption in industrial activities, retardation of expansion and growth plans and dissipation of investment and precious resources on rebuilding the same assets and infrastructure to make the operations sustainable. It is an 'encounter' of the worst kind with the dice firmly loaded against the human and physical infrastructure. Today, the corporate sector has become an inalienable part of our socio-economic and national life and a vibrant industry is not only better placed to make itself sustainable but can also act as a composite foil to the governmental efforts at holistic disaster management. Recognizing the importance of integrating the corporate sector and their nodal organizations in disaster prevention, mitigation and preparedness

agenda, the National Disaster Management Framework drawn up by the Ministry of Home Affairs, Government of India envisages “involvement of corporate sector in awareness generation and disaster preparedness and mitigation planning” through sensitization, training and co-opting of the corporate sector and their nodal bodies in planning process and response mechanisms. Similarly, the GoI- UNDP Disaster Risk Management Programme also entails promotion of partnerships with the private sector in awareness generation and sensitization leading to development of disaster risk management plans. The recent major disasters have clearly indicated the need for interweaving of disaster risk reduction and management concerns in order to minimize the losses— both human and economic. This underscores the necessity of involvement of all stakeholders, from the Government, at all levels, to Community Based Organizations, international and national organizations, the community and, of course, the corporate sector. 2 The Indian Perspective Disaster Risk Management and The Role of Corporate Sector 2. The Role of Corporate Sector In keeping with the paradigm shift in its approach to disaster management brought about by the Government of India and the recurring phenomenon of natural disasters impacting all sectors of socio-economic life, including the corporate sector, and inflicting heavy economic losses, focused attention has been given to risk mitigation endeavors to systematically reduce the vulnerabilities.

The new approach stems from the premise that development in any sector, more so in the corporate world, cannot be sustainable and viable unless risk reduction and mitigation measures are built into the development processes and that investments in mitigation are much more cost-effective than expenditure on relief, rehabilitation and reconstruction. Recognizing the gargantuan proportions of the challenge posed by recurring incidence of natural catastrophes, association and involvement of corporate sector and their representative nodal organizations for initiating disaster risk management measures has been considered as integral to success of disaster management initiatives. The corporates in every country have always played a major role in post-disaster relief, rehabilitation and reconstruction efforts in the affected regions.

Public Private Partnership: Public & Private Emergency service facilities available in the district. (1/2 Page)

Following the adoption of the Hyogo Framework for Action at WCDR, disaster risk reduction is given further attention in Japan. There is wider recognition of possible risks of major natural disasters in the near future. The necessity of a strengthened multi-sectoral approach for disaster reduction is widely recognized. In order to reduce disaster damage, there must be a close combination of “self-help efforts” rooted in the awareness of people and companies, “mutual-help efforts” of various community-based organizations, and “public-help efforts” made by the national and local governments. To promote a nationwide movement where individuals, families, communities, corporations and other various groups and entities participate in continuous activities and investments for mitigating disaster damage, in 2006 the Central Disaster Management Council decided and published a “Basic Framework for Promoting a Nationwide Movement for Disaster

Reduction - Actions with Added Value to Security and Safety.” In this official paper the role of private companies, the importance of public-private partnership and BCP are emphasized. Also in the process of the formulation of this basic framework, many companies were invited to make presentations at the Central Disaster Management Council meetings. These occasions were covered by the media and gave good reputations to these companies active in disaster risk reduction. People hesitate to take insurance cover due to lack of awareness about the need for insurance, cost of premiums and lack of trust in insurers. On an average only 30-40% of disaster risks are insured. Recovery and rehabilitation efforts gobble up government funds and the onus falls on the exchequer. Disasters also set the clock back on development gains achieved by economies over the years. Insurance plays an important role in mitigating the macroeconomic costs arising from major natural catastrophes

The public-private participation in disaster management will play an important role in this transition from a reactive to a proactive approach. As always, in troubled times, the old adage “Prevention is better than cure” stands tall.

Table__ Contact Details of Private emergency services

Table 42 Contact Details of Private emergency services

Sl. No.	Name of the Contact Person	Contact No.
01	Maa Jagat Janani Seva Trust, Champua, Keonjhar	9438578200
02	Rotary Club,Keonjhar	9437252729
03	Dhokatha Youth Club, Dhokatha ,Keonjhar	9439243555
04	TailaSamaja,Keonjhar	943725347
05	Karana Samaja,Keonjhar	9437252161
06	Dreams Club,Saras,Keonjhar	9090919102/9439677999
07	Kendujhar Truck Assosiation	9937037835
08	STSC Development, Kendujhar	8895698953

4.21 Flood Shelters (FS) in the District

(GIS Maps for location of FS may be incorporated)

The completed Multipurpose Flood Shelters constructed by OSDMA will be handed over to the community based Cyclone Shelter Management and Maintenance Committees (FSMMC).

Composition:

The **FSMMC (Flood Shelter Management and Maintenance Committee)** will be constituted in a Special Meeting convened by the local Sarpanch/Executive Officer in the shelter village including served villages. The FSMMC will have around 21-25 members as detailed below. The Sarpanch of the concerned Gram Panchayat/Executive Officer of concerned ULB will function as the **President** of the FSMMC. One representative of the vulnerable community, selected by General Body or in case of urgency nominated by the President, will function as the **Secretary** of the FSMMC.

Table – 4.17:

Sl No.	Official Members	
1.	Sarpanch/Executive Officer	President
2.	Local Tahasildar	Member
3.	Local Medical Officer (CHC/PHC)	Member
4.	Asst. Engineer/Jr. Engineer of Local Block and/Engineer/Jr. Engineer of RD dept	Member(s)
5.	Local Revenue Inspector	Member
6.	Executive officer of the Gram Panchayat / Councilor (Ward Member) of ULB	Member
7.	Headmaster/Principal of the school/college closer to which the MCS has been constructed	Member
8.	Local ANM	Member
9.	Local Anganwadi worker	Member
	PRI representatives	
10.	Concerned ward member of the MCS village	Member
11.	Concerned ward members of hamlets of served villages which the MCS serves	Member (1-3)
	Community representatives	
12.	One community volunteer to be selected as	Secretary
13.	Representative of Local N.G.O./village club	Member
14.	Women representative	Member
15.	SC/ST representative	Member
16.	Shelter village/ hamlet representatives	Member (1-4)
17.	Representative of Persons with Disability	Member

Registration:

The FSMMC will be registered under the Societies Registration Act, 1860. The FSMMC will have joint bank account in the name of Secretary and President. A standard Bye-Law has been prepared for all FSMMC and a copy of the same will be sent later. The procedures and conditions laid down in the bye-law will be standard guidelines for functioning of the FSMMC.

Training and capacity building:

The FSMMCs will be provided with different types of search & rescue and disaster management equipment from time to time and the committee will be responsible for safe custody and maintenance of the building as well as the equipment.

FSMMC members will be trained on disaster management & shelter management skills and record keeping procedures. Selected task force members of shelter village will be imparted training on first-aid and search & rescue skills.

Use, Management and Maintenance of the building:

The Flood shelter buildings will be used for class room purposes of the school or college during normal time. During disaster time, the same will be used for shelter purposes of the vulnerable people. Besides the building can be used for community purposes like as community halls, anganwadi centres, marriage mandaps, training centres, for organizing social functions, etc. under permission of FSMMC. The FSMMC may decide to put the building for temporary economic use and collect user fees from the user at a rate decided by the FSMMC through resolution. User fees so collected will be kept in the joint account and be used for day-to-day maintenance on proper resolution and accounting. The shelter building cannot be given on rent for residential or other private uses.

The FSMMC will be responsible for day-to-day maintenance of the shelter building and its use during normal time, disaster time and post-disaster time.

Procedure for formation of FSMMC:

As per Project requirement, the FSMMC will be constituted during the execution of works so that the committee will be acquainted with the process of execution which will ultimately help in smooth handing over the completed Flood shelters. Besides, constitution of the committee at this stage will help in social auditing of the works.

The Constitution of FSMMC involves a social process in different levels and social mobilization is required for educating the vulnerable community before identifying the members of the FSMMC and task force members. Coordination with the Block administration, concerned local officials, PRI members like Sarpanch and Ward Member and community members and local NGO/ volunteers and widespread discussion on disaster management and shelter management activities are required. For coordination and wide circulation of the meeting notice, services of local nodal NGO/ volunteers will be utilized. Since the village community and other Government, PRI and community members will be present in the Special Meeting.

OSDMA has identified nodal NGOs for the Blocks to coordinate shelter related activities at the block and village levels. The services of nodal NGOs are being

utilized for day-to-day shelter management, mock drill, disaster management and training purposes in our existing shelters.

Table 46: Details of FSMMC (Flood Shelter Management Maintenance Committee)

Sl No.	Name of the FS	Location	Name of President	Contact No.	Name of Secretary	Contact No	Remark
01	Aiyatpur Village	Ratakana	New committee will form by 20 th June				Fuctional
02	Habelswar Village	Habelswar	Mrs. Anasaya Behera	8249209109	Mr. Mohanty	9178337923	Fuctional
03	Ambo G.P	Karagola	New committee will form by 10 th June				Fuctional
04	Atta Village	Batto –GP of Anadapur					Fuctional

Table ___: Details of equipments provided to FS

Sl No.	Name of the MCS	Location	Equipments Provided	Status		Remarks
				Operational	Non Operational	
01	Aiyatpur Village	Ratakana	Yes	Operating		Nil
02	Habelswar Village	Habelswar	Yes	Operating		Nil
03	Ambo G.P	Karagola	Yes	Operating		Nil
05	Atta Village	Batto –GP Anadapur	Yes	Operating		NIL

Refer DDMP Vol -2 Table No
4.23. Other Safe Sites for temporary shelter for Flood/ Tsunami etc.

Table ___: Other safe sites for temporary shelter

Table 49: Other Safe Sites for temporary shelter for Flood/ Tsunami etc.

Sl. No.	Block Name	GP Name	No. of Mounds	No. of High Bridges
01	Hatadihi	Janara	0	2
02	Hatadihi	Salani	0	1

03	Hatadihi	Mugupur	0	2
04	Hatadihi	Govindpur	0	1
05	Hatadihi	Panchapalli	0	2
06	Hatadihi	Habelswar	0	2
07	Hatadihi	Batto	0	1
08	Hatadihi	Ambo	0	2
09	Anandapur	Batto	0	1
10	Anandapur	Saladei	0	
11	Anandapur	Jalasan	0	
12	Anandapur	Bailo	0	
13	Anandapur	Belabahali	0	
14	Ghasipura	Batto	0	01
15	Ghasipura	Deogaon	0	02
16	Ghasipura	Khaliamenta	0	01

Chapter – 5: Prevention & Mitigation Measures

5.12 PRIVENTION&MITIGATION MEASURES OF THE DISTRICT.

Personal preparedness focuses on preparing equipment and procedures to use when a disaster occurs, i.e., planning. Preparedness measures can take many forms including the construction of shelters, implementation of an emergency communication system, installation of warning devices, creation of back-up life-line services (e.g., power, water, sewage), and rehearsing evacuation plans. Proper Preparation can save time, money and lives. Planning for all different types of events to magnitudes in at utmost importance for disaster. Proper planning is instrumental during times of chaos to make situations less stressful. With proper planning duties will be pre-assigned to different agencies, so that when disaster does occur responders can jump right into action. Two simple measures can help to prepare the individuals for either sitting out the event or evacuating, as necessary. For evacuation, disaster supplies kit may be prepared and for sheltering purposes a stockpile of supplies may be created.

The District Administration has already taken steps in providing instructions to the line departments and Block Administrations to take adequate and emergent action at least in the

following details. They also have been instructed to ensure the completion of the related activities by the mentioned time frame, before disaster season. Also every department has been advised to take development action plans should be disaster prevention and that can help in disaster mitigation.

5.12.1 Short Term Measures

Type of Sector	Sub Sector	Mitigation Measures	Responsible Dept.	Time Frame
Infrastructure development	IEC Activities	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the BDOs and DI & PRO	During the last week of May & 1 st week of June.
	Road	Repair of vulnerable/ affected points identified by the departments	PWD, RD	By 15 th of June
	Embankments	Receiving the Height of the embankment points identified Repair of Vulnerable/affected points identified	Irrigation Department	By 15 th of June
	Safe Shelters & Multi purpose Cyclone shelters	Ensure maintenance of shelters	RD department, DI and CI of Schools	Before 15 th of June

When the disasters are inevitable, the only way is to mitigate its impact. This falls under the Short Term Measures like immediate relief, reducing the response time to avert any losses, provide the vulnerable and affected people with the basic needs, supply of minimum essential items to those who have lost their properties and movables, grant of long/short term loans at a concession rate.

5.12.2 Long Term Measures:

The Long Term Measures to be followed include maintenance and repair of the embankments of the rivers and canals going through the district, construction embankments, bank protection and watershed management, bio-mass production by the forest/horticulture department.

Instructions have been given to all district level departments to put forth such activities in their yearly action plan. Also they should notice and take necessary steps to ensure the developmental units and new constructions are disaster free and disaster resilient.

Sector Wise Vulnerability Reduction Measures

Type of Sector	Sub Sector	Mitigation Measures	Responsible Deptt.	Time Frame
Communication & Infrastructure	Communication	Ensure maintenance and good running condition of communication systems	Telecom and District Administration	By 31 st of May
	Drinking water and sanitation	Repair of the Damaged standpoints Check the Leakage of overhead tanks and pipes	RWSS	All the time
	Technology Dissemination	Installation of VHF in all the block headquarters	OSDMA and District Administration	Before April 30 th
Health/Animal Husbandry	IEC Activities	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the district and CDVO	By May 31 st and after the receipt of warning
	Immunisation & Vaccination	Stock piling of vaccines	CDVO & CDMO	By April 30 th
	Training	Health care, sanitation, first aid	CDVO & CDMO	After the 1 st Natural Calamity Meeting
Livelihood	Awareness	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the district and CDVO	By May 31 st and after the receipt of warning
	Agriculture	Flood Resistant crops/ Alternative cropping Drought Resistant – short duration paddy Crop insurance Coordination with Irrigation and DRDA	Agriculture and horticulture department	Normal period Pre flood Period
	Horticulture	Nursery raising Insurance	Horticulture Department	Normal period Pre flood
Insurance	IEC Activities	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the district and CDVO	During normal period

	Livelihood	Ensure insurance of livestock, crops, work sheds/workshops etc.	Agriculture, Cooperative Society	During normal period
	Life	Awareness	NGOs	During normal period

5.12.3 Special Mitigation Measures undertaken in the district.

(Structural and Non-Structural Plans and their Continuation).

- Walling and Posters are done regularly describing Do's and Don'ts and precautionary measures to be taken into action at pre, during and post disaster events. The posters of remedies on Fire accident, Sunstroke, Flood and Cyclone, Nutritional care during disasters etc are disseminated at the Govt buildings and public places.
- Special trainings are organized in the district of Govt Officials, NGOs, Volunteers, Disaster Management Committee members, PRIs etc on DRM.
- Special Task Force trainings are organized of the Disaster Management teams, Volunteers (NSS, NYK) etc on First Aid, Search & Rescue etc.
- Meetings, rallies are arranged at district, block and village level to put an impact on necessity of Disaster preparedness and subsequent measures.
- In the district, Observation of Disaster preparedness Day, Volunteers Day, competitions among school and college students on special DRM topics etc are taking place-creating awareness among the community on Disaster management.
- To establish a better communication networking within the district, the District Control Room and Block headquarters along with a few more important stations like Dam sites, Tahasils and Sub-Collector's Office are connected with VHF systems. It will establish a two-way communication linkage between the stations. The EOC is connected with a toll free telephone having no- 1077, which can be accessed for any disaster related information.
- Repair and restoration of vulnerable points on road. The engineering department and all Blocks are in regular coordination of such measures.
- Repair and restoration of proper vulnerable points on embankments. The engineering department and all Blocks are in regular coordination of such measures.
- Proper maintenance of shelter places. For this a regular communication is obtained with DEPE, Angul, CI of Schools and engineering departments.
- It is regularly ensured by the district control room and subsequent control rooms at Sub-divisions, Zones and Sub-Zone level, the functioning of Telephones connected, Computers along with other electronic equipments functional.
- The functioning of all water supply systems is ensured functioning well. Alternative arrangements have also been made for functioning of units during emergency and each repairing of it.

- The functioning of tube wells is ensured before the disaster in the rural areas. Utmost priority has been given for repairing of the units. Also a few more vulnerable positions have been identified and constructions are carried out.
- Prior to the disaster seasons adequate vaccination has been done by the health and animal husbandry departments.
- Training programs and awareness are continuing for common people on various health aspects. Volunteers are receiving trainings on health care, sanitation, First Aid and PFA.
- There formed a “crop and weather watch group” in the district consisting the technical members of Agriculture department. The group at the district level will be responsible to advise on the alternate cropping pattern, relative crop corrections etc during the drought period and flood resistant crops.
- The Agriculture department will make an assessment on the vulnerability of crops and advise accordingly on the requirement of seeds and associate fertilizers.
- Crop insurance will be made with the farmers’ field crop by the agencies.
- The Horticulture Units will supply the horticulture plants to the farmers. Important horticulture plants should be taken with insurance coverage.
- The Departments, Units and Individuals are advised to make insurance of livestock, crops, work sheds/workshops etc.

In the current year it was strategically agreed that all the 1st and 2nd priority of development action plan in the GPs and Villages will be taken as the activities under Flood Protection, Drought Mitigation, Watershed Management and provisioning of drinking water and irrigation related. A list of this as mitigation action plan is attached as annexure.

PREVENTION & MITIGATION PLAN

4.1 Sector wise Vulnerability Reduction Measures:

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department/ Personnel	Time Frame
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Infrastructure Développement	IEC Activities	<ul style="list-style-type: none"> • Distribution of leaflets, posters & wall painting. • Awareness generation programme in schools and colleges, conducting padayatra other and relies. • Organising staff development and refresher training to concerned dept., task force team NGO and CBOs . • Conduct regular Mock Drill. • Plantation Programme. 	DIPRO & NGO Co-ordination Cell.	Through out the year (With regular intervals)
	Road	<ul style="list-style-type: none"> • Identification/ repair of main and alternative routs • Repair of identified vulnerable points. • Conversion to pucca roads of all • Village roads. • Encourage water ways ferry's 	PWD , RD and Block	During normal Time & Immediately after disaster
	Embankment	<ul style="list-style-type: none"> • Strengthening and raising the height of weak embankments, points • Storage of flood fighting materials like sandbags , bamboo's mats etc. 	• Irrigation Dept	During pre-flood season
	Bridges	<ul style="list-style-type: none"> • Regular maintenance of Bridges. 	R &B & RD dept	During normal period

	Safe Shelters	<ul style="list-style-type: none"> • Ensure Maintenance of the Flood shelters • Identification of places for preparation of mounds and cattle shelters. • Ensure multipurpose use of shelters by community, schools, NGOs, CBOs . 	Sub-Collectors, BDOs & NGOs	During normal period
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Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department / Personnel	Time Frame
Infrastructure Développement	Communication	<ul style="list-style-type: none"> • Ensure proper maintenance of Telephone, FAX, WLL Phones, Wireless & VHS sets. • Ensure timely setting of Wireless Stations in District/ Block Office. <p>Installation of VHF / HAM Radio in all the Block Headquarters</p>	BSNL, OSDMA, SP signal	April-May

	Drinking Water & Sanitation	<ul style="list-style-type: none"> • Assessment of running /defunct Tube wells & make necessary arrangements • Identification of scarce water pockets installation of water supply system. • Identification of with sub-mergible TWs and rising of its platform height. • Arrangement of Tankers / Syntax Tank. • Assessment of requirement of disinfectants and ensure its regular use. 	PHD & RWS S	During normal time & immediately after disaster
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	Power	<ul style="list-style-type: none"> • Ensure proper maintenance of Electric Sub Stations , Power grids • Complete electrification through out the District. • Install Solar Lamps nears flood & Cyclone shelters <p>&ensure its maintenance.</p> <p>Ensure un-interrupted power supply to the district control room during disaster period</p>	CESCO	Through out the year.
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Health&	IEC Activities distribution leaflets	<ul style="list-style-type: none"> • Distribution of leaflets , posters & wall painting , • Conducting meeting / workshops, staff development training , orientation to village level volunteers , taskforce members • Awareness generation programme such as conducting reliefs street plays etc. 	CDMO, CDVO & NGO	Pre, during & post disaster period.
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Animal Husbandry	Vaccination/ Disinfections	<ul style="list-style-type: none"> • Procurement & stock piling of vaccines. • Regular vaccination of domestic animals • Regular dis-infection of TWs , Wells & Ponds . • Regular cleanliness of Medical / Hospital Campus • Procurement of a Refrigerator for Veterinary Hospital. 	CDMO & CDVO	Pre, during & post disaster period.
	Training	<ul style="list-style-type: none"> • Impart trainings on Health care, Sanitation, Insurance First Aids to Medical staff as well as volunteers 	CDMO	During normal period.

Sectors Wise Vulnerability Reduction Measures

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department	Time Frame
LivelihoodSector	IEC Activities	<ul style="list-style-type: none"> • Distribution of leaflets , posters & wall painting • Conducting meeting workshops staff development training, orientation to village level volunteers & to beneficiaries on EDP (Entrepreneurship Development Programme). • Awareness generation programme such as conducting relies street plays etc. 	BDOs,DIC, Banks	During normal period.
	Agriculture	<ul style="list-style-type: none"> • Alternative cropping , Installation of L .I. Points • Crop Insurance, Provision of Credit Facilities & Cold Storage 	Dy. Director Agriculture &DAOs ,	During normal period.

	Horticulture	<ul style="list-style-type: none"> • Providing nursing raising training & Insurance facilities 	Dy. Dir Horticulture	During normal period.
	Fishery	<ul style="list-style-type: none"> • Providing fishery technology & training 	Dy. Dir Fishery	During normal period.

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department	Time Frame
Insurance	IEC Activities	<ul style="list-style-type: none"> • Distribution of leaflets ,postering , wall painting • Conducting meeting workshops staff development training, orientation to line department, Block functionaries, NGOs, village level volunteers & to beneficiaries on Insurance Schemes. • Awareness generation programmes such as conducting relies street plays etc. 	Block, Insurance Companies, Agriculture Department, Bank, NGOs.	During normal period.
	Infrastructure	<ul style="list-style-type: none"> • Maintenance of Roads / Building • Maintenance of Block Level / GP Level Storage godown 	R & B, Deptt.and Block Authority	During normal period.
	Life & Livelihood	<ul style="list-style-type: none"> • Insurance of life, livestock, Crop & small business units etc. 	Block, Insurance Companies, Agriculture Department, Bank, NGOs.	During normal period.

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department	Time Frame
<p>Planning & Response</p>	<p>IEC, Relief & Rehabilitation Activities.</p>	<ul style="list-style-type: none"> • Renewal of Block Contingency Plan at regular intervals. • Aware Community through distribution of leaflets, posters & wall painting. • Awareness generation programme such as Conducting relief street plays etc. • Conducting meeting workshops staff development training, orientation to line department, GP functionaries, NGOs, village level volunteers & to beneficiaries on Contingency Plans. • Regular mock drill at level. • Timely preparedness & dissemination of warnings, carrying out search & rescue , evacuation Operations. • Shelters to victims. • Protection to livestock. • Carry out emergency relief operation. • Clearance of debris & disposal of dead bodies & maintenance of sanitation. • Damage assessment. • Taking care of Starvation Cases. • Maintenance of law and order. • Co-ordination & Sharing of information. 	<p>Block and all Line Departments, NGOs & CBOs.</p>	

GOVERNMENT LEGAL AID PROVISION TO THE DISASTER VICTIMS:

1. Background

Sub clause (e) of Section 12 Legal Services Authorities Act, 1987 makes the victims of disasters who are under circumstances of undeserved want as a result of such disaster eligible for free legal services to file or defend a case. But in a disaster of catastrophic nature whether it is natural or manmade, the victims are often taken unawares and are subjected to face the grim situation of loss of life, becoming homeless, destruction of property or damage to or degradation of environment and subject to human sufferings and damage beyond the coping capacity of the community of the affected area.

Even though it is the duty of the Government and the Administration of the locality to come to the help of the victims of disasters, Legal Services Authorities by virtue of sub-clause (e) of Section 12 can play an effective role by coordinating the activities of the State Administration in the disaster management by way of strategic interventions in an integrated and sustainable manner, reducing the gravity of the crisis and to build a platform for early recovery and development. The Legal Services Authorities shall endeavour to help the victims and the administration for reducing risk and assisting them to adopt disaster mitigation policies and strategies, reducing the vulnerabilities of the geographical and social situation and strengthening their capacities for managing human made and natural disasters at all levels.

2. Name of the Scheme.

This Scheme shall be called the Scheme for Legal Services to the victims of disasters through Legal Services Authorities.

3. Objective

The objective of the scheme is to provide legal services to the victims of disaster - both manmade and natural - who are under circumstances of undeserved want being victims of mass disaster, ethnic violence, caste atrocities, flood, drought, earth-quake or industrial disasters.

The intervention of Legal Services Authorities should be for coordinating the integrated, strategic and sustainable development measures taken by the Government and Disaster management Authorities for reducing the period of crises and for building a platform for early recovery and development. The thrust of the efforts for by the State Legal Services Authorities shall be for strengthening the capacity of the victims for managing the disaster at all levels and to coordinate with the Government departments and non-governmental organisations and also for providing legal aid to the victims.

4. Strategic Intervention by the State Legal Services Authorities.

The strategy for intervention by the Legal Services Authorities for helping the victims of disasters shall be on the following lines:

1. Ensuring immediate help by Governmental and Non-Governmental Agencies to the victims.
2. Coordinating the activities of different departments of the Government and the NGOs for bringing immediate relief.
3. Supervising the distribution of relief materials.
4. Supervising the construction of temporary shelter or transporting the victims to a safer place.
5. Supervising the reunion of families.
6. Supervising the health care and sanitation of the victims and preventing the spread of epidemics.
7. Supervising the needs of women and children.
8. Ensuring the availability of food, medicine and drinking water.
9. Supervising the reconstruction of damaged dwelling houses.
10. Supervising the restoration of cattle and chattel.
11. Legal Awareness Programmes in the relief camps on the legal rights of the victims.
12. Organising Legal Aid Clinics in the affected areas for assisting in reconstruction of valuable documents.
13. Assisting the victims to get the benefits of the promises and assurances announced by the Government and Ministers.
14. Assisting in the rehabilitation, care and future education of orphaned children.
15. Taking steps for appropriate debt relief measures for the victims.
16. Assisting in the rehabilitation of the old and disabled who lost their supporting families. Assisting in the problems relating to Insurance Policies.
17. Arranging Bank Loans for restarting the lost business and avocations.
18. Arranging for phyciatrist's help / counselling to the victims who are subjected to physiological shock and depression on account of the disaster.

5. Machinery for Legal Services.

The State Legal Services Authorities shall establish a Core group in all districts under the control of the District Legal Services Authorities to spring into action in the event of a disaster, whether manmade or natural.

The Core group shall consist of a senior judicial officer, young lawyers including lady lawyers selected in consultation with the local bar association, Medical Doctors nominated by the local branch of the Indian Medical Association and the NGOs by accredited by the State Legal Services Authority. The Secretary of the District Legal Services

Authority shall maintain a Register containing the Telephone numbers and the cell numbers of the members of the Core group.

STRATEGY FOR LEGAL AID TO THE VICTIMS

6. Ensuring immediate help by Governmental and Non-Governmental agencies to the victims.

The nodal agency for responding to a disaster shall be the State and District Disaster Management Authorities set up under the Disaster Management Act, 2006. The State Legal Services Authority should immediately alert the District Legal Services Authority concerned who in turn shall get in touch with the Disaster Management Authority of the State and District and gather the details of the steps taken by the latter.

- i. The Core group set up the District Legal Services Authority shall immediately proceed to the area where the disaster has occurred and get involved in the work of relief.
- ii. The District Legal Services Authority and the Core team shall coordinate the activities of the relief operations by involving themselves and without causing any hindrance to the smooth flow of the relief operations.

7. Coordinating different departments of the government and the NGOs for bringing immediate relief.

The State Legal Services Authority at the apex level shall get in touch with the State Disaster Management Authority / Department to ensure that all the departments of the State Government including health, finance, social welfare and police are involved in the relief operations. The State Legal Services Authorities shall coordinate the implementation of the Plan of Action, if any, prepared by the Disaster Management Authorities.

- (a) The State and District Legal Services Authorities shall obtain a copy of the disaster management plan, if any, prepared by the State Disaster Management Authority / District Disaster Management Authority.
- (b) The State Legal Services Authority / District Legal Services Authority shall as far as practicable follow the aforesaid plan and, if necessary, make suggestions to the state administration or Disaster Management Authorities for improving the quality of relief operations.

8. Supervising the distribution of relief materials.

In the event of a disaster, the first and foremost step to be taken is to ensure that the victims are provided with adequate support to tide over their undeserved wants. This includes provision of food, safe drinking water and transferring the victims to safe shelters. The District Legal Services Authority in coordination with the Disaster Management

Authority and State Government Departments shall supervise effective and timely supply of relief materials to the victims of the disaster.

9. Supervising the construction of temporary shelters or transporting victims to safer place.

District Legal Services Authority and the Core team shall supervise construction of temporary shelters and transportation of victims to such shelters to other safer places. Any lapses can be reported to the government officer incharge to ensure that the lapses are remedied immediately.

10. Supervising the reunion of families.

A disaster may result in sudden disruption of the cohesive unit of families. Members of the family are likely to get separated on account of the disaster or by reason of the rescue operations or on account of medial emergencies. Separation can occur due to loss of life also.

The Core team shall visualise such probable traumatic situations in the families affected by the disaster and shall take necessary steps for consoling the victims and shall take earnest search for the missing members of the families.

11. Supervising the health care of the victims and preventing the spread of epidemics.

The District Legal Services Authority shall take prompt steps for coordinating with the District Medical Officer for ensuring that the victims of the disaster are given proper medical care. The injured victims shall be given prompt treatment.

- (a) When a large number of affected persons are congregated in relief camps, adequate sanitation has to be ensured. Steps shall be taken to ensure that the public health authorities are performing cleaning and sanitation of the camps on a regular basis.
- (b) The District Legal Services Authority shall ensure that adequate preventive measures are taken by the health authorities against outbreak of contagious and infectious diseases and water-born diseases can occur in the relief camps.
- (c) Right to health being a concomitant to the Right to Life guaranteed under Article 21 of the Constitution of India, the disaster victims are entitled to adequate health facilities and the Legal Services Authorities are duty-bound to ensure the same through appropriate measures.

12. Supervising the needs of women and children.

Women and children are beneficiaries of free legal aid under Section 12 of Legal Services Authorities Act. They are the most vulnerable group amongst the victims of any disaster. Safety of women and children in the camps and their valuables like ornaments and personal belongings are to be protected. The District Legal Services Authority shall ensure that the Police takes necessary steps for preventing theft and anti-social activities. Legal Services Authorities shall coordinate with the Police Officers to ensure the safety of women and children.

13. Ensuring the availability of food, drinking-water and medicine.

The need for food, safe drinking water and medicine are basic human needs and hence are attributes of the Right to life under Article 21 of the Constitution of India. Legal Services Authorities can therefore rightfully intervene and coordinate with the State Government, District Administration and Health Authorities to ensure the availability of food, safe drinking-water and medicine to the victims living in the shelters.

14. Supervising the reconstruction of damaged dwelling houses.

Housing is one of the important problems faced by the victims of disasters. Partial or total damage may occur to houses in disasters like earthquake, flood and communal riots. Assurances given by the Ministers and Government official's ex-gratia payment and funds for reconstruction of damaged houses of the victims may go unfulfilled or forgotten due to passage of time. Efforts shall be taken by the Legal Services Authorities to ensure that such promises are fulfilled and the promised funds or other relief measures are disbursed to the victims without delay.

15. Supervising the restoration of cattle and chattel.

Loss of cattle, chattel and household articles are concomitant with all mass disasters. Thieves, looters and anti-socials have a field day during riots and ethnic violence and also during the havocs like flood, drought, pestilence and earth-quake. The District Legal Services Authority in coordination with the Police or Armed Forces shall ensure that the valuables belonging to the victims are not looted or stolen houses. Similarly, steps shall be taken to protect livestock and chattel also. The Legal Services Authorities shall coordinate with the animal-husbandry department of the government to save the livestock.

16. Legal Awareness Programmes in the relief camps on the legal rights of the victims.

Once the victims are relieved from the immediate shock and impact of the disaster, the Legal Services Authority may choose a convenient time and place near the relief camps for imparting legal awareness to the victims. Women lawyers may be entrusted with the job of conducting informal legal awareness programme, mainly related to the rights of the disasters victims to avail of the relief measures from the authorities. The legal remedies available and the mode in which the benefits of the offers and schemes announced by the government are to be availed of also may be included as topics. Legal Awareness Programmes shall not be conducted in a ceremonial manner. Inaugural function and other formalities shall be totally avoided. The ambience of disaster and the mood of grief stricken victims should be fully taken in to account by the resource persons and the steps for legal awareness shall be taken in such a manner as to go along with the measures for consolation and redressal of the grievances of the victims. Visits by women lawyers to the camps and homes of the victim will be desirable.

17. Organising Legal Aid Clinics in the affected areas for assisting in the reconstruction of valuable documents.

It is likely that the victims of disaster have lost their valuable documents like titled deeds, ration cards, identity cards, school and college certificates, certificate of date and birth, passport, driving licence etc. The District Legal Services Authority shall organise legal aid clinics in the affected areas and assist the victims to get duplicate certificate and

documents by taking up the matter with the authorities' concerned. Arrangements for issuing Death Certificates of the deceased victims also shall be made.

18. Taking care of the rehabilitation and the future care and education of the orphaned children.

Orphaned children are the living monuments of disasters. Losses of childhood, paternal affection are likely to haunt them for the rest of their lives. At times, the orphaned children may get affected with psychiatric problems also.

The Legal Services Authority shall seek the help of voluntary organisations large business houses and Corporates for the educational needs and accommodation of such children till they attain the age of maturity. In appropriate cases, the Legal Services Authority may assist such children to be taken care of under provisions of the Juvenile Justice (care and protection) Act.

19. Taking steps for appropriate debt relief measures for the victims.

Rehabilitation of disaster victims will be a gigantic challenge for any administration. The adequate funds should be made available to the victims who lost everything in their life for rebuilding their avocation, buying agricultural implements and other implements required for their avocations in which they were engaged prior to the disaster. Victims belonging to fisherman community may require huge amounts for buying nets, boats and outboard engines. Such measures of rehabilitation may require the assistance of government departments concerned. The State Legal Services Authority shall coordinate with Public Sector Banks, Social Welfare Department and other departments concerned for helping the victims to re-start their avocations. In appropriate cases, provisions in the laws relating to debt relief shall be invoked.

20. Rehabilitation of the old and disabled who lost their supporting families.

Persons with disabilities as defined in Clause (e) of Section 2 of Disabilities (Equal Opportunity) Protection of Rights and Full Participation Act, 1995 are entitled to free legal aid under Section 12 of the Legal Services Authorities Act. Senior citizens are entitled to certain benefits under the provisions of Maintenance and Welfare of Parents and Senior Citizen Act. The senior citizens and disabled persons who lost their support on account of disasters shall be identified and appropriate legal aid shall be given to them.

21. Problems relating to Insurance Policies.

The Legal Services Authorities shall take up the insurance claims of the disaster victims with the Insurance Companies for settlement of such claims. Negotiations may be undertaken with the Insurance Company officials for a settlement favourable to the victims. In appropriate cases the service of Insurance Ombudsman also may be availed of.

22. Arranging Bank Loans for restarting the lost business and avocations.

The victims who suffered substantial loss of their business and implements used in their avocations shall be helped by adopting proper restorative measures. For this purpose,

efforts shall be made to make available financial assistance of nationalised banks and other public sector financial institutions. The Legal Services Authorities shall persuade the officials of such financial institutions to raise to the occasion for helping the victims.

23. Arranging for the services psychologists / psychiatrists help for counselling the victims suffering from psychological shock and depression on account of the disaster.

Mental shock and the related psychiatric manifestations are usually seen associated with the traumatic effects of disasters on the victims and their family members. Sudden loss of human life and the horrifying experiences of the trauma of the disasters can result in mental shock and psychiatric problems not only to the victims but also to their family members. The District Legal Services Authority shall in coordination with the District Medical Officer make necessary arrangements for the services of psychiatrists and psychologists.

The District Authority shall ensure the presence of the members of the Core group at the relief camps everyday till the victims are rehabilitated.

24. District Legal Services Authority shall collect reports from the Core Group.

District Legal Services Authority shall collect daily reports from the Core group working at the location of the disaster. Copies of such reports shall be sent to the State Legal Services Authority. The State Legal Services Authority shall consolidate the reports and send a comprehensive report to the National Legal Services Authority and copies thereof shall also be sent to the District Management Authorities of the State and District. Copies of the report shall be placed before the Patron-in-Chief of the State Authorities and also in the meeting of the State Authority. If any difficulty arises in giving effect to this Scheme, the State Legal Services Authority and District Legal Services Authority or the Core group may seek guidance from the Executive Chairman of the State Authority.

Table No. 52: Scope for integrating different schemes for Disaster Risk Reduction (DRR) Activities.

District Administration and line Departments shall take initiatives for integrating all the development programmes and projects to resist hazard impact.

DDMP refers to the measures used to reduce direct, indirect and intangible disaster losses. The measures may be technical, economic or social. DDMP encompasses the two aspects of a **disaster reduction strategy: 'mitigation' and 'preparedness'**. **Mitigation** refers to measures aimed at reducing the risk, impact or effects of a disaster or threatening disaster situation, whereas, preparedness refers to the measures undertaken to ensure the readiness and ability of a society to forecast and take precautionary measures in advance of imminent threat, and respond and cope with the effects of a disaster by organising and delivering timely and effective rescue, relief and other **post-disaster assistance**. **'Mainstreaming DDMP' describes a process to fully incorporate the concerns of disaster preparedness, prevention and mitigation into development and post disaster recovery policy and practice.** It means

completely institutionalizing DDMP within the development and recovery agenda.

Disaster risk can best be addressed through integrating into the developmental planning, programmes and processes. The mapping of hazards, identification of elements at risk and exposure data assists in quantifying risk. Thereafter risk reduction initiatives can be taken. Mainstreaming DDMP is a prerequisite for safe and sustainable development. Some of the key sectors where integration of DMP can be done are as follows:

Sl. No.	Scheme	Possible activities for DRR
01	MGNREGA	Creation of small SMC (Soil moisture conservation) structure drought prone areas Creation of wage work for the poor people in disaster prone areas <ul style="list-style-type: none"> • Construction of embankments • Construction of roads in remote areas through labor work • Ensure job & food security to the job seekers in the disaster prone areas
02	Atal Pension Yojana	Age-old people of the disaster prone areas should be linked with this schemes
03	DDU –GKY	Youth of the project areas should be linked with this schemes for the job opportunity
04	Pradhan Mantri GraminAwas Yojana	Provides financial assistance to rural poor for constructing their houses themselves.
05	Janani Surakha Yojana	Cash initiative for the poor & rural women during pregnancy
06	MDM	Mid day Meal scheme should be linked with childrens properly to ensure food & nutrition security of the poor & deprived children
07	<u>Swarnajayanti Gram Swarozgar Yojana</u>	Bring the assisted poor families above the poverty line by organising them into Self Help Groups (SHGs) through the process of social mobilisation, their training and capacity building and provision of income generating assets through a mix of bank credit and government subsidy.
08	National rural Livelihood mission	This scheme will organize rural poor into Self Help Group(SHG) groups and make them capable for self-employment. The idea is to develop better livelihood options for the poor. This could be implemented in drought and flood prone areas properly
09	NFSM – National food Security Mission	To ensure food security of all the poor and vulnerable groups of the societies, grain and nutrition security will be ensured by this
10	Biju PakkaGhar Scheme	Poor people will be ensured all weather housing facilities in flood and drought prone areas
11	Pradhan Mantri Jan Dhan Yojana	Ensure financial inclusion of poor people through different schemes
12	ATMA (Agriculture technology	Farmers Linkage with agriculture schemes & Programs

	Managent Agency)	
13	Pradhan Mantri Gram Sadak Yojana	Explore the villages which has no all weather roads & make the proposal
14	<u>Pradhan Mantri Suraksha Bima Yojana</u>	Accidental Insurance with a premium of Rs. 12 per year. The poor and marginalized family will be get benefited by this
15	<u>Pradhan Mantri Jeevan Jyoti Bima Yojana</u>	Life insurance of Rs. 2 lakh with a premium of Rs. 330 per year.
16	Krushak Kalyan Yojana	To ensure farmers benefit in the drought and flood prone areas
17	Mo Kudia Yojana	Provide housing facilities to the poor and needed family
18	Mo Pokhari Yojana	To promote in drought prone areas
19	Biju Gaon Gadi	Establish communication to the remote areas
20	Wadi –NABARD	Promote orchard the backward of poor & small farmers in drought and flood prone areas
21	Mobile animal health service	To provide better animal health care in remote areas we need to promote basic animal health care facilities in the disaster prone areas
22	Mission Shakti: Empowering Women through SHGs	<ul style="list-style-type: none"> Capacity building of women on adaptation and risk reduction behaviors and preparedness at household level to face climatic extremes\ Linking livelihood promotion with sustainable natural resource management
23	GopabandhuGramin Yojana	<ul style="list-style-type: none"> The roads must be assessed for future climatic extremes and should be location wise designed to be resilient. The same applies to the other two sectors. The integration can be done from design to implementation, monitoring and evaluation that the infrastructure is created maintained keeping in mind future possibilities and rising frequency and magnitude of extremes. A life cycle analysis based on (probable life of the infrastructure and expected future climatic extreme events) history of extremes and climatic projections can ensure resilient design, construction and maintenance. For this capacity building of planners, contractors and engineers on themes such as, assessment of climate and disaster risks, resilient designs, monitoring and evaluation will be required
24	Biju Pucca Ghar Yojana or Rural Housing	<ul style="list-style-type: none"> Disaster Resilient housing for the beneficiaries by the trained Engineers and Masons Awareness among the beneficiaries to take up disaster resilient housing
25	Indira Awaas Yojana	<ul style="list-style-type: none"> Disaster Resilient housing for the beneficiaries by the trained Engineers and Masons Awareness among the beneficiaries to take up disaster

		resilient housing
26	Pradhan Mantri Suraksha BimaYojana (PMSBY)	<ul style="list-style-type: none"> • Insurance and Risk Transfer to be promoted among the beneficiaries to minimize the losses
27	The Pradhan Mantri Jeevan Jyoti BimaYojana (PMJJBY)	<ul style="list-style-type: none"> • Insurance and Risk Transfer to be promoted among the beneficiaries to minimize the losses
28	Sarva Shiksha Abhiyan	<ul style="list-style-type: none"> • Disaster resilient construction of new school buildings • Retrofitting in existing school buildings • Essential school safety, planning, preparedness & response at school level • Awareness among the PTA • Training of teachers and students on Search & Rescue and First Aid • Mock drill at the schools
29	RashtriyaSwasthya BimaYojana (RSBY)	<ul style="list-style-type: none"> • Insurance and Risk Transfer
30	Pradhan Mantri AwasYojana (PMAY)	<ul style="list-style-type: none"> • Disaster Resilient housing for the beneficiaries by the trained Engineers and Masons • Awareness among the beneficiaries to take up disaster resilient housing
31	Member of Parliament Local Area Development Scheme (MPLADS)	<ul style="list-style-type: none"> • Construction of flood control embankments • Construction of common shelters for cyclones, Floods and handicapped • Purchase of motor boats for flood and cyclone prone areas • Fire tenders for Government organization • Retrofitting of essential lifeline buildings, viz Govt. hospitals, Govt. Schools and public buildings to be used as shelters in an emergency. • Early Warning Systems for effective disaster mitigation. • Construction of roads, approach roads, link roads, Pathways. • Drinking water facility
32	RKVY	<ul style="list-style-type: none"> • Preparation of agriculture plans for the districts and the States based on agro-climatic conditions, availability of technology and natural resources; • Development of structures for to mitigate various disaster related to agricultural, horticultural and veterinary
33	Biju SwasthyaBima	

[Activities/ Projects for 5.3 and 5.4 (Indicative Only):

- Construction of multipurpose cyclone and flood shelters.
- Removal of hoardings before specified cyclone period
- Trimming of trees and shrubs and removal of damaged and decayed parts of trees close to localities and critical infrastructure
- Public safety norms and constructions in places of worship and mass gathering
- Soil erosion control and riverbank stabilization
- Road and Highway Stabilization
- Bridge abutment stabilization
- Protection of Roads, Culverts and Bridges against flood- grass plantation
- Repair and Maintenance of Embankments against flooding and erosion. Retrofitting of vulnerable spots to prevent embankment breaches
- Cross Drainage Works:- Construction of causeways and culverts sufficient for carrying water more than historical records to prevent flash floods in downstream villages
- Drinking Water:
 - Habitations to be covered under pipe water supply scheme
 - Water supply in scarcity areas in during summer season
 - Raising of hand pumps in flood prone areas
 - Repair/ Replacement of non-functional hand pumps
- Sanitation:
 - Community Mobilization
 - Construction of Toilets
 - Municipal Waste Management
 - Sewerage System in ULBs
- Plantation: River bank plantation, AR, ANR, Hill Slope Plantation, Fodder Plantation, Agro forestry etc.
- Soil conservation works.
- Water harvesting
- Prevention of Road Accidents:
 - Putting up of signage in accident prone zones
 - Light reflectors
 - Diversion boards for roads and bridges
 - Repair of potholes & construction of Speed breakers
- Immunization
- Preventive measures against vector borne diseases
- Risk Transfer: Crop insurance/ livestock insurance
- Measures against animal depredation- Trenching/ Fencing
- Awareness generation programmes on disaster prevention and mitigation
- Mainstreaming Disaster Risk Reduction (DRR) in development activities.

3.6.4 Standard Operating Procedures for responsible Departments:

SDMP has outlined the Standard Operating Procedures (SOP) in respect of all responsible Departments and agencies of the State Government.¹⁵ These include the primary tasks of the departments, and the functions to be performed for mitigation, preparedness, early warning, response, recovery and rehabilitation. This will provide good guidance to the Departments to prepare their respective DM Plans.

3.6.5 Disaster Specific Response Plans:

SDMP has further outlined Disaster Specific Response Plans in respect of four major disasters of the State, namely earthquake, landslides, flash floods and snow-avalanche.¹⁶ This will provide good guidance to the nodal Departments in respect of these hazards for preparation of their respective DM Plans.

3.6.6 Emergency Support Functions of Departments:

SDMP has outlined the responsibilities of the primary and secondary agency in respect of 15 Emergency Support Functions (ESF) for disaster response. These include communication, public health, sanitation and sewage disposal, power, transport, search and rescue, public works and engineering, information and communication, relief supplies, food and supplies, drinking water, shelter, media, help lines, animal care, law and order and removal of trees and fuel wood. The Departments having primary and secondary responsibilities in respect of these ESF are well advised to incorporate these functions in their respective DM Plans.

Chapter – 6

Climate Change Adaptation & Mitigation

Weather and climate are the results of complex interactions between anthropogenic and natural factors. Evidence of global climate change include higher average temperatures, changes in precipitation, ocean warming, ocean acidification, sea level rise, decreasing sea ice, and changes in physical and biological systems. Observed climate change can be linked with the increase of green house gas concentrations in the atmosphere since the industrial revolution. Global surface temperature change for the end of the 21st century is likely to reach 4°C if no drastic mitigation actions are taken. Various sources of climate data exist that can support planning for climate change.

Greenhouse gases (GHGs) are trace gases in the atmosphere that absorb and emit long wave radiation. They naturally blanket the earth and keep it at about 33° C warmer than it would be without these gases in the atmosphere. The table features the seven most important greenhouse gases as regulated under the Kyoto Protocol. The seven gases each have a different capacity to trap heat in the atmosphere, or a so-called “global warming potential” (GWP). They all belong to the group of long-lived greenhouse gases (LLGHGs), because they are chemically stable and persist in the atmosphere over time scales of a decade to centuries or longer, so that their emission has a long-term influence on climate. Some of the GHGs occur naturally (e.g. CO₂, CH₄ and N₂O) but increases in their atmospheric concentrations

over the last 250 years are due largely to human activities. Other greenhouse gases are entirely the result of human activities (e.g. HFCs, PFCs, SF6 and NF3).

Table : 6.1

Greenhouse Gas	Global Warming Potential (GW (over 100 years)	% of Total Anthropogenic GH Emissions (2010)
Carbon dioxide (CO ₂)	1	76%
Methane (CH ₄)	25	16%
Nitrous oxide (N ₂ O)	298	6%
Hydrofluorocarbons (HFCs)	124-14,800	< 2%
Perfluorocarbons (PFCs)	7,390-12,200	< 2%
Sulphur hexafluoride (SF ₆)	22,800	< 2%
Nitrogen trifluoride (NF ₃)	17,200	< 2%

6.2 Important GreenhouseGases: Carbon Dioxide (Co₂)

Most important greenhouse gas (contributes ~64% to total radiative forcing by long-lived GHGs). Half of CO₂ emitted by human activities is being absorbed in the biosphere and in the oceans. Rest remains in the atmosphere for hundreds to thousands of years

The most important anthropogenic GHG is carbon dioxide (CO₂). It accounts for around 64% of total radiative forcing due to LLGHGs. Carbon dioxide does not have a specific lifetime because it is continuously cycled between the atmosphere, oceans and land biosphere and its net removal from the atmosphere involves a range of processes with different time scales. CO₂ is primarily emitted as a result of burning of fossil fuels, deforestation and forest degradation and iron and steel production. Oceans and forests are the main sequesters of carbon i.e. sinks that can absorb CO₂ from the atmosphere. Carbon dioxide is the gas to which all other gases are compared when speaking of Global Warming Potential. Emissions of other greenhouse gases can be converted into CO₂ equivalent emissions.

REGIONAL OFFICE, STATE POLLUTION CONTROL BOARD, KEONJHAR:

REGIONAL OFFICE, STATE POLLUTION CONTROL BOARD, KEONJHAR:

CO₂ equivalent emissions: NOT MONITORED

Sl No	Name of the Industries/ Plant/ Firm	Location	Quantity of CO ₂ emission (PPM)	Ranking as per CO ₂ Emission (in the district)	Other major pollutants emitted (PPM)	Action taken for cutting down emission
-	-	-	-	-	ParticulateMatter	-
Remarks : Regional Office, SPC Board, Odisha, Keonjhar is only monitoring ParticulateMatter émission from différent operating industries in Keonjhar district.						

EMISSION MONITORING DATA OF OPERATING INDUSTRIES IN KEONJHAR DISTRICT

Sl. No.	Date of Monitoring	Name of the Industry	Particulate Matter Emitted from the Stack		
			Source	Results in mg/ NM3	Emission Standard in mg/ NM3
1	27.01.2021	M/s. Patnaik Minerals (P) Ltd. At: Ramachandrapur, PO: Basantapur, Dist: Keonjhar	1. Common Stack attached to the ESP outlet of Kiln- II & Kiln- I	72	100
			2. Stack attached to the ESP of DRI Kiln- III	51	100
2	29.01.2021	Ferro Alloys Plant of M/s. Tata Steel Ltd. At/ PO: Bamnipal, Dist: Keonjhar	1. Stack attached to the Ventury Scrubber of Sub Merged Arc Furnace of GC- 1	52	100
			2. Stack attached to multi clone of Grinding, Filtering, Pelletization and Sintering (GFPS) unit	131	100
3	24.02.2021	M/s. Shree Jagannath Steels & Power Ltd. At: Uliburu, PO: Nalda, Dist: Keonjhar	1. Stack attached to the ESP of DRI Kiln – II (Kiln – I not in operation)	49	100
			2. Stack attached to the ESP of AFBC Boiler	52	50
			Common Stack attached to ESPs outlet of Hood exhaust & Wind Box exhaust of Pellet Plant	32	50
4	02.03.2021	M/s. Grewal Associates (P) Ltd., At: Matkambeda Ind. Area, Barbil, Dist: Keonjhar	1. Common Stack attached to the ESPs of Kiln III & IV (Only Kiln-III was in operation)	68	100
5	22.03.2017	Ferro Mn. Plant of M/s. Tata Steel Ltd. At/PO: Joda, Dist: Keonjhar	1. Stack attached to the Ventury Scrubber of GCP-1 of Arc Furnace-1	60	100
			2. Stack attached to the Ventury Scrubber of GCP-2 of Arc Furnace-2	82	100
			2. The stack attached to the ESPs of Kiln IV & V	63	100
6	03.03.2021	M/s. Arya Iron & Steel Co. (P) Ltd. At: Matkambeda Ind. Area, Dist: Keonjhar	1. Stack attached to the ESP of TG	41	100
			2. Stack attached to the Wet Scrubber of Drier	79	100
7	04.02.2021	M/s. Brand Steel & Power (P) Ltd. At: Murusuan, PO: Palaspanga, Dist: Keonjhar	Common Stack attached to the ESPs outlet of Kiln I & II	56	100

8		Ltd. At: Soyabali, PO: Thakurani, Dist: Keonjhar	Outlets of Kiln I & II		
9	03.02.2021	M/s. Tata Sponge Iron Ltd.,At/PO: Bileipada, Dist: Keonjhar	1. Stack attached to the ESP outlet of Kiln - II	66	100
			2. Stack attached to the ESP outlet of Kiln - III	53	100
10	10.12.2020	M/s. Jindal Steel & Power Ltd. At/ PO: Deojhar, Dist: Keonjhar	1. Duct attached to the ESP outlet of Wind Box Exhaust of PP - 1	10	35
			2. Duct attached to the ESP outlet of Hood Exhaust of PP - 1	27	35
			4. Stack attached to the Wet Scrubber outlet of Drier of PP-1	102	100
11	22.01.2021	M/s. N. K. Bhojani (P) Ltd. At: Rugudih, PO: Guali, Dist: Keonjhar	1. Common Stack attached to the ESP Outlet of Kiln I, II & III	92	100
12	01.12.2020	M/s. Patnaik Steels & Alloys Ltd. At: Purunapani, PO: Dubuna, Dist: Keonjhar	1. Common Stack attached to the ESPs Outlets of WHRB & AFBC Boiler	48	100
13	13.09.2019	M/s. RungtaMInes Ltd. (Sponge Iron Division) At: Karakolha, PO: Nalda, Dist: Keonjhar	1. Stack attached to the ESPs of Kiln I, II & III (Only Kiln I is in operation)	32	100
			2. The stack attached to the ESPs of Kiln IV & V	54.2	100
14	06.01.2021	M/s. SreeMetaliks Ltd. At: Rugudih, PO: Guali, Dist: Keonjhar	1. Common Stack attached to the ESPs Outlets of Kiln III & IV	58	100
			2. Stack attached to the ESP Outlet of Kiln V & VI	69	100
			3. Stack attached to the ESP Outlet of Kiln VII	74	100
			4. Stack attached to the ESP Outlet of AFBC Boiler	42	50
			5. Stack attached to Ventury Scrubber Outlet of Blast Furnace	34	100
15	21.12.2020	M/s. SreeMetaliks Ltd. (Iron Ore Pelletization Plant) At: Anra, PO: Upper Raiguda, Banspal, Dist: Keonjhar	Stack attached to the ESP Outlet of Travelling Great (TG) & Kiln	76	100
16	19.02.2021	M/s. MSP Sponge Iron Ltd., At: Haladiaguna, PO: Gobardhan, Dist: Keonjhar	1. Common Stack attached to the ESPs Outlets of Kiln I & II	44	100
	19.02.2021		2. Common Stack attached to the ESPs Outlets of Kiln III &	80	100

			IV		
	04.02.2020		3. Stack attached to the ESP Outlet of Pellet Plant (TG & Kiln)	86	100
17	22.02.2021	M/s. Crackers India Alloys Ltd. At: Gobardhanpur, PO: Deojhar, Dist: Keonjhar	1. Common Stack attached to the ESPs Outlets of Kiln I & II	79	100
18	21.01.2021	M/s. KJS Ahluwalia Steel & Power Division At: Barapada, PO: Guali, Dist: PKeonjhar	1. Stack attached to the ESP Outlet of WHRB of Kiln - III	51	100
			Stack attached to the ESP Outlet of AFBC Boiler	35	100
19	04.01.2020	M/s. Ardent Steel Ltd. At/Po: Phuljhar, Dist: Keonjhar	1. Stack attached to the ESP Outlet of TG & Kiln	44.6	100

CH4 Emission details: - NOT MONITORED

Sl No	Name of the Block	Major Sources	Annual emission (In PPM)	Ranking as per CH4 Emission (PPM)	Action taken for cutting down emission
-	-	-	-	-	-

Nitrogen Oxide (N2O): This office has a monitoring station under state ambient monitoring programme (SAMP) which measures the air quality data for the parameters PM₁₀, PM_{2.5}, SO₂ and NO₂ of Keonjhar town.

Sl No	Name of the Block	Fertilizer /Industrial processes	Annual Usage (In tonnes)	Ranking as per N2O Emission (PPM)	Other major pollutants emitted (PPM)	Action taken for cutting down emission
-	-	-	-	-	-	-

AIR QUALITY MONITORING DATA OF KEONJHAR TOWN FOR THE PERIOD FROM JAN-2021 TO MAR- 2021

Location of the Air Quality Monitoring Station: - Over the Regional Office Building, Keonjhar

Area/ Class: Residential, **City:** Keonjhar, **State:** Odisha

Sl. No.	Sampling Date:	24 – Hourly Value of SO ₂ in µg/ M ³		24 – Hourly Value of NO ₂ in µg/ M ³		24 – Hourly Value of PM ₁₀ in µg/ M ³		24 – Hourly Value of NH ₃ in µg/ M ³	
		Result	Standard	Result	Standard	Result	Standard	Result	Standard
1	01.01.2021	BDL	80	12.86	80	132.0	100	48.1	60
2	04.01.2021	BDL		12.56		119.0		45.5	

3	06.01.2021	BDL		13.86		120.3		43.9	
4	08.01.2021	BDL		15.83		126.7		48.2	
5	12.01.2021	BDL		15.04		140.3		44.6	
6	15.01.2021	BDL		14.37		131.3		43.1	
7	18.01.2021	BDL		14.86		117.7		42.7	
8	20.01.2021	BDL		14.17		134.3		38.9	
9	22.01.2021	BDL		14.62		142.0		35.3	
10	25.01.2021	BDL		14.79		121.7		42.2	
11	28.01.2021	BDL		13.49		143.3		42.0	
12	02.02.2021	BDL		15.7		117.7		34.8	
13	04.02.2021	BDL		14.6		128.7		38.6	
14	09.02.2021	BDL		15.24		131.0		39.5	
15	11.02.2021	BDL		14.88		99.3		33.8	
16	15.02.2021	BDL		14.27		129.0		35.0	
17	18.02.2021	BDL		13.69		95.7		33.1	
18	22.02.2021	BDL		15.16		97.0		33.1	
19	24.02.2021	BDL		14.84		76.0		31.4	
20	26.02.2021	BDL		15.62		80.7		30.3	
21	02.03.2021	BDL		14.5		95.8		35.2	
22	06.03.2021	BDL		16.8		86.0		29.6	
23	09.03.2021	BDL		15.81		85.3		39.5	
24	12.03.2021	BDL		14.14		75.0		34.1	
25	16.03.2021	BDL		13.81		91.7		39.7	
26	19.03.2021	BDL		13.01		87.0		32.6	
27	23.03.2021	BDL		13.08		75.7		32.0	
28	25.03.2021	BDL		13.31		86.7		31.9	
29	30.03.2021	BDL		12.31		81.3		31.5	

(Remarks: Lower Detection Limit = 4.0 µg/M³, BDL stands for Below Detection Limit)

Major Greenhouse Gases Contributors (Anthropogenic) to Climate Change (Table: 6.7)

Greenhouse Gas	Human Source (Examples)	% of Total Global GHG Emissions (2010)
Carbon dioxide (CO ₂)	Fossil fuel combustion, land use changes, cement production, etc	76%
Methane (CH ₄)	Fossil fuel mining/distribution, livestock, rice agriculture, landfills, etc	16%
Nitrous oxide (N ₂ O)	Agriculture (fertilisers) and associated land use change, etc	6%
Hydrofluorocarbons (e.g. HFCs)	Liquid coolants, etc	< 2%
Perfluorocarbons (e.g. PFCs)	Refrigerant, electronics industry and aluminium industry, etc	< 2%

Sulphur hexafluoride (SF ₆)	Insulator in electronics and magnesium industry, etc	< 2%
Nitrogen trifluoride (NF ₃)	Electronics and photovoltaic industries, etc	< 2%

The global community has committed itself to hold warming below 2°C (compared to pre-industrial temperatures) to prevent dangerous climate change. The 2013 IPCC report on the physical science basis of climate change provides a “budget approach” to this goal, looking at total allowable CO₂ emissions level to meet the 2°C target. The report states that in order to have a greater than two in three chance of keeping global warming below 2°C, cumulative emissions of CO₂ cannot exceed 1,000 Giga tonnes of carbon (GtC). As of 2011, more than half this amount, or over 500 GtC, has already been emitted since 1861-1880. When the effects of other greenhouse gases are included, even less CO₂ could be emitted to keep below a 2°C warming.

Current annual emission levels are at 9.5 GtC and are likely to grow every year due to population growth and economic development patterns. If annual emissions continue to grow as in past years (“business as usual” scenario) the carbon budget will be exhausted in the next three decades.

Source: IPCC (2013). *Climate Change 2013 – The Physical Science Basis, Summary for Policymakers*

Details of forest as a major Carbon sink (District) (Table: 6.8) Not Monitored

Reserved Forest / Protected Forest (in Sq. KM)	Revenue / Village Forest (in Sq. KM)	Private owned Forests (in Sq. KM)	Others (If any) (in Sq. KM)	Total (in Sq. KM)

6.2 Sectors with High Mitigation Potential (Table : 6.9)

SI No	Sectors	Mitigation Options
1	Energy	<ul style="list-style-type: none"> • Use of renewable heat and power (hydropower, solar, wind, geothermal and bio-energy) • Improved supply and distribution efficiency • Carbon capture storage (CCS) • Combined heat and power
2	Transport	<ul style="list-style-type: none"> • More fuel efficient vehicles • Use of alternative energy sources (biofuels, cleaner diesel, etc.) • Better land-use and transport planning • Shift from individual transport to public transport systems • More efficient driving practices • Non-motorized transport (cycling, walking)
3	Industry	<ul style="list-style-type: none"> • Process-specific technologies that improve efficiency and reduce emissions • Material recycling and substitution • Heat and power recovery/cogeneration

		<ul style="list-style-type: none"> • Control of greenhouse gas emissions
4	Agriculture	<ul style="list-style-type: none"> • Manure and livestock management to reduce CH₄ emissions • Improved fertilizer application techniques to reduce N₂O emissions • Improved crop and grazing land management to increase soil carbon storage • Restoration of cultivated peaty soils and degraded lands • Agro-forestry practices
5	Forestry	<ul style="list-style-type: none"> • Reduced deforestation • Afforestation/reforestation • Forest management • Tree species improvement to increase biomass productivity and carbon sequestration
6	Waste	<ul style="list-style-type: none"> • Landfill methane recovery • Waste incineration with energy recovery • Composting of organic waste • Controlled wastewater treatment • Recycling and waste minimization • Biocovers and Biofilters to optimize CH₄ oxidation

6.3 Sectorspecificclimate change mitigation projects: (Table : 6.10)

Sl No	Sector	Project Title	Period		Mitigation Targets
			From	To	
	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA

N.B: Please fill in the above table with Project undertaken exclusively for Climate Change Mitigation.

Chapter-7

Inclusive Disaster Risk Reduction

7.1 Data Collection

Data is essential to understanding the risks that people face during disasters and climate change situations. It is important to give effect to policies and establish norms. The Census in 2011 identifies 2.68 Crore persons with disabilities constituting 2.21% of the country's population.

7.2 Policy, Institutional Mechanisms and Inclusive Standards

Policies and their implementation need to be inclusive. Odisha State Disaster Management Plans has already laid the foundation of an inclusive strategy. OSDMA has set up a cell for persons with disabilities headed by a person with disability. The cell will look into inclusion in EWS, SER, rehabilitation and resettlement. Impart training for response forces

ODRAF, Red Cross, Civil Defense and community level task force volunteers. Monitoring accessibility in shelters will also be work of the cell.

The Odisha State Disaster Management Plan 2017 takes note of the vulnerability of disabled persons and the specific provision provided is related to inclusive education of children with disabilities during disasters. It also makes special mention of children with disabilities and specifically 'mentally retarded' (Intellectual Disability).

For preparation of the inclusive DDMP the following data at district level are to be collected

Table-7.1-Information on PWD

Table-7.2-Information on vulnerable women and children

No. of HHs headed by Women	Child Population per village		No. of Widow per village	No. of Orphans per village	
	0-5 Years	6-14 Years		M	F

Table-7.3-Information on people needing special care (Aged and Pregnant Women)

INFORMATION ON PREGNANT WOMEN SHIFTED TO HEALTH FACILITIES			
Sl. No	Name of the Project	No. of Pregnant Women having EDD in June 1st week	No. of Pregnant Women sifted to the nearest Hospital/ Health Facility
1	Hatadihi	14	2
2	Ghasipura	29	5
3	Anandapur	10	0
4	Ghatgaon	32	1
5	H.c.pur	26	1
6	Banspal	34	0
7	Telkoi	25	4
8	keonjhar	80	2
9	Patna	27	0
10	Saharpada	36	12
11	Jhumpura	38	2
12	Joda(T)	20	0
13	Joda(U)	2	0
14	Champua	10	3
	TOTAL	383	32

All AWW are already instructed to provide support to Pregnant & lactating women on priority basis as and when required.

After compiling the database of the people who need special attention in the wake of a disaster and to make the district disaster management plan more inclusive, the following may be considered during District Disaster Management Plan preparation.

- **Pre-Disaster:** Identification of special needs of physically challenged and mentally challenged persons. Make necessary Planning for evacuation of people with special needs with special care and compassion. The DDMP should outline adequate training and orientation of field level functionaries who are normally engaged as front line workers of disaster management at grassroots. Special responsibility may be entrusted with the appropriate officials at block level to ensure the execution of the plan. The district must ensure that the committees and groups created in the district for the disaster management pursuits **has adequate representation from the vulnerable section of the society** as outlined above.
- **During Disaster:** Appropriate Relocation of the people in the shelter with special care, priority in meeting the needs of such population, organizing medical attention if needed.
- **Post disaster:** Ensuring careful & safe return of such people to home, prioritisation during relief distribution, prioritisation of rehabilitation & reconstruction efforts

Chapter – 8

SAFETY OF SCHOOLS AND CHILD CARE INSTITUTIONS

Guidelines on School Safety Policy, 2016- NDMA

The School Safety encompasses “the creation of safe environments for children starting from their homes to their schools and back.” This as well includes safety from large-scale natural hazards, human made risks, pandemics, violence as well as more frequent and smaller-scale fires, transportation and other related emergencies and environmental threats that can adversely affect the lives of children.

Vision :

- The Guidelines stand for a vision of India where all children and their teachers, and other stakeholders in the school community are safe from any kind of preventable risks that may threaten their well being during the pursuit of education.
- Educational continuity is maintained/ resumed even in the immediate aftermath of a disaster so that Children are physically, mentally and emotionally secure within their schools.

Approach and Objectives

- All hazard approach.
- All schools; all stakeholders 2. Strengthening existing policy provisions to make schools safer
- School Safety as an indicator of quality for continued planning, execution and monitoring
- Primary objective is to ensure the creation of safe learning environment for children.
- Also seek to highlight specific actions towards school safety that can be undertaken by different stakeholders within the existing framework of delivery of education.

Applicability

- The National School Safety Policy Guidelines apply to all schools in the country- whether government, aided or private, irrespective of their location in rural or urban areas.
- They apply to all stakeholders involved in delivery of education to Children in India

All hazard approach

- School Safety efforts needs to take cognizance of all kinds of hazards that may affect the wellbeing of children.
- Hazards include structural and non-structural factors.
- Structural factors include dilapidated buildings, poorly designed structures, faulty construction, poorly maintained infrastructure, loose building elements, etc.
- Non Structural factors include loosely placed heavy objects such as almirahs, infestation of the campus by snakes and any other pests, broken or no boundary walls, uneven flooring, blocked evacuation routes, poorly designed and placed furniture that may cause accidents and injury, inadequate sanitation facilities, etc.

National Policy Instruments

1. Constitution of India
2. National Policy on Children -2013
3. Disaster Management Act- 2005

4. National Policy on Disaster Management-2009
5. National Policy on Education (NPE)- 1968 Revised in 1992
6. Right to Education Act- 2009
7. National Building Code of India- 2005 (Revised 2016)
8. Honourable Supreme Court of India- Judgement of April 13th , 2009 on writ Petition (Civil) no. 483 of 2004

Right to Education Act 2009

- The Act sets minimum norms and standards with regard to location and quality of schools and in Clause 19, lays down that no school shall be established, or recognized unless it fulfills the norms and standards specified in the schedule.
- One of the key standards is in relation to access to “all weather buildings”; in “areas with difficult terrain, risk of landslides, floods, lack of roads and in general, danger for young children in the approach...
- The State Government / Local Authority shall locate the school in such a manner as to avoid such dangers”.
- The Act lays down the formation of the School Management Committee for planning of infrastructure and other requirements with respect to operational functioning of schools.
- The School Development Plan, as laid out by the Act, spells out the physical requirements of additional infrastructure and equipments to meet the norms spelt out in the schedule (in relation to all weather buildings).

Key Action Areas

1. Institutional strengthening at the State & District levels

- Co-opting senior officials of the Department of Education in SDMA and DDMA.
- Nomination of School Safety Focal Point Teacher & Sensitization of School Management Committee on DM.

2. Planning for Safety

- Structural Measures (including siting, design and detailing for structural safety).
- Non structural Measures.
- Preparation & implementation of School Disaster Management Plan.
- Leveraging existing flagship programmes to make school campus safer.

3. Capacity building for safe schools

- Training for students and school staff
- Specialized training and skill building of Education officers, representatives of SCERT and DIET, SDMA, DDMA, etc on school safety
- Mock Drills

4. Regular monitoring of risk and revision of School Safety Plans (including Safety Audits & Availability of Emergency Equipment).

Part I:

District:	Keonjhar
Total Block/ULB	13/191
Total Cluster	
Total Village / wards	1848
Total Schools	3372
Total Govt. schools	2713
Total Govt. Aided Schools	315
Total Pvt. Schools	329
Total Govt. schools – Urban	143
Total Govt. schools – Rural	2570
Total Govt. schools – Elementary	2470
Total Govt. Schools – secondary	243
Has the school Safety Advisory Committee been constituted at the Dist. Level	Not Formed

Basic Information

Category & type of schools

Category & Type of School									
Sl.No	Name of the Block	Government Schools				Government Aided schools		Private Schools	
		Elementary		Secondary		Elementary	Secondary	Elementary	Secondary
		Rural	Urban	Rural	Urban				
1	ANANDAPUR	149		10		9	13	11	1
2	ANANDAPUR MPL		33	1	7	2	2	7	3
3	BANSPAL	205		17		1	9	2	1
4	BARBIL MPL	1	22		5	3	2	6	5
5	CHAMPUA	144		23		5	12	22	2
6	CHAMPUA NAC		10		3	2		10	3
7	GHASIPURA	176		22		12	12	16	2
8	GHATAGAON	172		15		7	21	15	3
9	HARICHANDANPUR	223		11		13	15	21	4
10	HATADIHI	239		25		38	22	17	
11	JHUMPURA	171		23		6	11	17	7
12	JODA	141		11		1	6	17	8
13	JODA MPL		19		4	1	1	9	6
14	KEONJHAR	201		20		3	17	35	9
15	KEONJHAR MPL		34		6		3	15	7
16	PATNA	171		15		6	18	24	7
17	SAHARAPADA	162		12		1	16	7	5
18	TELKOI	197		13		7	18	10	1
		2352	118	218	25	117	198	261	74

Details of School Safety in the District

Educational Infrastructure and other facilities				
Block Name	No of Primary schools	No of ME schools	No High schools	Colleges and ITI
Saharpada	97	66	27	4
Banspal	204	01	26	01
Anandapur	130	63	31	7
Jhumpura	108	69	39	1
Hatadihi	137	140	45	5
Joda	127	54	28	4
Patana	112	71	33	5
Saharpada	97	66	27	4
Telkoi	125	73	31	4
Ghasipura	198	24	18	2
Champua	144	38	34	2
Keonjhar	235	23	52	16
Harichandanpu	223	39	28	4

Sl no.	Name of the programme	No. of Schools, Colleges and other educational institutions to be covered during the year	Time line	Remarks
1	Awareness generation and mock drills for fire/earth quake etc	0		
2	Preparation of School disaster management plan	2323		

Vulnerable School/AWC Buildings

Serial No	Block Name	No of Vulnerable Buildings
01	Banspal	05
02	Patana	5 schools & 5 AWC
03	KeonjharSadar	10 Schools in Sadar block affected by cyclone
04	HC Pur	15 School cyclone affected; 3 School flood affected

School Safety Advisory Committee (District)

(Letter has been issued on the date of 01/06/2018 the committee will be finalized after selection of Nodal NGO the district committee will be form)

1. Date of Formation
2. Institutional Architecture

SI No	Name & Designation	Contact No.	Email ID	Remarks
1	Sangram Sahoo, S-SB, District Education Officer, Keonjhar	9861411926	deokeonjhar18@gmail.com	

Part – II (Status of implementation of the National Guideline on School Safety)

Sl no	Activity	Status		
		Completed	To be Completed	Total
1	No of School which have finalised the School Disaster Management Plan (SDMP)	2323		3240
2	No of Schools which have conducted Safety Audit	2323		3240
3	Structural	26		3240
4	Non- structural	3240		3240
5	No of Schools have conducted Annual Mock drills	105		3240
6	No of Schools where fire extinguisher have been installed	3077		3240
7	No of Schools which adhere to Safety Norms with respect to storage of	2806		3240

	Inflamable and Toxic Materials			
8	No of schools confirm to the safety standards as per local building bye-laws (As approved by Local authorities)	1006		3240
9	No of schools which have been issued “ Recognition Certificate” under sub-rule(4) Rule 15 of RTE Rules 2010 (only to schools that comply with structural safety norms)	26		250
10	No of schools where students and teachers undergo regular training in school safety and disaster preparedness	3240		3240
11	No of schools where disaster management is being taught as part of the curriculam.	3240		3240

Chapter-9

Chemical(Industrial),NuclearandRadiologicalDisaster:-

A. Chemical(Industrial)Disaster:

The growth of chemical industries has led to an increase in the risk of occurrence of incidents associated with hazardous chemicals (HAZCHEM). A chemical industry that incorporates the best principles of safety, can largely prevent such incidents. Common causes for chemical accidents are deficiencies in safety management systems and human errors, or they may occur as a consequence of natural calamities or sabotage activities. Chemical accidents result in fire, explosion and/or toxic release. The nature of chemical agents and their concentration during exposure ultimately decides the toxicity and damaging effects on living organisms in the form of symptoms and signs like irreversible pain, suffering, and death. Meteorological conditions such as wind speed, wind direction, height of inversion layer, stability class, etc., also play an important role by affecting the dispersion pattern of toxic gas clouds. The Bhopal Gas tragedy of 1984 the worst chemical disaster in history, where over 2000 people died due to the accidental release of the toxic gas Methyl Isocyanate, is still fresh in our memories. Such accidents are significant in terms of injuries, pain, suffering, loss of lives, damage to property and environment. A small accident occurring at the local level may be a prior warning signal for an impending disaster. Chemical disasters, though low in frequency, have the potential to cause significant immediate or long-term damage.

9.1 Nearest Fire Station of the Factories/Industries Table-9.6

Fire Stations Details											
Organisation Name	Area fire station name	Hospital address	District Name	City	Pincode	Lat-long	Fire Officer Name	Fire Officer Designation	Fire Officer Email-id	Fire Officer Mobile Number	Facilities Available
	Keonjhar F.S		Keonjhar					AFO- K .C. Samal		7008442355	Fire Tender/Capacity
	Aharpada F.S		Keonjhar					LFM- S. N. Tudu		8637200454	Foam Materials
	Anandpur F.S		Keonjhar					SO- P .Singh		9937253623	Hoods
	Banspal F.S		Keonjhar					S.O. P A Minz		8018930469	
	Barbil F.S		Keonjhar					SO- G. Singh		9437064486	
	Champua F.S		Keonjhar					SO- M.Singh		7683826510	
	Ghasipura F.S		Keonjhar					S.O- O P Swain		8249952899	
	Ghatagaon F.S		Keonjhar					SO- G . Singh		7978762187	
	Harichandrapur F.S		Keonjhar					SO- G. Hemram		9853947350	
	Hatadihi F.S		Keonjhar					S.O- S M Naik		6372484988	
	Jhumpura F.S		Keonjhar					SO- A .Sahu		9777200173	
	Joda F.S		Keonjhar					LFM- P.K.Naik		9439282415	
	Patna F.S		Keonjhar					SO- M. R. Mohanta		9438666225	
	Telkoi F.S		Keonjhar					SO- B .B. Pradhan		6370844506	

B. Nuclear&RadiologicalDisaster:

India has traditionally been vulnerable to natural disasters on account of its unique geoclimatic conditions and it has, of late, like all other countries in the world, become equally vulnerable to various man-made disasters. Nuclear and Radiological Emergencies as one such facet of man-made disasters is of relevance and concern to us. Any radiation incident resulting in or having a potential to result in exposure and/or contamination of the workers or the public in excess of the respective permissible limits can lead to a Nuclear/Radiological Emergency.

For improving the quality of life in society, India has embarked upon a large programme of using nuclear energy for generation of electricity. As on date, India has 17 power reactors and five research reactors in operation along with six power reactors under construction. It is also planned to explore setting up Thorium based reactors to meet its ever-increasing energy needs. Further, the country utilises radioisotopes in a variety of applications in the non-power sector, viz., in the field of industry, agriculture, medicine, research, etc. Due to the inherent safety culture, the best safety practices and standards followed in these applications and effective regulation by the Atomic Energy Regulatory Board, the radiation dose to which the persons working in nuclear/radiation facilities are exposed to, is well within the permissible limits and the risk of its impact on the public domain is very low.

However, nuclear emergencies can still arise due to factors beyond the control of the operating agencies; e.g., human error, system failure, sabotage, earthquake, cyclone, flood, etc. Such failures, even though of very low probability, may lead to an on-site or off-site emergency. To combat this, proper emergency preparedness plans must be in place so that there is minimum avoidable loss of life, livelihood, property and impact on the environment.

Although, the State of Odisha does not have any major Nuclear/Radiological setup or power plants, still the Districts need to be prepared in case of any Emergencies especially Medical Preparedness and Capacity Building of the Response Forces. Mock Exercises on Nuclear and Radiological Disasters or Emergencies at regular intervals is also highly essential. Districts are required to keep and update the following information given in the table every year for minimizing the risk of Nuclear/Radiological Disaster.

Chapter-10

Biological Disaster and Public Health in Emergencies:-

10.1 Biological Disaster Management & Medical Preparedness

Biological disasters, be they natural or man-made, can be prevented or mitigated by proper planning and preparedness. The primary responsibility of managing biological disasters vests with the state government. The central government would support the state in terms of guidance, technical expertise, and with human and material logistic support to develop the policies, plans and guidelines for managing biological disasters in accordance with the national guidelines and those laid down by SDMAs.

The H&F would be the nodal Department for managing biological disasters in the State. Further, Home department will be the nodal for Bio-terrorism, Bio War, F&ARD Department will be the nodal department for animal health and Agriculture & Farmers Empowerment Department will be the nodal department for agro-terrorism. Besides, the community, medical-care, public health and veterinary professionals, etc., must also remain in complete preparedness for such eventualities.

Table 10.1 Nodal Departments for Managing Biological Disaster

SIN o.	Bio Disaster	Nodal Department	Contact person	Contact details (Office/Mobile)
1	Biological Disaster	H&FW Department	CDMO (District)	9439987004(M) 06766-250770(O) keonjharcdmo@gmail.com
2	BioTerrorism/ War	Home Department	SP	9437052115 (M) 06766-254106(O) spknj.odpol@nic.in
3	Animal Health Disaster	F&ARD Department	CDVO (District)	8895949545(M) 06766-258404(O) cdvokjr@gmail.com
4	Agro-Terrorism	A&FE Department	DAO	9437366705(M) 06766-255596(O) ddakeonjhar.dag@nic.in

10.2 Institutional & Operational Framework

SDMA will coordinate all the disasters including those of biological origin in the state. A multi-sectoral approach must be adopted involving H&FW, Home Department, PR&DW, SSEPD, F&ARD and A&FE.

The intelligence and deterrence required & the management structure must be identified and strengthened so as to act as one crisis management structure, committees, task forces and technical expert groups preferably within the Nodal department

Table10.2- CrisisManagementCommittee

SL	Member	Dept./Instt.	Contact Details
	Collector & DM	Revenue & DM	8763090000(M) 06766- 255482
	CDM& PHO	Health	
	District Emergency Officer, Keonjhar	Revenue & DM	8895214073(M) 6766-255437
	DPHO	Health	9439987004(M) 06766-250770(O)
	ADPHO(DC)	Health	9439998775
	Epidemiologist	Health	9439987006
	Microbiologist	Health	9439998788
	Pharmacist	Health	9439990211
	Medicine Specialist	Health	9437166392
	MPHS	Health	7008709955
	MPHW	Health	7008321768
	SR Helper	Health	9861171445

Table10.3 TaskForce

SL	Member	Dept./Instt.	Contact Details
1	CDM&PHO, Keonjhar	Health	9439987004
2	DPHO, Keonjhar	Health	9439998775
3	DMO (MS) Cum Suptd, DHH, Keonjhar	Health	9439987006
4	Epidemiologist	Health	9439998788
5	DPM, NHM	Health	9439990211
6	Microbiologist	Health	9437166392

Table10.4 TechnicalExperts

SL	Member	Dept./Instt.	Contact Details
1	CDM&PHO, Keonjhar	Health	9439987004
2	DPHO, Keonjhar	Health	9439998775
3	DMO (MS) Cum Suptd, DHH, Keonjhar	Health	9439987006
4	Epidemiologist	Health	9439998788
5	DPM, NHM	Health	9439990211
6	Microbiologist	Health	9437166392

10.5 Nodal Public Health Institution

SI	Block / Municipality	Name and Address of Health Centre	Facilities (Numbers)			Facility In-charge	
			Wards	Beds	Ventilators	Name	Contact
1.	Keonjhar Sadar	Padmapur CHC	1	6	0	Dr. Ashok Kumar Naik	9439998890
2	Keonjhargarh Municipality	DHH, Keonjhar	2	14	0	Dr. Kishore Ch. Prusty	9439987006
3		UPHC	1		0	Dr. Sabyasachi Behera	8249244511
4	Patna	Patna CHC	1	2	0	Dr. Suprakash Satpathy	9556232706
5	Banspal	Banspal CHC	1	6	0	Dr. Ipsita Subhadarshini	9438434057
6	Telkoi	Telkoi CHC	1	2	0	Dr. Chandan Samal	9439337459
7	Jhumpura	Jhumpura CHC	1	2	0	Dr. Pabitra Kumar Pati	9439986547
8	Ghatagaon	Ghatagaon CHC	1	4	0	Dr. Mukতিকatna Nayak	9439986433
9	Harichandanpur	Harichandanpur CHC	1	6	0	Dr. Mukतिकatna Nayak	9439986433
10		Bhagamunda CHC	1	2	0	Dr. Kailash Ch. Nayak	7894677764
11	Anandapur	Fakirpur CHC	1	0	0	Dr. Prafulla Ch. pal	9439987920
12		SDH, Anandapur	1	4	0	Dr. Dhaneswar Sethy	9437336906
13	Ghasipura	Sainkul CHC	1	2	0	Dr. Ranjeeb Kumar Rout	9937862848
14		Keshdurapal CHC	1	1	0	Dr. Rajendra Ku Murmu	9937365087
15	Saharpada	Udaypur CHC	1	2	0	Dr. Shyam Sundar Tudu	9439998904
16	Joda	Basudevpur CHC	1	2	0	Dr. Laxmikant Singh	9439986716
17		Joda CHC	1	2	0	Dr. Laxmikant Singh	9439986716
18		Barbil CHC	1	4	0	Dr. Pritis Kumar Mohanta	9439986716
19	Hatadihi	Salania CHC	1	2	0	Dr. Pravat Chandra Nayak	7873362818
20	Champua	Bhanda CHC	1	3	0	Dr. Anand Bilom	7684092026
21		SDH, Champua	1	4	0	Dr. Umakanta Sahoo	9437317189

SI	Block	Name and Address of the Health Centre	Personal Protective Equipments (Requirement)			Sanitizers (Requirement)	
			Gloves	Suits	Masks	Sanitizers	Disinfectants
1.	Keonjhar Sadar	Padmapur CHC	10000	0	10000	500	5000 Liter (1% Hypochloride Solution)
2	Keonjhargarh Municipality	DHH, Keonjhar	50000	0	25000	7000	10000 Liter (1% Hypochloride Solution)
3		UPHC	10000	0	10000	500	5000 Liter (1% Hypochloride Solution)
4	Patna	Patna CHC	10000	0	10000	500	5000 Liter (1% Hypochloride Solution)
5	Banspal	Banspal CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
6	Telkoi	Telkoi CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
7	Jhumpura	Jhumpura CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
8	Ghatagaon	Ghatagaon CHC	10000		10000	500	10000 Liter (1% Hypochloride Solution)
9	Harichandanpur	Harichandanpur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
10		Bhagamunda CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
11	Anandapur	Fakirpur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
12		SDH, Anandapur	50000		10000	5000	10000 Liter (1% Hypochloride Solution)
13	Ghasipura	Sainkul CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)

14		Keshdurapal CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
15	Saharpada	Udaypur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
16	Joda	Basudevpur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
17		Joda CHC	10000		10000	5000	10000 Liter (1% Hypochloride Solution)
18		Barbil CHC	50000		10000	5000	10000 Liter (1% Hypochloride Solution)
19	Hatadihi	Salania CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
20	Champua	Bhanda CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
21		SDH, Champua	50000		10000	5000	10000 Liter (1% Hypochloride Solution)

10.6 Collaborative Institutions

Name of the NGO/CS O/ Private Sector	Expertise	Contact Person	Contact Details (Number & Email ID)	Address
TISCO222	CMO	CMO	9238003488	Tisco Joda, keonjhar
Utkal Health care Pvt Ltd	Hospital Manager	HM	9338280999	Ranki, keonjhar sadar

10.4 Preventive Measures

Prevention and preparedness shall focus on the assessment of bio-threats, medical and public health consequences, medical countermeasures and long-term strategies for mitigation. The important components of prevention and preparedness would include

- An epidemiological intelligence gathering mechanism to detect a BW/BT attack;
- A robust surveillance system that can detect early warning signs, decipher the epidemiological clues to determine whether it is an intentional attack;

- Capacity building for surveillance, laboratories, and hospital systems that can support outbreak detection, investigation and management.
- Developing a biological disaster response plan
- Pre-exposure immunisation (preventive, if available any) of first responders against anthrax and smallpox must be done to enable them to help victims' post-exposure.

10.4.1 Pre-Disaster Preventive Measures

- Important buildings and those housing vital installations need to be protected against biological agents wherever deemed necessary through security surveillance.
- Restricting the entry to authorized personnel only by proper screening,
- Installation of High Efficiency Particulate Air (HEPA) filters in the ventilation systems to prevent infectious microbes from entering the circulating air inside critical buildings.
- Those exposed to biological agents may not come to know of it till symptoms manifest because of the varied incubation period of these agents. A high index of suspicion and awareness among the community and health professionals will help in the early detection of diseases.
- Environmental monitoring can help substantially in preventing these outbreaks.
 - Water Supply: A regular survey of all water resources, especially drinking water systems, & proper maintenance of water supply and sewage pipeline will go a long way in the prevention of biological disasters and epidemics of waterborne origin.

FORMAT FOR REPORTING OF CCHs**Name of the District: KEONJHAR****Date of Report:11.04.2021****Covid Care Homes (CCHs) By DISTRICT ADMINISTRATION**

Sl No.	Name of the Block	Total No. of GPs	Total No. of CCHs created	Total no. of Beds	No. of CCHs occupied	Total no. of people stayed in CCHs till today	Total no. of people discharged	No. of people staying today	Out of people staying today (Col-9), No. of people completed 7 days quarantine	Remarks, If any
1	2	3	4	5	6	7	8	9	10	11
1	ANANDAPUR	18	1	50	Nil	Nil	Nil	Nil	Nil	
2	BANSAPAL	21	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
3	CHAMPUA	22	1	50	Nil	Nil	Nil	Nil	Nil	
4	GHASIPURA	25	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
5	GHATGAON	27	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
6	HARICHADANPUR	25	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
7	HATADIHI	31	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
8	JHUMPURA	22	Nil	Nil	Nil	Nil	Nil	Nil	Nil	

9	JODA	19	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
10	KENDUJHAR SADAR	25	1	85	Nil	Nil	Nil	Nil	Nil	
11	PATANA	20	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
12	SAHARAPADA	20	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
13	TELKOI	22	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Total		297	3	185						

Table 10.7 Important/Critical Infrastructure

SI	Infrastructure/Institution Type	Dept./Instt.	Contact person with contact details

10.4.2 Post-Disaster Preventive Measures

- When exposure is suspected, the affected persons shall be quarantined and put under observation for any atypical or typical signs and symptoms appearing during the period of observation.
- Health professionals who are associated with such investigations will have adequate protection and adopt recognised universal precautions.
- It often may not be possible to evolve an EWS. However, sensitisation and awareness will ensure early detection.
- Dead bodies resulting from biological disasters increase risk of infection if not disposed off properly. Burial of a large number of dead bodies may cause water contamination. With due consideration to the social, ethnic and religious issues involved, utmost care will be exercised in the disposal of dead bodies.

10.8 Infrastructure that can be used as quarantine centres

SI	Infrastructure/Institution Type	Dept./Instt.	Contact person with contact details
1	4 nos of multi purpose Flood shelter in two blocks	PR Department /All BDO	BDO, Hatadihi & BDO Ghashipura 9439917013 & 74400-74243
2	All High schools are used for TMC /Quarantine Center	DEO, Keonjhar	DEO keonjhar & All BEO keonjhar, 9861411926

10.5.1 Establishment of Command, Control and Coordination Functions

The incident command system needs to be encouraged and instituted so that the overall action is brought under the ambit of an incident commander who will be supported by logistics, finance, and technical teams etc. EOCs will be established in all the state health departments with an identified nodal person as Director (Emergency Medical Relief) for coordinating a well-orchestrated response.

- Human Resource Development: The DHO, in consultation with the state epidemiological cell, will develop a simple & informative format for daily data collection, depending upon quantum of information available at each level.

10.6 Training & Education

- Necessary training/ refresher training must be provided to medical officers, nurses, emergency medical technicians, paramedics, drivers of ambulances, and QRMTs/MFRs to handle disasters due to natural epidemics/Bio disaster.
- Structured education and web-based training must be given for greater awareness and

- networking of knowledge so that they are able to detect early warning signs and report the same to the authorities, treat unusual illnesses, and undertake public health measures in time to contain an epidemic in its early stage.
- Refresher training will be conducted for all stakeholders at regular intervals. An adequate number of specialists will be made available at various levels for the management of cases resulting from an outbreak of any epidemic or due to a biological disaster.
 - Standardised training modules for different medical responders/community members for capacity building in the area of disaster management developed by state government or national government should be followed to create adequate training facilities for the same.
 - Selected hospitals will develop training modules and standard clinical protocols for specialised care, and will execute these programmes for other hospitals. Table-top exercises using different simulations will be used for training at different levels followed by full-scale mock drills twice a year.
 - A district-wise resource list of all the laboratories and handlers who are working on various types of pathogenic organisms and toxins will be prepared.
 - BDM related topics will be covered in the various continuing medical education programmes and workshops of educational institutions in the form of symposia, exhibition/demonstrations, medical preparedness weeks, etc.
 - Biological disaster related education shall be given in various vernacular languages. Simple exercise models for creating awareness will also be formulated at the district level.
 - Biological disaster plans will be rehearsed as a part of training every six months.
 - Knowledge of infectious diseases, epidemics and Bt activities will be incorporated in the school syllabi and also at the undergraduate level in medical and veterinary colleges.

10.7 Community Preparedness

Community members including public and private health practitioners are usually the first responders, though they are not so effective due to their limited knowledge of BDM. These people will be sensitised regarding the threat and impact of potential biological disasters through public awareness and media campaigns. The areas which need to be emphasised are:

- **Risk communication to the community**
 - Community education/awareness about various disasters and development of Do's and Don'ts.
 - The public will be made aware of the basic need for safe food, water and sanitation. They will also be educated about the importance of washing hands, and basic hygiene and cleanliness. The community will also be given basic information about the approach that health care providers will adopt during biological disasters.
 - Toll-free numbers and a reward system for providing vital information about any oncoming Biological disaster by a nearby responder or the public will be helpful.
 - Definition of predisposing existing factors, endemicity of diseases, various morbidity and mortality
 - indices. The availability of such data will help in planning and executing response plans.

- **Community participation**

- Providing support to public health services, preventive measures such as chlorination of water for controlling the possibility of epidemics, sanitation of the area, disposal of the dead, and simple non-pharmacological interventions will be mediated through various resident welfare associations, ASHA/ANM, village sanitation committees, and PRIs.
- Community level social workers who can help in rebuilding efforts, create counselling groups, define more vulnerable groups, take care of cultural and religious sensitivities, and also act as informers to local medical authorities during a biological disaster phase, will be created after proper training and education.
- NGOs and Voluntary Organisations (VOs) will be involved in educating and sensitising the community.
- Supporting activities like street shows, dramas, posters, distribution of reading material, school exhibitions, electronic media, and publicity, etc., will be undertaken.

A legally mandated quarantine in a geographic area, isolation in hospitals, home quarantine of contacts, and isolation management of less severe cases at homes would only be possible with active community participation.

10.8 Medical Preparedness

Medical preparedness will be based on the assessment of bio-threat and the capabilities to handle, detect and characterise the microorganism. Specific preparedness will include pre-immunisation of hospital staff and first responders who may come in contact with those exposed to anthrax, smallpox or other agents. It further relates to activities for management of diseases caused by biological agents, EMR, quick evacuation of casualties, well-rehearsed hospital DM plans, training of doctors and paramedics and upgradation of medical infrastructure at various levels which will reduce morbidity and mortality. Medical preparedness will also entail specialised facilities including chains of laboratories supported by skilled human resource for collection and dispatch of samples. The major aspects of medical preparedness are e.g. Hospital DM Plan

Hospital disaster planning will consider the possibility & needs to evacuate or quarantine or divert patients to other facilities.

- The plan will be 'all hazard', simple to read and understand, easily adaptable with normal medical practices and flexible enough to tackle different levels and types of disasters.
- The plan will include capacity development, development of infrastructure over a period of time and be able to identify resources for expansion of beds during a crisis.
- The plan will be based on the need assessment analysis of mass casualty incidents. There will be a triage area and emergency treatment facilities for at least 50 patients and critical care management facilities for at least 10 patients
- The quality of medical treatment of serious/critical patients will not be compromised.

Table10.9

Sl.	Block Name	Details of the Doctor's		Details of Civil officer		Details of PRI	
		Name	Contact	Name	Contact	Name	Contact
1.	Keonjhar Sadar	Dr. Siba Ch. Bagh	8249081201				
2.	Patna	Dr. Subhendu Sagar Kumar Nayak	9337663473				
3.	Banspal	Dr. IpsitaSubhadarshine	9438434057				
4.	Telkoi	Dr. Barun Kumar Dhir	8455048980				
5.	Jhumpura	Dr. Khirod Kumar Mahanta	9437179416				
6.	Ghatagaon	Dr. Muktikanta Nayak	9439986433				
7.	Harichandanpur	Dr. Muktikanta Nayak	9439986433				
8.	Anandapur	Dr. Prafulla Ch. Pal	7978114085				
9.	Ghasipura	Dr. Ranjeeb Ku. Rout	9937862848				
10	Saharpada	Dr. Shraban Kumar Das	8249921651				
11	Joda	Dr. Laxmikant Singh	9439986716				
12	Hatadihi	Dr. Pravat Ch. Nayak	9439987914				
13.	Champua	Dr. Deepak Kumar Sahoo	9439986607				

Logistic

Sl	Block	Name and Address of the Health Centre	Personal Protective Equipments (Requirement)			Sanitizers (Requirement)	
			Gloves	Suits	Masks	Sanitizers	Disinfectants
1.	Keonjhar Sadar	Padmapur CHC	10000	0	10000	500	5000 Liter (1% Hypochloride Solution)

2	Keonjhar Municipality	DHH, Keonjhar	50000	0	25000	7000	10000 Liter (1% Hypochloride Solution)
3		UPHC	10000	0	10000	500	5000 Liter (1% Hypochloride Solution)
4	Patna	Patna CHC	10000	0	10000	500	5000 Liter (1% Hypochloride Solution)
5	Banspal	Banspal CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
6	Telkoi	Telkoi CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
7	Jhumpura	Jhumpura CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
8	Ghatagaon	Ghatagaon CHC	10000		10000	500	10000 Liter (1% Hypochloride Solution)
9	Harichandanpur	Harichandanpur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
10		Bhagamunda CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
11	Anandapur	Fakirpur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
12		SDH, Anandapur	50000		10000	5000	10000 Liter (1% Hypochloride Solution)
13	Ghasipura	Sainkul CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
14		Keshdurapal CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
15	Saharpada	Udaypur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
16	Joda	Basudevpur CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)

17		Joda CHC	10000		10000	5000	10000 Liter (1% Hypochloride Solution)
18		Barbil CHC	50000		10000	5000	10000 Liter (1% Hypochloride Solution)
19	Hatadihi	Salania CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
20	Champua	Bhanda CHC	10000		10000	500	5000 Liter (1% Hypochloride Solution)
21		SDH, Champua	50000		10000	5000	10000 Liter (1% Hypochloride Solution)

Table 10.10 Mobile Hospitals & Health Teams

Sl	Mobile Hospitals & Health Teams	Nodal Person	Contact Details

- **Stockpile of Antibiotics and Vaccines**
 - Government medical stores will stock sufficient quantities of essential drugs, antibiotics and vaccines based on the risk assessment. State and local public health authorities have to develop plans for distributing and administering these materials. There is a need to have a supply of readily available anthrax, smallpox and other vaccines, which will be administered rapidly in the event of an outbreak to contain the spread of the disease. All first responders will be vaccinated in an impending disaster situation.
 - A plan will be prepared to define the availability of antibiotics, antivirals, vaccines, sera and other drugs from private pharmaceutical companies who will be able to supply these items at short notice.

Table-10.11-Stockpile of Medicines

Sl	Medicine/Drugs	Actual Requirement	Present availability

- **Emergency Medical Response**

A biological disaster can lead to mass casualty incidences, both intentional or otherwise. The development of infectious diseases depends on various factors such as type of agents, incubation period, immune status of individuals, amount of infectious agent entering the body, etc. However, a large number of cases arising in a short span of time may require prompt establishment of medical posts near the incident site. They would triage the patient, provide basic life-support if required at the site, and transport patients to the nearest identified health facility along with collection and dispatch of biological and environmental samples. If the incident command system is implemented, then the RRT/MFR will be integrated with the ICP and function under the overall direction of the incident commander. Important components of an EMR plan are as follows:

- Pre-hospital care shall be established and operationalised using a trained medical force. EMR at the site will depend upon the quick and efficient response of MFRs.
- MFRs must be trained in the use of PPE and in collection and dispatch of samples from air, water, food and biological materials. The standards for detection and basic life support (airway maintenance, ventilation support, anti-shock treatment and preparation for transportation) will also be developed. EMR will be integrated with ICP and will function under the overall direction of the incident commander. There will be periodic mock drills for checking response time and reducing it to a minimum. Periodic training and refresher training schedules will also be prepared.
- The medical posts shall provide evacuation services, specialised health care, food, shelter, sanitation, etc. These will coordinate with other functionaries involved in search, rescue, helpline and information dissemination, transport, communication, power and water supply, and law and order.
- SOPs for providing hospital care and a command control centre with the district collector as supreme head, will be laid down and rehearsed using mock exercises.
- The modes of communication will be dovetailed with emergency services of the district. Inter-hospital and inter-services communication will be established at all levels.
- Mechanisms for checking the status of coordination in planning, operations and logistic management will be developed.

10.9 PsychoSocial Care

Disasters usually leave a trail of human agonies including loss of human life, livestock, damage to properties, loss of livelihood, and all development works. In any disaster the magnitude of psychosocial and mental health problems is enormous. Apart from logistic and material help, relief and rehabilitation, the sufferings of human beings will require psychosocial and mental health interventions. It has been recognized that

most of the disaster affected persons' experience stress and emotional reactions after disaster as a 'normal response to an abnormal situation', and are able to cope well with a little psychosocial support. However, a significant proportion of people are not able to cope effectively with the situation in the absence of appropriate/ adequate support system and they experience significant signs and symptoms requiring psychosocial support and mental health services. The symptoms are directly related to trauma experience. The greater the trauma, the more severe is the response if other factors are same.

Psychosocial support in the context of disasters refers to comprehensive interventions aimed to help individuals, families and groups to restore social cohesion and infrastructure along with maintaining their independence and dignity in the aftermath of a disaster. Psychosocial support helps in reducing the level of actual and perceived stress that may prevent adverse psychological and social consequences among disaster affected people

Table-10.10 Volunteers & Paramedical Staffs (Community)

Name of Volunteers	Institution/Organisation	Contact Person with contact details	Contact Details (Number & Email ID)	Address

Concept of Social Support Network

The psychological response to a disaster depends on three main factors

Table-10.11

Disaster	Community	Survivor
<ul style="list-style-type: none"> » Place of occurrence » Magnitude » Suddenness » Type 	<ul style="list-style-type: none"> » Level of preparedness » Social support network » Leadership » Past disaster experience 	<ul style="list-style-type: none"> » Age/Sex » Level of education/exposure » Marital status » Physical health / Disability » Personality / Coping skills » Magnitude of losses » Social support available

The psychological reaction that people experience as a result of the disaster may be either adaptive or maladaptive.

Table-10.12

Adaptive	Maladaptive
----------	-------------

<ul style="list-style-type: none"> • Adaptive responses allow individuals to overcome the difficulties caused by the disaster. • For instance, obtaining information or developing effective survival skills. 	<ul style="list-style-type: none"> • Maladaptive reactions can include denial, ineffective actions etc. reactions can be prevented from occurring and if they do occur then they can be treated. • The incident of a young girl can be considered here from Orissa cyclone. The rescue team saw her hanging from a tree after five hours, but she was not having any clothes on her body. After accepting the clothes from the rescue team, she immediately jumped in the floodwater and committed suicide.
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Table-10.13

Phases after a Disaster	Duration	Characteristics
Occurrence of the disaster	Hours	Apathy, Disorientation, Wandering Surprise, Fear, Perplexity Anxiety, Helplessness
Heroic	Upto 1-2 weeks	Feeling strong, Direct feeling of saviour, heroism, Solidarity, Optimism
Honeymoon	2 weeks to 3 to 6 months	Great solidarity, Eagerness to rebuild, Sharing of common experience
Disillusionment	2 months to 2 years	Withdrawal, Loneliness, Anger, frustration, Community disorganization, Negativity, Hostility, Impulsiveness, Violence, Alcohol and drug abuse
Reconstruction	2-5 years and Lifetime	Acceptance of losses Realistic assessment of the situation, Search for alternatives to rebuild lives

14. Coping with Loss & Circles of Support

It is very clear that the usual social support systems are eroded after a disaster. The family and the neighbourhood no more exist as a functional unit. The tertiary level of support system exist to some extent in terms of larger community, government and other external agencies. So, it is essential to pull these external resources (out of the affected community) for rebuilding the social support system and normalize the life of the survivors. At the third level the government and external agencies take the main role to rebuild the entire support system. Apart from the government agencies a lot of other players also come to the forefront. These include:

- Professionals from the medical, legal and other such fields.
- Student volunteers
- Religious social service groups
- Non-government organizations both national and international
- Business communities
- Civil society bodies
- Individuals in their own capacity contributing their skills or money

15. NeedsofMoreVulnerableGroups

The reactions to and impact of a single disaster event may vary among specific groups of survivors within the affected community, i.e. people with special needs or more vulnerable groups viz. children, people with disability, women, elderly people and people needing special medical care facilities. Lot of inter group and intra group variations are there in terms of vulnerabilities as detailed below

Table-10.18

Category	Exposure/Vulnerability
Children	<ul style="list-style-type: none"> • Children who were physically, neurologically, mentally and sensory challenged in the pre-disaster period and those who became disabled after the disaster • Children who need critical medical care facilities e.g. children suffering from cancer, diabetic, asthma, poor heart condition, bloodborne diseases, HIV-AIDS, etc. • The children with special needs who become orphans after a disaster, are most vulnerable to different types of exploitation. • Orphaned and unaccompanied Adolescent children, especially girls Children whose parents are missing or remarried
Women	<ul style="list-style-type: none"> • Pregnant and lactating women • Disabled women • Women on critical health care facility • Women who lost their children and plant undergo re-education surgery • Elderly women • Women with prior history of psychiatric illness
Elderly	<ul style="list-style-type: none"> • Reduced physical & mental capabilities, delayed response syndrome,
	<ul style="list-style-type: none"> • increased transfer trauma & the array of emotional difficulties, • dementia, and rigidity

As per the PWD Act (1995) of Govt. of India, people with disabilities are a highly diverse group. Thus, each disability has its unique characteristics and disability specific needs. Since, their life conditions even prior to disaster are at a higher deprivation level, life conditions after a disaster become even worse. This could induce higher level of psychological distress and negative emotional reactions, which in turn could jeopardize their whole life functions. Therefore, psychosocial care givers should take extra caution to safeguard their self-respect and cater to their mental health needs. In case special intervention programme is needed to address their overall safety, dignity and needs, more emphasis should be placed on the inter-sectoral collaborations for their betterment. The following aspects & vulnerabilities should receive special attention of the care givers in the post-disaster phase:

- Accessibility to shelters and availability of basic amenities
- Availability of auxiliary aids, equipment's and services during the relief
- Special livelihood programme
- Treatment for any associated psychiatric illness
- Long-term community rehabilitation
- People on Dialysis
- People with organ transplantation
- Alcohol/drug dependents
- Heart patients
- People living with HIV/AIDS (PLWHA)
- People on specific therapies (such as Cancer patients)
- Insulin dependent diabetics on high doses of insulin

16. Principles of Psychosocial Support

- No one who experiences or witnesses the event is untouched by it
- Disaster stress and grief reactions are normal responses to an abnormal situation
- Disaster results in two types of trauma i.e. individual and collective trauma. Individual trauma manifests itself in stress and grief reactions, while collective trauma can lead to deterioration in the social ties of survivors with each other.
- Disaster mental health services must be tailored to the needs of specific communities to be served
- Interventions must be appropriate to the phase of disaster
1. Initial phase: listening, supporting, ventilation, catharsis and grief resolution are helpful and
2. latter phase: handling frustration, anger and disillusionment
- Support systems are crucial for recovery
- Attitude of the caregiver

17. Basic Techniques of Disaster Psychosocial Care

- Ventilation: ventilation is a process to help the disaster survivors in expressing their thoughts, feelings and emotions related to the disaster and the resulting living conditions.
- Empathy: "looking at the event from the other person's perspective and trying to realise the trauma of the other person by keeping himself/herself in that situation". This skill of developing empathetic attitude towards survivors comes
 - through regular habit of active listening of the survivor.
 - Active listening Active listening is an important skill to facilitate ventilation and develop empathy, which in turn facilitates the whole process of providing emotional support. The following guidelines can help the caregivers in achieving better results.
 - Look at the person while he/she is talking:
 - Respond occasionally while listening:
 - Avoid interruptions
 - Be tolerant & empathise:
 - Social support: Social support networks are extremely important for feeling comfortable and secure. In a disaster situation all the support systems get disrupted, hence the need to rebuild and restore.
 - Externalization of Interests: Engaging them in small but productive activity/work (keeping age, gender, physical status, skills and interests as considerations) would help

emini bibing a positivethinking and feelings.

- The Value of Relaxation: Introducing relaxation activities for children (for instance some games, songs, dancing, painting, colouring and other things) and adults involving physical movement has proved to be very beneficial in helping survivors recover from their trauma and pain.
- Turning towards Religion and Spirituality: Helping people to turning towards his/her practiced religious rituals and practices (e.g. daily worship, prayer and related activities) would also facilitate the ventilation process, whereby there is a possibility of verbal/non verbal expression of feeling/emotions and thus, making the survivor more peaceful in mind.

18. Ethics & Confidentiality

- Never make false promises to the survivors
- Maintain the confidentiality of the very private information/problems
- what the survivors share with you.
- Have the commitment and strive to help and support the survivors in an unbiased manner
- Helping the co-workers and taking care of yourself is very crucial.
- Whenever, the pressure of work or dealing with humans suffering become stressful for you, seeking help and support is a must.
- Keep smiling and spread smiling among others

FOREST FIRE IN KEONJHAR DISTRICT.

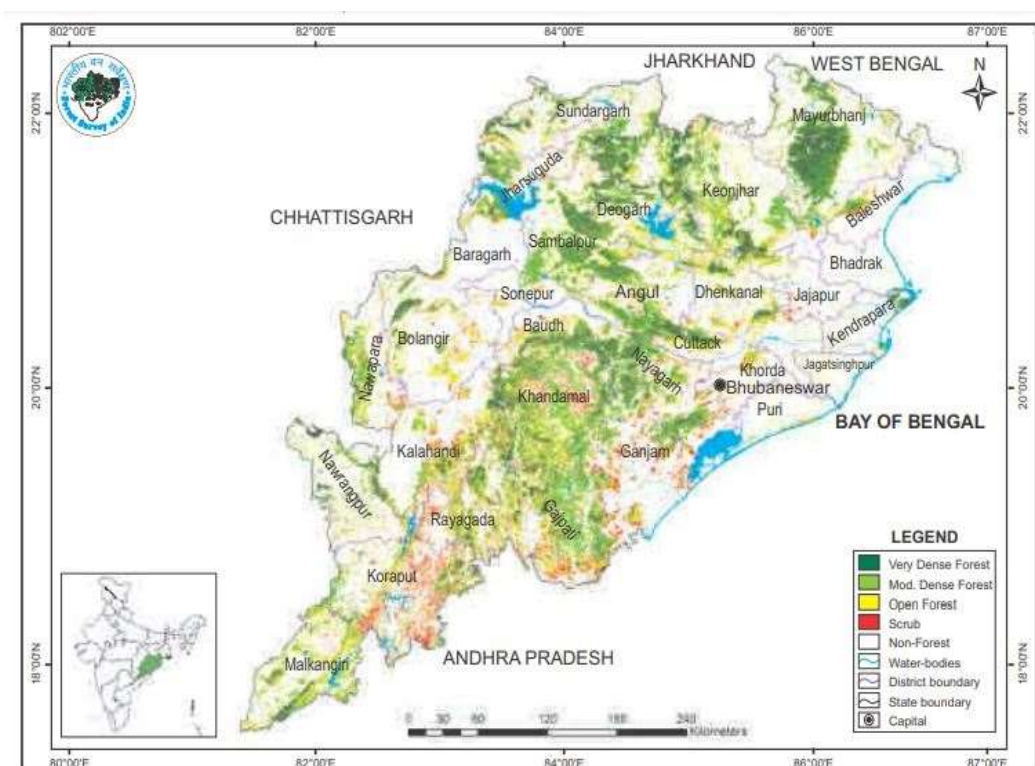
1.1 Forest Area:

The total geographical area of the Keonjhar is 8,303 Sq. Km. The recorded forest area is 3222.16 Sq. Km including Notified Forest Blocks and Other Forest area under the control of Revenue Department and Private Individual. The district average per capita forest area is 121.87 in comparison to Geographical area average of 121.87% which is a healthy sign on natural resource management and future development.

District- wise Forest Cover in Odisha

District	Geographical Area (GA)	2019 Assessment				% of GA	Change wrt 2017 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Kendujhar	8,303	288.78	1,420.07	1513.31	3222.16	121.87	10.16	53.24

Forest Cover Map of Odisha



1.1.1 Forest and Tree Cover:

(Area in Sq.Km)

Forest and Tree Cover

Year	Very Dens	Moderately dense	Open forest	Total	Mangrove	Scrub	Outside forest
2020							
2018	162.281	1162.2045	1177.3328	2501.8183	0	36.1272	3693.893
2016	162.8776	1156.4357	1184.1284	2503.4417	0	37.1977	3644.4741
2014							
2011							
2009							

(Based on the Indian State Forest Report published by the Forest Survey of India)

The forest and tree cover in the state is 55,338 Sq.Kms. i.e. 35.54% of its geographical area against the country's percentage which is 6.90%. This is with reference to the State Forest Report 2017 based on the interpretation of satellite data pertaining to October-December 2015.

1.1.2 Legal Status on Govt. & Private Forest Area (Area in Sq.Km):

The Odisha Forest

Act classifies forest areas into various categories by bestowing different legal status on them.

The details are given below.

1. Legal Status on Govt & Private forest Area (Area in Sq.Km)

Reserved forest	PRF	DPF	UDPF	Other forests/ VF	Un-classed Forest	Total	Private Owned Forest	Deemed forest (DLC Forest)
1185.9419	152.86857	18.9266	224.99213	26.6688	0.2200	1609.618		228.7150
1	3	5	4	1	5	1		5

1.2 Administrative Setup:

The Forest Department field setup is headed by the Principal Chief Conservator of Forests who is the Head of the Forest Force.

Keonjhar	Territorial Circles	Territorial/ Wildlife Division	Territorial/ Wildlife Ranges	Territorial/ Wildlife Section	Territorial/ Wildlife Beats
Number of Unit	0	Territorial-01	7	25	105

**Out of the total 50 Divisions, 37 are Territorial and 13 are Wildlife Divisions.*

Forest Type:

Forest types in Odisha are dry deciduous forests which cover approximately 50% of the total forest area and the moist deciduous forests cover around 30%. The rest 20% consists of various types of forests like semi-evergreen forests, the littoral forests and the tidal swamp forests. The dominating forest types are the dry and moist mixed Sal.

Sl No	Training Programmes	Key Components/Topics	Target Audience
1	Awareness & Forest Fire sensitization	About Forest Fire, role of community, steps to be taken on identification of forest fire, future planning	VSS members, Temporary staff engaged for fire protection
2	Training on capacity building	Training for capacity building on prevention and protection of forest fire with different methodology and use of equipment	Forest Guards, Forester & Forest Ranger

		S.	
3	Strategic planning for prevention and protection of forest fire through consultative workshop	Evaluation of past documentation, shortfalls in taking action for prevention, monitoring of fire protection measures and protection of forest fire, formulation of future strategies.	DFO & RCCF

The following training programme is undertaken for combating forest fire in the Keonjhar Forest Division

S.L No	Training Programmes	Key Components/ Topic	Target Audience	Nos from Keonjhar Division
1	Awareness & forest fire sensitization	About Forest Fire, role of Community, steps to be taken on identification of forest fire, future planning	VSS members, Temporary staff engaged for fire protection	165 nos
2	Training on Capacity building	Training for capacity building on prevention and protection of forest fire with different methodology and use of equipment	Forest Guards, Forester & Forest Ranger	23 nos
3	Strategic planning for prevention and Protection			1 no

Prevention & Mitigation Measures

Forest Fire:

Many forest fires start from natural causes such as LIGHTNING which set trees on fire. Periodic lightning induce fires which have been recorded throughout history of Odisha. However, rain extinguishes such fires without causing much damage. Majority of the forest fires are the result of human neglect. A casual throwing away of a smouldering bidi, cigarette butt or a spark from a picnicker's open hearth in a desiccated forest, causes a fire in summer. Such fires start on the ground due to dry litter and then flames up due to strong winds, engulfing vast tracts of forest as they spread by causing extensive damage.

The forests of Odisha are managed through well-prepared forest working plans. Fire prevention and control has always constituted an important component of

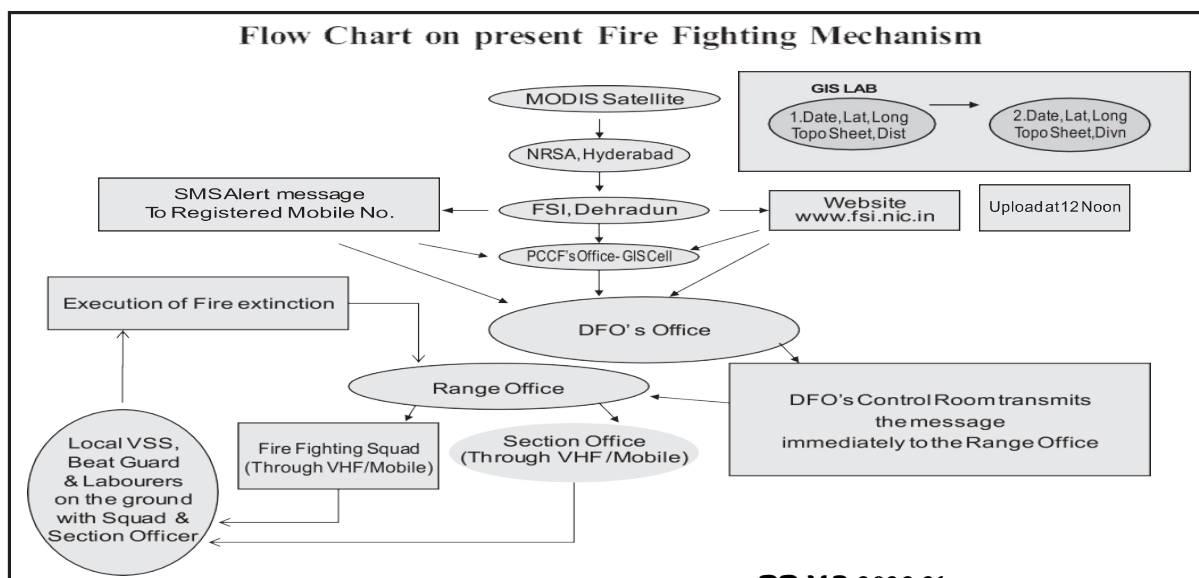
the working plan. In some parts of Odisha, "Slash and Burn" method of Farming is used by the tribes of hilly areas, in which they cut down and burn small areas of the forest and use the cleared land for cultivation. This method of burning offers them not only the cheapest means to clear the forests, but also free fertilizers in the form of ash from the burnt vegetation on limited scale. But when it is indiscriminately practiced, as is being done at present, the damage can be irreversible. Sometimes the local people practise burning for collection of NTFP and also for good growth of Saba grass which spreads to forest area. Mostly, the prescriptions relate to employing traditional practices like creation and maintenance of fire lines, fire tracks, and control burning, engaging fire watchers during the fire season etc. The villages situated in and around forest areas are also legally bound to assist the forest department staff in extinguishing the fires. These methods proved quite effective in controlling forest fires in the state, but gradually due to population pressure on forests and resultant conflicts and resource hunger, it has become difficult to check forest fire through these methods. More and more biotic pressure has increased the fire incidences resulting in poor regeneration of forest areas.

Preventive Measures:

Forest fires are usually seasonal. They usually start in the dry season and can be prevented by adequate precautions. Since old times, forest fire was prevented in the summer through removal of forest litter all along the forest. This was called "Forest Fire line". This line prevents fire breaking into the forest from one compartment to another. Hence in Odisha, fire lines are created in the vulnerable areas of the forest and plantations inside forests to save them from forest fires. Generally, the fire spreads only if there is continuous supply of fuel (Dry vegetation) along its path. The best way to control a forest fire is, therefore, to prevent it from spreading, which is done by creating Fire Breaks in the shape of small clearings or ditches in the forest.

Mitigation Measures:

All the DFOs have been asked to make registration of the mobile phone numbers for fire alert along with the Range Officers so that a quick alert of FSI can be disseminated to field. The IT & GIS Cell of office of the PCCF, Odisha, Aranya Bhawan is facilitating the details of KMZ files relating to different divisions received from FSI to forest divisions with geo-coordinates upto Forest Block level for field inspection by ground staff. The field officials then take adequate measures for extinguishing the forest fire and report back to the higher authority. The flow chart of the total mechanism is furnished below:



Inter-departmental coordination

The involvement of other departments is very much required which depends on the gravity and extent of fire reported. Also for the preventive measures on creating awareness among the people, it is required to co-ordinate with the Panchayat Raj, Revenue, Police, Fire Department and Health Department etc so that they will also be on alert during forest fire hazard. The details on the coordination with other departments and calendar plan for the activities are spelt out in Standard Operating Procedure being adopted by the State (**Annexure-I**).

Incident Response Team:

A three-tier mechanism is in operation for the control of forest fire. The first information received at State Control Room is transmitted to field units and division control room regularly on a daily basis. Then, the action taken by the dedicated fire squads and other support staff on the extent of damage is collected from divisions regularly for effective monitoring. The three-level mechanism is explained as below:

Sl No.	Level	Head of the IRT	Roles/Responsibilities
1	State	Protection & Sustainable Management Wing of Principal CCF, Odisha	<ul style="list-style-type: none">- Coordinate with State Government and other line Departments.- Ensure Reporting of the affected area and assess damage thereof.- Plan and arrange necessary inputs for response measures.- Manage the fund and maintain financial records- Maintain an inventory of all related guidelines, procedures, action plans, district maps and Contact numbers.

2	District/Division	RCCFs & DFOs	<ul style="list-style-type: none"> - To coordinate with Directorate, District Authorities and line departments at District level. - To prepare and activate division plan - To manage the overall response activities in the field - To mobilise resources for response measures - To collect and record information for post incident analysis. - Capacity Building
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Sl No.	Level	Head of the IRT	Roles/Responsibilities
3	Block / Range	DFOs	<ul style="list-style-type: none"> - To supervise collection of information and report to the higher authority. - To prepare and activate plan at Range level - To implement the plan - To ensure availability of resources for response measures - Capacity Building

At present, 269 Forest Fire Squads consisting of 10 members in each squad are working in 216 Ranges wherein 53 Ranges are equipped with two squads depending on the Fire Intensity experience last year. All these squads are provided with vehicle and fire fighting equipments for immediate response to the fire points reported on a daily basis.

Role of NGOs and Voluntary Organizations:

The Forests of Odisha are supported with different Vana Surakshya Samiti and Eco-Development Committees who play a vital role in prevention and protection of forest fire. However, at the district level, few voluntary organizations/NGOs come forward to assist the field officials for prevention and protection of forest fire.

Present System on Forest Fire Control:

On Receiving Warning	Response time	Loss Analysis
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<ul style="list-style-type: none"> - Disseminate the alert to all concerned as per reports received from Forest Survey of India by State Control Room - At District level transmission of information to different Ranges through telephones/VHF network/Sms alert by Division Control Room - Transmission of message to different field units for immediate action to extinguish the fire by Range officer/Fire Fighting Squad 	<ul style="list-style-type: none"> - Within an hour of occurrence through satellite data and communicated to mobile telephones. - Within one hour of transmission of message to different field units by different Ranges. - Immediate action by field units to extinguish forest fire. 	<ul style="list-style-type: none"> - Assessment of damages on regeneration. - Assessment of damages on wildlife - Assessment of damages on timber and other MFPs. - Investigation on the offences resulting to forest fire.
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Reporting formats for damage assessment and others:

The daily reporting on the damage caused by forest fire is received from different divisions as per the fire alert disseminated and forwarded to DFOs on receipt of same from Forest Survey of India. The authenticity is verified at field with the report received on the extent of damage as below:

Sl. No	Date & Time	Lat.	Long	State	District	Circle	Division	Range	Block	Beet	Area Affected on forest fire
Provided by the State Control Room to Division Control Room & Field Units											Reported by DFO & Field Units

Risk Reduction through developmental programmes

Different programmes are taken up under various schemes for expanding and enhancing the forest fire risk reduction as below:

1. A large no. of water bodies are created all over the forest blocks in the state which will be useful for making availability of water.
2. Adequate afforestation measures are taken up to supplement the recovery plan in cases where regeneration has been affected and the forest area has become barren.
3. Regular salvage of timber and firewood is carried out which is useful for reducing forest fire.

4. Subsidiary Silvicultural Operations are taken up to remove the dead, drying trees, creepers which restrict the spreading of forest fire.
5. Vehicular access is augmented for immediate action in case where measures are required to extinguish forest fire.
6. The VHF network and mobile communication is strengthened for law and order, protection purpose which also help in forest fire control during hot summer months.
7. Forest Development Agencies are actively involved in mobilizing the VSS and EDC through different schemes under Green India Mission programme.

CHAPTER-5

Technology Updation

Risks can be minimized by taking a phased approach that gives beneficial returns at each step & tangible results quickly with enhanced efficiency, better decision making and greater use of tested solutions across the department.

Present Practices:

Thematic Area	Best Practice	Technology Intervention	Opportunity for replication
Forest Fire Occurrence From January 2021 to	<ol style="list-style-type: none"> 1. Beating the ground with fire Broom and twigs. 2. Use of fire blowers to prevent further spread of forest fire. 3. Spraying water with help of Fire Department. 4. Use of Fire extinguisher wherever feasible. 5. Mobilization of all squads and staffs of the Range to the site of forest fire in addition to pulling of squads and staffs of the neighboring Ranges along with Fire and Police Department and VSS. 6. Regular monitoring from Division control room by ACF with all Ranges of the Division in addition to surprise field visit by ACF & DFO. 	<ol style="list-style-type: none"> 1. Use of fire blowers to prevent further spread of forest fire. 2. Use of Fire extinguisher wherever feasible 	

Best Practices & innovation in the Department

Technology Needs	Current State of Technology	Prioritization	Collaborating Institute
Geospatial Analysis	Odisha Forest Management System App		Forest Survey of India & OFMS

BestPractices&innovationintheDepartment:

FuturePlan:

<p>Detail Action Plans for management of Forest Fire in this Division during 2020-21</p>	<ol style="list-style-type: none"> 1. Provision of the booklet on SOP to combat forest fire to all field staffs i.e FG, Fr., Range Officer and ACF. 2. Deployment of fire protection squad to the tune of 251 persons in addition to 203 nos forest & Wildlife protection squad, 65 nos AJY Animator and 232 nos Plantation watchers in all 7 Ranges. 3. Sporadic deployment of squad at different fire sensitive locations involving 3 individuals and 1 field staff with vehicle in each Range of the Division. 4. Deployment of fire blower to the tune of 102 nos to all 25 sections of the Division. 5. Creation of new fire line and maintenance of old fire lines over 732 Km in all sensitive forest blocks of this division. 6. Mobilization of deployed staffs and squad in sensitive forest block prone to fire, most often for Kenduleaf, during mid-day hours and forest blocks, situated adjoining fringe villages, during evening hours. 7. Ensuring patrolling of field staffs in vehicle with at least 3 members all over the Range jurisdiction to have a view of fire incidences in the Range and immediate action. 8. Interdepartmental coordination meeting on forest fire involving District Fire Officer, Divisional Forest Officer, Kenduleaf, Divisional Manager, OFDC Ltd. for coordinated preventive and control measures. 9. Arranged 140 nos Awareness meeting at village
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	<p>level involving all forest fringe villages of all 7 Ranges of this division.</p> <p>10. Posting of posters and banners, reflecting the mobile nos of FG, Fr, Range Officer, DFO's control room on prevention and control of forest fire in all forest fringe villages, public roads and public places.</p> <p>11. Deployment of fire control units by all Mining Lease in the Range of 1 KM radius of the mining lease area in Champua, Barbil& BJP Range.</p> <p>12. Control Room allotted to collect the fire data.</p> <p>13. Vehicle tracking system using GPS installed in all protection vehicles and maintained at division level about its movement to particular fire site.</p> <p>14. Provision of incentive to the VSS for meaningful participation in controlling forest fire and incentive provided to 95 nosVss/villages.</p>
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Wild life Section

Administrative set-up (Range, Section, beats):

Ranges- 4, Sections- 12,Beats- 36

EDC/JFM set-up:

EDCs - 0, VSS - 0

Management set-up

No. of RF- 0, No. of PRF- 0, No. of DPF- 0, No. of

(RF/PRF/DPF/UDPF/VFs):

UDPF- 0, No. of VF- 0

Chapter – 11

Capacity Building Measures:

Approach

Developing a DDMP without building capacity or raising awareness amongst stake- holders can be detrimental to the development of a successful and sustainable plan. Stakeholders and communities are critical components to a successful, long-term, sustainable disaster management plan. Capacity Building develops and strengthens skills, competencies and abilities of both Government and non–government officials and communities to achieve their desired results during and after disasters, as well as preventing hazardous events from becoming disasters

Developing institutional capacity is very important. At the same time, by making the local community part of the process and solution would help in ensuring that disaster mitigation measures are more likely to be implemented and maintained over time.

8.2 Capacity Building of Govt. Officials, PRI Members etc.:

A training strategy should be formulated for training of major government and non-governmental cadres in the district who can aid in disaster management. Programmes to be finalized by the district based on need and requirement.

Districts to first utilize the funds available under different schemes at the district level, for capacity building activities. Besides, funds are also available under State Disaster Response Fund (SDRF). District Administration to prepare the Capacity Building plan for the district and send the same with detailed budget to SDMA for necessary funding.

Indicative list of training programmes is given below.]

Sl. No.	Name of the Course/ Training Programme	Participants	Duration of the Training Programme	Month of Organization	To be Organized by	Remarks if any
1	Training programme on treating heat wave related health issues	Doctors and Paramedical Staff, ANMs	1 day		CDMO	
2	Mass Casualty Management.	Para Medics/Police, RPF/Home Guard/Fire and Civil Defense/ Railway Officials			DDMA	
3	Earth quake resistant construction	Asst. Engineers & JEs	1 day			
4	Post disaster damage assessment	AEs of all Blocks and line departments	1 day		DDMA	
5	GIS mapping of Utilities	Block Computer Programmers, Line Department MIS officials	1 day			
6	Public health in emergencies- safe drinking water and sanitation	All BDOs, Block and district level officials of PHED/ RWS & S Dept.			CDMO	
7	Training of teachers on school safety including DM plan and conduct of Mock Drills	Principal/ Head Masters of all Govt & Private Institutions	1 day		DEO	
8	Role of PRIs and ULBs in disaster management.	Members of ZP and ULBs, Chairman & Vice Chairman of PS.	1 day		DDMA/ Collector	

9	Block level training programmes on role of PRIs in Disaster Management	Sarapanchas & PS members	1 day		BDO	
10	Role of NGOs/VOs/CBOs in Disaster Management.	District and block level NGOs/ VOs involved with district administration in disaster management			DDMA/ Collector	
11	Training of ZKSS and BKSS members on basics of disaster management and creating community level awareness for do's and don'ts related to common disasters.	ZKSS and BKSS members		1 day	District Culture Officer/ DIPRO	
12	GIS mapping of Utilities	Block Computer Programmers, Line Department MIS officials	1 day			
13	Public health in emergencies- safe drinking water and sanitation	All BDOs, Block and district level officials of PHED/ RWS & S Dept.			CDMO	
14	Training of teachers on school safety including DM plan and conduct of Mock Drills	Principal/ Head Masters of all Govt & Private Institutions	1 day		DEO	
15	Role of PRIs and ULBs in disaster management.	Members of ZP and ULBs, Chairman & Vice Chairman of PS.	1 day		DDMA/ Collector	
16	Block level training programmes on role of PRIs in disaster management	Sarapanchas & PS members	1 day		BDO	
17	Role of NGOs/VOs/CBOs in disaster management.	District and block level NGOs/ VOs involved with District administration in disaster management			DDMA/ Collector	
18	Training of ZKSS and BKSS members on basics of disaster management and creating community level awareness for do's and don'ts related to	ZKSS and BKSS members		1 day	District Culture Officer/ DIPRO	

	common disasters.					
19	Search & rescue and safe evacuation.	Civil Defense Volunteers, NSS, NYK Volunteers, NCC	5 days		SP/ Asst Commandant of the nearest ODRAF unit.	
20	Training of Masons on earthquake resistant construction.					
21	Role of Media in Disaster Management	Media Personal	1 day		DIPRO	

8.3 District/ Block level Mock Drills:

[Periodic mock drills to be organized involving district and block level officials/ institutions to assess the capacity and preparedness to face certain disasters. All recommendations and findings will be incorporated in updating of DDMP.]

Sl. No.	Type of Mock Drill	Officials/ Institutions to be involved	Month/ Date	Remarks
1	Tsunami	NA	NA	NA
2	Flood	Fire department, Police, NYK staff, Redcross society, Medical straffs, DFO, NGO staff, All district level Officers	June	
3	Cyclone	NA	NA	NA
4	Earthquake	Fire department, Police, NYK staff, Redcross society, Medical straffs, DFO, NGO staff,	February	
5	Industrial Accidents/ Industry Specific Mock drills	DIC, Labor officer, CDMO, Fire	NA	NA
6	Crowd Management	NA	NA	NA

8.4 Community Capacity Building and Community Based Disaster Management:

[District to chalk out detailed plan for community capacity building for disaster management which includes formation of village disaster management committees and task forces, their orientation and preparation of village disaster management plans. The villages having multi hazard vulnerability or having more vulnerability towards flood, cyclone and tsunami may be selected in the first phase i.e. for financial year 2018-19]

Sl. No	Block Name	No. of vulnerable villages covered 2018-19	No. of VDMC and task force members to be oriented	No. NGOs to be involved in the process	Time line	Remark
1	Hatadihi	30	NA	2	Dec ~March	
2	Ghasipura	22	NA	1	Dec ~March	
3	Andandpur	20	NA	1	Dec ~March	

[Block wise village list for 2018-19 to be given in Volume II of the DDMP]

8.5 Capacity building of Cyclone and Flood Shelter Maintenance & Management Committee and Task Force members:

[Note: the districts having Cyclone and Flood Shelter constructed by OSDMA, to draw detailed action plan for formation of FSMMC & FSMMC and training of task forces.]

Sl. No	Name of the Training Programme	Total No. of Persons to be trained	No. of Training Programmes to be organized	Time Line	Remarks
1	Orientation of FSMMC and FSMMC	400	15	Nov ~ March	
2	Training of task force members on Search Rescue and First Aid	25 Task Force	5	Oct ~Dec	
3	PRI Members and Village Volunteers	100	3	Oct ~Dec	
4	Block Level Government Officials	60	2	October ~Dec	

Shelter level mock drills:

Sl. No.	Type	No. of Cyclone/ Flood Shelters to be covered	No. of villages to be covered.	Month/ Date
1	Cyclone Mock drill	NA	NA	NA
2	Tsunami Mock drill	NA	NA	NA
3	Flood Mock drill	4	15	June October ~Nov

CHAPTER -12

Preparedness

Table 55: Relief Lines: Keonjhar district HQ to Block Headquarter

Sl. No	Name of the Road		Type of Road & Length	Vulnerability of the route (Description of the Vulnerability)	Coverage (Blocks)
	From	To			
01	Keonjhar	Ghasipura	90 Km 4 lane road	After Anadapur around ~4 ~5 Km is low line areas possibility of flood water submerge	3
02	Keonjhar	Hatadihi	Around 90 Km 4 lane road, then 22 KM single road	Before Hatadihi ~4 ~5 Km is low line areas possibility of flood water submerge	4
03	Keonjhar	Anandapur	Tar Road - 20~30 Ft	Some portion near Dhakata is low lying areas	2
04	Keonjhar	Patana	Tar Road -20 Ft	Around 30 Km distance from the district Head Quarters	1
05	Keonjhar	Joda	Tar Road -20~ Ft	20 ft with tar road the distance would be around 70 Km from HQ	2
06	Keonjhar	Saharpada	Tar Road - 20~30 Ft	20 ft with tar road the distance would be around 60 Km from HQ	2
07	Keonjhar	Ghatagaon	4 lane road	4 lane under road under construction with tar road the distance would be around 48 Km from HQ	1
08	Keonjhar	Champua	Tar Road -20~ Ft Single road	Single road from DHQ to Champua	2
09	Keonjhar	Banspal	Tar Road -20~ Ft	Single road from DHQ to Banspal	
10	Keonjhar	Telkoi	Tar Road -20 Ft	Single road with narrow road	
11	Keonjhar	Harichandanpur	Tar Road -30 Ft	On main road via KeonjharDuburi road	1

9.1 Relief Line Channels :Block to GPs & Villages

Sl. No	Name of the Road		Type of Road & Length	Vulnerability of the route (Description of the Vulnerability)	Coverage (In Nos.)	
	From	To			Village	Population Approx
01	Ghasipura	Deogan	Tar Road – 10 Km distance the width would be	No vulnerability	6	1200


			10 Ft			
	Ghasipura	Keshdurapal	Tar road, 15 KM Distance width would be 10 FT	No	8	1500
	Ghasipura	Saladei	20 Km Tar road, 10ft Width	In few location is low lying areas	15	2000
	Ghasipura	Batto	20 Km Tar road, 10ft Width	In few location is low lying areas	15	2300
	Ghasipura	Daradipal	18 KM Tar Road	Good road	9	1800
	Ghasipura	Madanapur	8 KM	Good road but low level possibility of water overflow		
	Ghasipura	Balrampur	8 KM	Good road but low level possibility of water overflow		
2	Hatadihi	Gedema	28 KM Tar Road with 10 ft width	Good road but low level possibility of water overflow	15	4000
	Hatadihi	Samana	25 KM Tar Road with 10 ft width	Good road but low level possibility of water overflow	15	3000
	Hatadihi	Panchugochia	12 KM Tar Road with 10 ft width	Good road close to block officer	7	1300
	Hatadihi	Habelswar	27 KM Tar road with 10 ft width	Low level road possibility of water inundation	15	3500
	Hatadihi	Bancho	11Km tar Road, with 10 Ft width	Low level road	4	1000
	Hatadihi	Aiyatapur	30 Km tar Road, with 10 Ft width	Low level road possibility of water overflow	15	4000
	Hatadihi	Ambo	10 Km tar Road, with 10 Ft width	Low lying area	6	1200
	Hatadihi	Sadanga	24 Km tar Road, with 10 Ft width	Low lying areas possibility of water overflow	12	2000
	Hatadihi	Inchada	8 Km tar Road, with 10 Ft width	Low lying areas possibility of water overflow	4	7000
3	Anandapur	Dhakota	18 KM 4 lane road	Good road	5	800
	Anandapur	Tartara	12 KM single road	Low lying area	4	1000
	Anandapur	Belabahali	12 Km	Good road	7	1200
	Anandapur	Kantipala	20 Km	Low lying road	8	700

	Anandapur	Kodapada	23	Low lying area	9	1100
4	Anadpur	Panchupalli	6 KM	PMGSY Road		

Table 57 :Resources available : Response force & Volunteers

Sl. No	Response Force/	Capacity (In Nos.)	No. of trained person			Name of Nodal Person	Contact Details (Mobile/Phone)
			Search /Rescue	First Aid	Relief line Clearance		
1	NDRF						
2	ODRAF						
3	Police	470				Mr. Kalichanran Bagh	0676285306
4	Home Guards						
5	Civil Defense	20				Mr. Rabindra Kumar Parida	8908055319
6	NCC	39				Mr. Joseph Antanny	0676-258120
7	NSS						
8	NYK	50				Mr. Anshuman Dash	06766258464
9	Trained Task force						

1.3 PROCEDURE FOR USING INMARSAT ISAT PHONE 2

1. Stand outside with a clear view to the sky with the phone antenna pointing upwards.
2. There must be a clear line of sight between the phone's antenna and the satellite.
3. Point the antenna towards **South-East** direction.
4. Switch on the phone by pressing the Red power button of the phone for few seconds. Until the screen lights up.
5. Align the antenna for getting the maximum satellite signal strength (minimum two bars) 
6. The screen will show "searching for satellite" "registering with network".
7. The screen will show "ready for service". Inmarsat name will come in top right corner.
8. Then the phone is ready to operate
9. Simply dial the desired no:
 - i. From satellite to landline : Dial **00** + Country code 91+ **STD code (without 0)** + desired **Telephone No**
 - ii. From **Satellite to mobile** : Dial 00 + 91+ Mobile Number

- iii.From **Satellite to satellite**: 00+ satellite phone number
iv.From **Landline** (should have ISD facility) to **satellite** : 00 + satellite phone number
v.From **Prepaid mobile** (should have ISD facility with sufficient balance) to **satellite** : 00 + satellite phone number
10. To end the call Press 'red' button

NOTE:

- A delay in microseconds will be observed so the user is advised to listen to one end and then speak.
- The user is also advised to SPEAK SOFTLY to get better voice quality at the other end.
- Check the Battery. (Display will show a rectKeonjharar block that will be filled according to the charge in the battery). Always charge the battery till it gets charged 100%.

For more detail information please follow the **User Guide document**.

1.4 Alloted Satellite Phone Numbers

SI No.	Districts	Calling Numbers	SI No.	Districts	Calling Numbers
1	Collector Keonjhar	870776146926	27	Collector Rayagada	870776146919
2	Collector Balasore	870776146936	28	Collector Sambalpur	870776146920
3	Collector Bargarh	870776146928	29	Collector Subarnapur	870776146951
4	Collector Bhadrak	870776146927	30	Collector Sundargarh	870776146952
5	Collector Bolangir	870776146930	31	ODRAF Cuttack,	870776146961
6	Collector Boudh	870776146929	32	OASP 6th Battalion	870776146962
7	Collector Cuttack	870776146932	33	ODRAF	870776146959
8	Collector Deogarh	870776146931	34	Bhubaneswar, OSAP 7th Battalion	870776146960
9	Collector Dhenkanal	870776146934	35	ODRAF Baripada, OSAP 5th Battalion	870776146957
10	Collector Gajapati	870776146933	36		870776146958
11	Collector Ganjam	870776146949	37	ODRAF Rourkela,	870776146955
12	Collector Jagatsinghpur	870776146950	38	OSAP 4th Battalion	870776146956
13	Collector Jajpur	870776146947	39	ODRAF Koraput,	870776146953
14	Collector Jharsuguda	870776146948	40	OSAP 3rd Battalion	870776146954
15	Collector Kalahandi	870776146945	41	ODRAF	870776146908
16	Collector Kandhamal	870776146946	42	Jharsuguda, OSAP 2nd Battalion	870776146909
17	Collector Kendrapada	870776146943	43	ODRAF Chatrapur, OSAP 8th Battalion	870776146906

18	Collector Keonjhar	870776146944	44		870776146907
19	Collector Khorda	870776146935	45	ODRAF Balasore	870776146904
20	Collector Koraput	870776146942	46		870776146905
21	Collector Malkangiri	870776146918	47	ODRAF Bolangir	870776146902
22	Collector Mayurbhanj	870776146925	48		870776146903
23	Collector Nabarangpur	870776146924	49	ODRAF Jagatsinghpur	870776146963
24	Collector Nayagarh	870776146923	50		870776146964
25	Collector Nuapada	870776146921	51	Special Relief Commissioner (SEOC)	870776146917
26	Collector Puri	870776146922	52	Managing Director, OSDMA	870776146916

1.5 Preparedness at District level: (The list is Indicative & may be extended further as per need & requirement)

Task	Activity
District Emergency operation Centre (DEOC)	<ul style="list-style-type: none"> • Test Checkup of all communication Interfaces in regular interval • Proper manning of the Control Room as per Para-10 of the Odisha Relief Code • A dedicated vehicle must be earmarked for Control Room
Upward & Downward Communication	<ul style="list-style-type: none"> • Have a list of Nodal person with contact details • Establish regular linkages with all important stakeholders • Contact SEOC regularly
Meeting of DDM (Heads of department stakeholder)	<ul style="list-style-type: none"> • DDMA must meet twice every year & before any disaster • Fix time & venue for regular Preparedness meeting to Assess preparedness of District /Department /Civil Society /Block Community /Family /Individual level regularly • Circulate the minutes of the meeting with clear-cut role & responsibility
Capacity Building	<ul style="list-style-type: none"> • Identifying & designating Nodal Officer for different Dept. • Capacity building & skill upgradation of ODRAF/Fire services/ Police/Hon Guard • Identify Volunteer like Civil Defense/Cyclone shelter Task Force/NCC/NSS/Scout & Guide & train them on Search & Rescue, First aid, evacuation etc. • Take stock of required materials for search & rescue, first aid, casualty management, evacuation, relief etc. & update IDRN portal regularly • Assess preparedness through Mock drill at District, Block & Community level
Shelter Management	<ul style="list-style-type: none"> • Take necessary steps for operation & maintenance of shelters • Test Check of various Equipment at shelter level & repair of the defective

	<p>ones</p> <ul style="list-style-type: none"> • Ensure regular meeting of Shelter committee • Assess Shelter level preparedness through Mock drill I
Planning & Reporting	<ul style="list-style-type: none"> • Collect & transmit Rain fall data regularly • Collect & transmit weather report regularly • Ensure preparation of Disaster Management Plans & Safety plans at levels • Capacity building of all Stake holders • Integrate the District plan with block & Village disaster management Plans • Develop healthy media partnership

1.6 Preparedness at Community Level

Task	Activity
Early Warning Dissemination	<ul style="list-style-type: none"> • Build regular linkages with BEOC & DEOC • Test Check of various Equipment at shelter level & repair of defective ones • Keep updates from BEOC/DEOC • Monitor & Transmit updates to BEOC • Supply required information to BEOC & DEOC
Ensuring Preparedness	<ul style="list-style-type: none"> • Have a list of Nodal person deployed in the village with contact details • Identification of safer routes & shelters • Identify possible ways to reach persons like Farmers/Fisherman/NTFP collectors etc. who ventures into fields, sea & forest respectively • Build teams from among the task force on Search & Rescue, First aid, Damage & loss assessment • Assess preparedness at Family/Individual level • Test Check-up of equipment's

Capacity Development	<ul style="list-style-type: none"> • Understand Local dynamics exposed & vulnerable to different disaster • local Social Economic & weather conditions • Develop Village DM plan • List of emergency contact Nos. & display it in Centre places. • Participate in the activities of Preparing village Disaster Management, developing Safety plans, Capacity building Programmes & Mock Drills
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1.7 Preparedness at Family Level (The list is Indicative & may be extended further as per need & requirement)

Task	Activity
Warning Communication	<ul style="list-style-type: none"> • List the minimum Important requirements Keep all the important Documents in a water proof polythene • Record the Safe & alternative routes to shelter • Keep News update in Radio/TV
Preparedness	<ul style="list-style-type: none"> • Always keep in readiness a “Ready to go Emergency Kit” containing Dry food (for 72 hours x Family member), Drinking water (2ltr/per person per day), Hand wash/soap, Important Documents/Valuables, Whistle/match box/lighter/torch/battery/ umbrella, Mobile & charger / radio • Family must have a “Ready to go First Aid Kit” containing Iodine/ Band aids/ Cotton/ Medicines/ ORS/ ointments/ scissor/ halogens etc. • Assess preparedness on a regular basis by checking Radio/Mobile/ Emergency Kit/First Aid Kit/Fuels & Kerosene (as per need) • Replace the damaged outdated or expired materials with new ones.
Capacity Building	<ul style="list-style-type: none"> • Participate & involve in the activities of village disaster Management plan, preparation of Safety plans, participate Capacity building Programmes & involve in Mock Drills

1.8 Preparedness at Individual Level (The list is Indicative & may be extended further as per need & requirement)

Task	Activity
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Early Warning Dissemination	<ul style="list-style-type: none"> • List & keep a ready to go minimum Important requirements • Record the Safe & alternative routes to shelter • Keep News update in Radio/TV
Ensuring Preparedness	<ul style="list-style-type: none"> • Every individual/children must have a Personal Identity information like a copy of Aadhar card/ Voter ID / School Identity Card & Contact numbers of Preferably two who can be contacted in time of emergency • Family members especially kids must be sensitized about family gathering point during disaster & crowded places • Assess preparedness on a regular basis by checking Radio/Mobile/ Emergency Kit/First Aid Kit/Fuels & Kerosene (as per need)
Capacity development	<ul style="list-style-type: none"> • Participate & involve in the activities of • Disaster Management • Safety plans • Capacity building Programmes • Mock Drills & FAMEX

1.9 Preparedness of Departments

State Management (SDMA)	Disast Author	<ul style="list-style-type: none"> • Coordination with NDMA, central government and state government • New policy making • Lobby and advocacy • Fund mobilization & resource mobilization • Coordination of Supervision of CBDRM/DRR works in disaster affected areas • Documentation of best practices • Provision of funds for infrastructure development • SDMA will review the relief, restoration and rehabilitation measures. • Utilize the machinery in restoration and rehabilitation work without compromise • In close coordination with district and region • Act at the center point for State and below district level
District Management Authority	Disast	<p>Normal:</p> <ul style="list-style-type: none"> • Conduct capacity building porgrammes for Govt. Official, PRIs, NGOs, Volunteers, SHGs, Paramedical Staffs, etc. To have a better knowledge on disasters and its management. • Documentation of best practices • Provision of funds for infrastructure development • Preparation of DDMP and its implementation at all levels <p>Post Disaster:</p> <ul style="list-style-type: none"> • The DDMA will review the relief, restoration and rehabilitation

	<p>measures.</p> <ul style="list-style-type: none"> Utilize the machinery in restoration and rehabilitation work without compromise In close coordination with Blocks, Tahasil and PRIs Act at the center point for State and below district level
Collector/ADM Emergency Officer	<p>Normal:</p> <ul style="list-style-type: none"> Monitor the activities undertaken by DDMA Review the preparedness activities <p>Post Disaster:</p> <ul style="list-style-type: none"> Restoration of Critical Infrastructures to bring situation to normalcy Ensure Restoration of roads & channels, Communication Network, Electricity & Energy Ensure address of health issues in the affected areas Adopt sustainable mitigation measures in the restoration activities Monitor & review the restoration activities Ensure proper functioning of rehab centers Ensure proper functioning of free kitchen centers in rehab centers
CDMO	<p>Normal:</p> <ul style="list-style-type: none"> Awareness and training programs for staff and other stakeholders Preparedness planning and sharing with the DDMA Review and monitor the preparedness activities and report to DDMA <p>Post Disaster:</p> <ul style="list-style-type: none"> All Circle Officers will carry out damage assessment in their respective areas Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment Carry out Disease surveillance measures to check epidemic prone diseases Rehabilitation of deprived & destitute All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA on daily basis Carry out Trauma & Psycho-social counseling A mechanism for quick identification of factors affecting the health of the affected people shall be established for surveillance and reporting. An assessment of the health and nutritional status of the affected population shall be done by experts with experience of emergencies and, if possible, local knowledge. The voluntary deployment of the nearest medical resources to the disaster site, irrespective of the administrative boundaries, will be

	<p>warranted.</p> <ul style="list-style-type: none"> • Mobile medical hospitals and other resources available with District shall be provided to the relief camp. • Adequate supply of medicines, disinfectants etc. shall be made. • Where necessary inoculation shall be done. • Vaccination of the children & pregnant women shall be undertaken. • Vector-borne diseases are a major cause of sickness and death in many disaster situations. Vector control measures shall be undertaken. • Water borne diseases may cause sickness and deaths and therefore adequate measures shall be taken to prevent such outbreaks.
<p>Superintendent of Police (SP)</p>	<p>Normal:</p> <ul style="list-style-type: none"> • Conduct training programmes for staff on operation of updated equipments for Search and Rescue • Conduct training programme for staff on First Aid • Review and monitor of preparedness activities • Rapport building with the local community by the staff members <p>Post Disaster:</p> <ul style="list-style-type: none"> • Close coordination with Dist. Administration • All Circle Officers will carry out damage assessment in their respective areas • Deployment of police personnel in shelters and relief camps to ensure smooth operation • Coordination with the district administration for law and order situation • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA on daily basis
<p>EE- RWSS</p>	<p>Normal:</p> <ul style="list-style-type: none"> • Proper planning for supply of drinking water at the rural pockets for summer and flood season • Time to time restoration of tube wells and raising of platforms in the flood affected area • Aware the community to use safe drinking water <p>Post Disaster:</p> <ul style="list-style-type: none"> • Close coordination with DEOC • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED,

	<p>Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment</p> <ul style="list-style-type: none"> • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA on daily basis • Immediate restoration of drinking water facility • Provision of drinking water tankers in water scarcity pockets. • Disinfection of drinking water sources • Awareness among the community to take safe drinking water
EE- Irrigation	<p>Normal:</p> <ul style="list-style-type: none"> • Identification of weak embankments • Repairing of the embankments • Capacity building training programmes for staff and other stakeholders • Flood contingency planning and sharing with DDMA <p>Post Disaster:</p> <ul style="list-style-type: none"> • Close coordination with DEOC • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA on daily basis
DDA- Agriculture	<p>Normal:</p> <ul style="list-style-type: none"> • Training to farmers and other stake holders on different good agricultural practices • Training to Staff members on different good / updated agricultural practices <p>Post Disaster:</p> <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment
EE- Rural Works	<p>Normal:</p> <ul style="list-style-type: none"> • Routine developmental works but disaster proofing mechanism needs to be ensured <p>Post Disaster:</p>

	<ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Immediate restoration of critical infrastructures
EE- Public Works	<p>Normal:</p> <ul style="list-style-type: none"> • Construct/reinforce the connecting roads from villages to roads, canals and bunds and raise their level so that people can access the high ground. • Routine developmental works but disaster proofing mechanism needs to be ensured <p>Post Disaster:</p> <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Immediate restoration of critical infrastructures
DTO-Telecom	<p>Normal:</p> <ul style="list-style-type: none"> • Routine developmental works such as towers needs to be placed outside crowded locality with the disaster proofing mechanism needs to be ensured <p>Post Disaster:</p> <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Similar damage assessment reports needs to be sent to the parent organisation
CDVO	<ul style="list-style-type: none"> • Normal:

	<ul style="list-style-type: none"> • Awareness of the livestock farming as one of the viable alternative livelihood option in the normal year in particular and in drought year in general through awareness generation, attractive schemes etc. <p>Post Disaster:</p> <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Restore the gosalas with fodder, water etc. • Distribution of assistance • Improvement of the quality and productivity of local livestock through Artificial Insemination and other breeding process. • Strengthening of the dispensaries/Livestock Aid centers with staffs, medicines, and equipment to proper health care of the animal. • Capacity building of the grass root extension workers/Para worker/ farmers on animal health care and hygiene, AI/breeding, birth care etc. • Popularization of the cultivation of nutritious fodder grasses or trees in the home stead/field bunds of farmers/village pasture lands etc. through demonstration unit, mini kit distribution etc. • Storage, Processing, Market linkage, Price fixation of the livestock products • Promotion of the development of Institutions like Milk Cooperatives, Goat grower association etc. for better access to market, credit etc. • Supply of quality and productive fingerlings of fast growing/improved fish species.
RTO/MVI	<p>Normal:</p> <ul style="list-style-type: none"> • Identification of potential places of road accident and necessary arrangement needs to be done to prevent accidents in coordination with the Police service • Prepare a plan to meet any sort of disasters with clear cut role and responsibilities <p>Post Disaster:</p> <ul style="list-style-type: none"> • RTO /MVI needs to have a close watch on the situation and coordinate with DEOC • All Circle Officers instructed to be in coordination with the local authority • Identification and Provision of vehicles for necessary emergency movement
Dist. Fisheries Officer	<p>Normal:</p> <ul style="list-style-type: none"> • Introduction of Pisciculture in all the Dams, Reservoirs /MIP /GP tanks and other bodies.

	<ul style="list-style-type: none"> Capacity building of fish farmers/grass root extn. Workers/SHG members on commercial pisciculture, fish seed and feed production etc. <p>Post Disaster:</p> <ul style="list-style-type: none"> All Circle Officers will carry out damage assessment in their respective areas Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis
Railway	<p>Post Disaster:</p> <ul style="list-style-type: none"> All Circle Officers will carry out damage assessment in their respective areas Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis Damage Assessment report of Railway may be sent to parent department apart from DDMA /DEOC.
EE- Electricity	<p>Post Disaster:</p> <ul style="list-style-type: none"> All Circle Officers will carry out damage assessment in their respective areas Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis Restoration of Electricity in hospitals, administrative buildings
EE – PHED	<p>Post Disaster:</p> <ul style="list-style-type: none"> All Circle Officers will carry out damage assessment in their respective areas Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis Restoration of safe drinking water

	<ul style="list-style-type: none"> • Close watch on outbreak of jaundice and other water related diseases
DEO- School & Ma Education	<p>Post Disaster:</p> <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Immediate restoration of Electricity, Drinking water facility, sanitation facilities after any serious disastrous event
DEO - Higher Secondary Education	<p>Post Disaster:</p> <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Immediate restoration of Electricity, Drinking water facility, sanitation facilities after any serious disastrous event

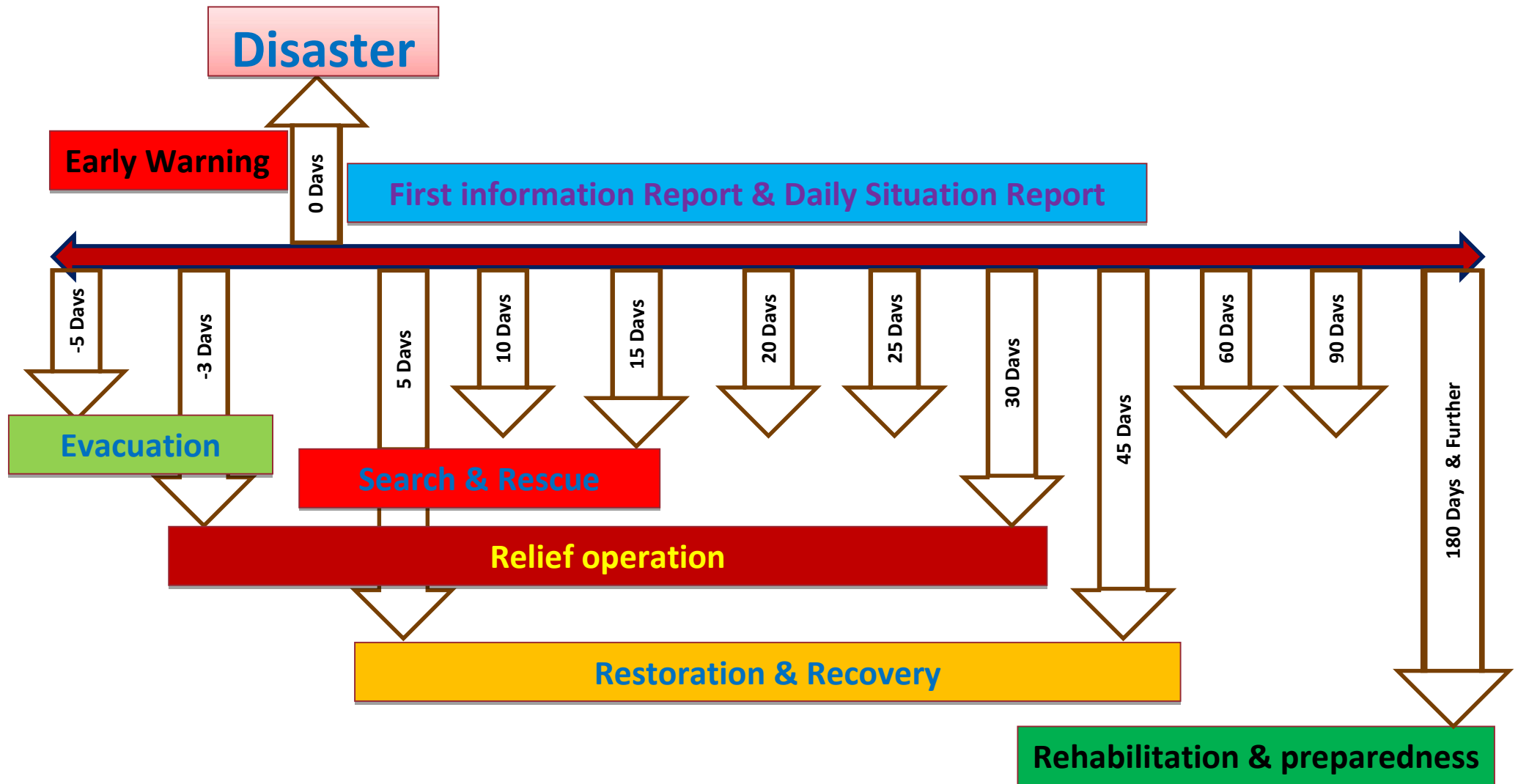
NFSA DAILY REPORT OF LIFTING OF COMMODIES BY FPS AGAINST THE ALORTMENT MONTH OF APRIL,MAY,JUNE -2022											
SL NO	RRC NAME	BLOCK/ MUNICIPALITY	GODOWN CAPACITY	RICE	WHEAT	CHANA	RAGI	DAL	STOCK	VACANT	%UTILISATION OF GODOWN
1	OSWC	5(b)+1(m)	105000	18337.86	5.069	0	0.16	0	18343	86656.91	17.47
2	BARBIL FSD	2(b)+2(m)	25000	4595.01	5.726	0	0.22	0	4600.96	20399.04	18.4
3	MANDU A	2(b)+1(m)	20000	10508.76	393.22 1	0	0.07	0	10900.05	9099.95	54.5
4	PEG	4(b)	50000	38051.69	304.11 4	0	0	0	38355.8	11644.2	76.71
	TOTAL=		200000	71491.32	708.13	0	0.45	0	72199.9	127800.19	36.1

Chapter-13

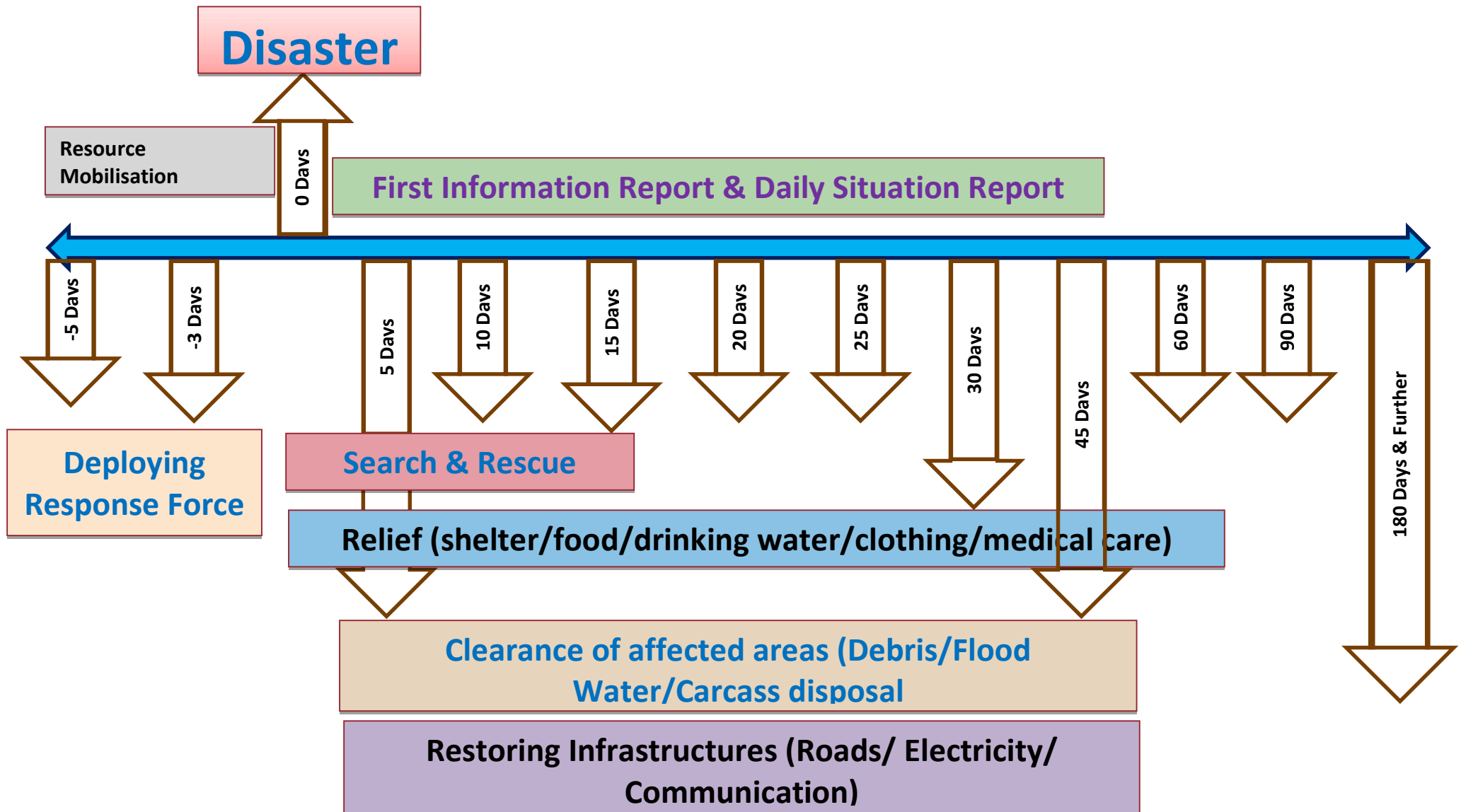
Response

Response refers to activities done for handling disaster to bring the situation to normalcy not exceeding fifteen days from the abatement of disaster. The onset of an emergency creates the need for time sensitive actions to save life and property, reduce hardships and suffering, and restore essential life support and community systems, to mitigate further damage or loss and provide the foundation for subsequent recovery. Effective response planning requires realistic identification of likely response functions, assignment of specific tasks to individual response agencies, identification of equipment, supplies and personnel required by the response agencies for performing the assigned tasks. A response plan essentially outlines the strategy and resources needed for search and rescue, evacuation, etc.

10.1 Phases of Response: Timeline (Indicative)



10.2 Relief Management: Timeline



10.3 Response

Response: District (The list is Indicative & may be extended further as per need & requirement)

Task	Activity
Warning Communication	<ul style="list-style-type: none"> Warning dissemination to the list of Nodal person & concerned BDOs Recording the receipt of information & regular Status update Transmitting updates to SEOC in regular interval as instructed
Meeting of DDMA (Heads of the department & stakeholder)	<ul style="list-style-type: none"> Collector to take up a department coordination meeting & distribute works among all the Departments Collector issues circular to keep Govt. offices open cancelling all holidays. A fixed time to be finalized every day for reporting at all level. A nodal officer is identified for media management Circulate the minutes of the meeting with clear-cut role & responsibility
Pre-positioning of staff, resources & Evacuation	<ul style="list-style-type: none"> Identifying & designating Nodal Officer for different stages of disaster & affected areas. Positioning of ODRAF/NDRF/Fire services/ Police/Home Guard in the affected areas Pooling Volunteer services (Civil Defense/Task Force/NCC/NSS/Scout & Guide) Take stake of required materials for search & rescue, first aid, casualty management, evacuation, relief etc. Make necessary arrangements of shelters for evacuation Constitute a special team for special care to vulnerable section like Specially abled, Sr. Citizen, Pregnant & lactating women, Infants & children etc.
Rersponse	<ul style="list-style-type: none"> EOCs to Ensure back up (Power/Fuel/internet/ Communication at Dist/Dept. & Block levels Response force under guidance of Nodal officers ensure complete Evacuation (Human/ Animal), carry out Search & Rescue, clear relief lines, Collector to submit requisition of vehicle/boat/ helicopters & list of support from state & Centre to all concerned authorities CSO to store required relief materials (Chhuda. Gur, Dry Foods) in the nearby storage points CDVO to store, transport & distribute required foddors for animals to the affected areas

	<ul style="list-style-type: none"> • Cyclone shelter committee & Village Disaster management committee to organize free kitchen in the shelters with help of revenue dept. • EE- RWSS & CDMO to ensure supply of drinking water, disinfection of water & maintain Health & hygiene in the shelters • CDMO to carry out First aid & casualty management • Collector to collect & transmit First Information Report (FIR) & Daily Situation Report as per requirement
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10.4 Response: Community Level (The list is Indicative & may be extended further as per need & requirement)

Activity
<ul style="list-style-type: none"> • DEOC to disseminate warning communication to BEOC & Community • Response force to ensure Power/Fuel/internet/ Communication at Shelters back up • Supply Inspectors & Marketing Inspectors to distribute relief materials with response force, Task force & volunteers • Response force to carry out Search & Rescue measures, Emergent relief operation, Relief line clearance, distribution of relief • Doctors to carry out First aid & casualty management, Carcass disposal & sufficient mortuary facility in the affected areas

10.5 Response: Family & Individual Level (The list is Indicative & may be extended further as per need & requirement)

Task	Activity
Response	<ul style="list-style-type: none"> • Listen to the instruction of the response force & warnings • Economic use of "Ready to go Emergency Kit" Ready to go First Aid Kit • Cooperate the response force/officers & Render volunteer service if asked for • Maintain cleanliness & hygiene at shelter

10.6 Response: Standard Operating Procedures for Departments (The list is Indicative & may be extended as per need & requirement)

Name of Department	On Receiving Warning	Response time	Post Disaster
Collector/ADM / Emergency Officer	<ul style="list-style-type: none"> • Review the situation in DDMC • Activate EOC & Early Warning • Work distribution for operation • Circular to keep offices open round the clock • Arrange vehicle & activate Evacuation process (Normal/Forceful) 	<ul style="list-style-type: none"> • Activate Search & Rescue • Arrange temporary shelters • Arrange logistics in shelters • Workout financial estimates (evacuation / relief /recovery) 	<ul style="list-style-type: none"> • Activate relief line clearance • Proper relief Distribution • Start damage assesment • Facilitate Ex-gratia & Compensation • Start primary damage estimate • Pool resources for SAR/shifting of critical patients
CDMO	<ul style="list-style-type: none"> • Disseminate the alert to all concerned (Staff list) • Arrangement of medicine, First aid kits & teams • Mobile Health units for inaccessible pockets • Identifying & shifting patients requiring intensive care to safer places • Supply of medicines & pre-positioning of medical teams to vulnerable areas • Vaccination for prevention of communicable diseases • Measures to dis – infect drinking water 	<ul style="list-style-type: none"> • Mass Casualty Management units & Triage • First Aid Centers • Medical surgical teams • Adequate mortuary facility • Measures to shift patients requiring intensive care • Pool of Blood donors (Preferably each group) • Additional laboratories • Carcass disposal team & units 	<ul style="list-style-type: none"> • Psycho-Social Counseling • Post Disaster Disease surveillance system • Special attention to vulnerable section • Networking with & promote treatment in Private Hospitals • Carcass Management & Issuance of Death Certificate

	<ul style="list-style-type: none"> • Availability of Blood Banks/Ambulance 		
Superintendent Police (SP)	<ul style="list-style-type: none"> • Emergency traffic plan • Detail communication plan • Identification of Buildings for relief storage and godown • Security plan • Resource mapping • Training 	<ul style="list-style-type: none"> • Search and rescue • Deployment of resources • Plan to prevent cognizable offence • Security for the relief distribution • Camp management • Emergency transportation and communication system • Coordination with various agencies • Casualty information and disposal of dead bodies • Family liaison officers • Media management • VIP security • Crowd Management 	<ul style="list-style-type: none"> • Accommodation of person with special needs • Restoration of critical infrastructure • Safe exit of personnel involved in disaster management • Feedback and assessment • Contingency planning
EE- RWSS	<ul style="list-style-type: none"> • Inform people to store emergency supply of drinking water • Arrange standby water supply • Establish procedures for emergency distribution of water, if necessary 	<ul style="list-style-type: none"> • Organize monitoring of wells, intake structures, pumping stations, treatment plant • Make provision for distributing water on emergency basis 	<ul style="list-style-type: none"> • Cover pumps and restore with adequate protection to prevent damage • Establish emergency work gangs for immediate post disaster repair
EE- Irrigation	<ul style="list-style-type: none"> • Arrangement of materials for repairing of roads and breaches for post disaster preparation 	<ul style="list-style-type: none"> • Arrange casual labour on emergency basis 	<ul style="list-style-type: none"> • Immediate repair of the road and breaches for communication and transportation
Revenue	<ul style="list-style-type: none"> • Close contact with district administration • Alert officials to remain in HQ 	<ul style="list-style-type: none"> • Disseminate day to day information of the position of the blocks 	<ul style="list-style-type: none"> • Ensure cooperation of the public / task force during damage assessment
DAO- Agriculture	<ul style="list-style-type: none"> • Review and update 	<ul style="list-style-type: none"> • Determine what drugs and 	<ul style="list-style-type: none"> • likely damage to

	<p>precautionary agricultural measures</p> <ul style="list-style-type: none"> • Check available stock of equipment and materials • Stock agricultural equipments • Determine what damage, • pests or disease may be expected Review and update precautionary agricultural measures • Check available stock of equipment and materials • Stock agricultural equipments 	<p>insecticide item will be required</p> <ul style="list-style-type: none"> • Provide information to all concerned about diseases, • Determine what damage, pests or disease may be expected • Determine what drugs and insecticide item will be required 	<p>crop and plantation Inform ways to protect crop and plantation</p> <ul style="list-style-type: none"> • Provide information to all concerned about diseases, likely damage to crop and plantation • Inform ways to protect crop and plantation
Animal Husbandary	<ul style="list-style-type: none"> • Check and stock emergency medical equipments • Check and stock surgical packs • Prepare an area of the hospital to receive large number of livestock • Determine expected injuries/ illness to cattle • Assemble and sterilize surgical packs • Establish cattle camps and veterinary aid centers at disaster sites • Designate Officer in Charge for the camps Estimate 	<ul style="list-style-type: none"> • Develop emergency admission procedure • Provide information to all staff of veterinary hospitals and centers about the disaster, likely damages and effects • Organize transfer of seriously injured livestock from village to veterinary aid centers • Ensure adequate sanitary conditions to avoid outbreak of epidemics. • The VAS/AVAS/ LIs to remain present in their respective head quarters and keep regular contact with CDVO/Subdivisional Veterinary Officer, Local Revenue Officers, BDOs, Public Representatives, Villagers & NGOs working 	<ul style="list-style-type: none"> • Activate public information centre • Report to Emergency Operation center and District Control Room Animal health camps will be conducted in the disaster affected villages and preventive vaccination will be carried out in case of outbreak in any area of the distri

	<p>requirement of water, fodder and animal feed for cattle camps.</p> <ul style="list-style-type: none"> • Preventive vaccination against common contagious diseases of Cattle and Buffalos to be taken up. • Special Medicines and life saving drugs may be made available out of SRC grant to meet the emergency situations during disaster, as the normal quota of the medicine may not be adequate. • Cattle feed like rice bran/ pre mixed cattle feed/ straw to be kept ready at different storing points preferably in Panchayat Samiti godownssince there is no storage facility in Veterinary dispensaries. 	<p>for animal welfare and take care and rescue their live stock.</p> <ul style="list-style-type: none"> • Veterinary Mobile teams to be stationed in each block and VD head quarters who will visit the marooned villages for treatment of affected animals. • Control Room will function during rainy season 	
CESCO	<ul style="list-style-type: none"> • Arrange and procure additional generator from local market • Check emergency tool kits • Assemble additional equipments needed 	<ul style="list-style-type: none"> • Assist the district authorities to make arrangements for standby generators in hospitals, RWSS, Collectorate, Meteorological Stations 	<ul style="list-style-type: none"> • Review the total extent of damages to the power supply installations
NGO	<ul style="list-style-type: none"> • Mobilize volunteers • Work distribution among volunteers 	<ul style="list-style-type: none"> • Help the injured to move to the hospital • Deployment of Volunteers 	<ul style="list-style-type: none"> • Help people to return to their homes

		and resources at shelter points	
EE- Public Works Department	<ul style="list-style-type: none"> • Review and update precautionary measures and procedures • Extra transport vehicles, filled with fuel to be stationed at strategic spots along routes likely to be affected Secure work under construction • Secure heavy equipments • Issue two way communication to all • Check evacuation routes and assist people in evacuating an area 	<ul style="list-style-type: none"> • Inspect all roads and bridges by a bridge engineer, foundation and piers • Inspect all govt. buildings and structures • Assemble emergency tool kits like axes, power saws, pulley block, etc • Identify and mark strategic routes • Community assistance mobilized for road clearing 	<ul style="list-style-type: none"> • Establish priority listing of roads (to hospitals and main trunk routes) to be opened first • Despatch extra transport vehicles from headquarters

Chapter -14

11.1 Rehabilitation & Restoration

Rehabilitation and restoration comes under recovery phase immediately after relief and rescue operation of the disaster. This post disaster phase continues until the life of the affected people comes to normal. This phase mainly covers damage assessment, disposal of debris, disbursement of assistance for houses, formulation of assistance packages, monitoring and review, cases of non-starters, rejected cases, non-occupancy of houses, relocation, town planning and development plans, awareness and capacity building, housing insurance, grievance redress and social rehabilitation etc.

The district is the primary level with requisite resources to respond to any natural calamity, through the issue of essential commodities, group assistance to the affected people, damage assessment and administering appropriate rehabilitation and restoration measures.

The District Disaster management Authority reviews the relief measures submit financial requisition to the state Govt. under SDRF & NDRF. The requisition must reach the SDMA & SRC office in the prescribed format as detailed below for smooth & quick processing.

11.2 Standard Operating Procedure : Restoration & Rehabilitation (The list is Indicative & may be extended further as per need & requirement)

Name of the Department	Normal Time
Collector/ADM / Emergency Officer	<ul style="list-style-type: none">• Restoration of Critical Infrastructures to bring situation to normalcy• Ensure Restoration of roads & channels, Communication network, Electricity & Energy• Ensure health in the affected areas• Adopt sustainable mitigation measures in the restoration activities
CDMO	<ul style="list-style-type: none">• Carry out Disease surveillance measures to check epidemic prone diseases• Dis-infection of drinking water & measures for health & hygiene• Rehabilitation of deprived & destitute• Carry out Trauma & Psycho-social counseling

Superintendent of Police (SP)	<ul style="list-style-type: none"> • Conduct training programmes for staff on operation of updated equipments for Search and Rescue <ul style="list-style-type: none"> • Conduct training programme for staff on First Aid • Review and monitor of preparedness activities • Rapport building with the local community by the staff members Post Disaster: <ul style="list-style-type: none"> • Close coordination with Dist. Administration • All Circle Officers will carry out damage assessment in their respective areas • Deployment of police personnel in shelters and relief camps to ensure smooth operation • Coordination with the district administration for law and order situation • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By Go) to be submitted to DDMA on daily basis
DTO-Telecom	<ul style="list-style-type: none"> • Routine developmental works such as towers needs to be placed outside crowded locality with the disaster proofing mechanism needs to be ensured Post Disaster: <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • Representatives from line department's viz. Agriculture, PWD, PHED, Water Resource, Animal Husbandry, Education, Health, Irrigation, Fishery and Social Welfare will accompany Circle Officer & his staff during damage assessment • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Similar damage assessment reports needs to be sent to the parent organisation
CDVO	<ul style="list-style-type: none"> • Awareness of the livestock farming as one of the viable alternative livelihood option in the normal year in particular and in drought year in general through awareness generation, attractive schemes etc. Post Disaster: <ul style="list-style-type: none"> • All Circle Officers will carry out damage assessment in their respective areas • All damage assessment reports in the prescribed format (By GoO) to be submitted to DDMA /DEOC on daily basis • Restore the gosalas with fodder, water etc. • Distribution of assistance • Improvement of the quality and productivity of local livestock through Artificial Insemination and other breeding process. • Strengthening of the dispensaries/Livestock Aid centers with staffs, medicines, and equipment to proper health

	<p>care of the animal.</p> <ul style="list-style-type: none"> • Capacity building of the grass root extension workers/Para worker/ farmers on animal health care and hygiene, AI/breeding, birth care etc. • Popularization of the cultivation of nutritious fodder grasses or trees in the home stead/field bunds of farmers/village pasture lands etc. through demonstration unit, mini kit distribution etc. • Storage, Processing, Market linkage, Price fixation of the livestock products • Promotion of the development of Institutions like Milk Cooperatives, Goat grower association etc. for better access to market, credit etc. • Supply of quality and productive fingerlings of fast growing/improved fish species.
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11.3

Damage Loss Assessment

Sector	Damage Physical terms	Requirement of funds for repair of immediate nature	Out of (3) amount available from annual budget	Out of (3) amount available from related schemes/ programmes / other sources	Out of (3) amount proposed* to be met from SDRF/NDRF as per the list of works indicated in the revised items & norms
1	2	3	4	5	6
Roads Bridges					
Drinking water Supply works (Rural)					
Drinking water Supply works (Urban)					
Irrigation					
Power					
Primary					

Health Centres					
Community assets in social sectors covered by Panchayats					

11.4 Calculation of assistance for agricultural input subsidy-SMF

(Rs. In lakh)

Sl.	Name of the Block	Area held by SMF (in Hectares)	Total Agricultural area Affected [in Hect.]	Total agricultural area where crop loss is > 50%	Crop loss 33% & above		Expenditure incurred	Total				
					Irrigated [in hect.]	Rainfed [in hect.]			Perennial	Irrigated @Rs. 13,500/- per hectare	Rainfed @Rs.680/- per hectare	Perennial @ Rs.18000/ per Hect.
1												
Total												

11.5 Agricultural input subsidy- Farmers other than SMF

Farmers affected first year

(Rs. In lakh)

Sl.	Name of the Block	Area held by farmers other than SMF (in hectares)	Crop loss > 33%							
			No of Farmers	Irrigated area in hect	Amount spent @ Rs.13,500 /- per hect.	Rainfed Area in hect.	Amount spent @ Rs.6800/- per hect.	Perennial Area in hect	Amount Spent @ Rs.1800 / per Hect.	Total Amount Spent
1										
2										
3										
Total										

Assistance sought for repair /restoration of damaged houses(Rs. In Lakh)

Sl	District	Fully Damaged/ Severely Damaged							Partially (15% &More)				Huts		Cattle shed attached with house		TOTAL
		Plain Areas				Hilly Areas			pucca	Amount @ Rs.-5200/-	@Kutcha	Amount @ Rs.-3200/-	Nos.	Amount @ Rs.-4100/-	@Nos.	Amount @ Rs.-4100/-	
		Pucca	Amount @ Rs.-95100/-	@kutcha	Amount @ Rs.-95100/-	@pucca	Amount 101900/-	Rs.-Kutcha									
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
TOTAL																	

Chapter-15

Recovery:

A **disaster recovery plan (DRP)** is a documented process or set of procedures to recover and protect the life and property of people in the event of a disaster.^[1] Such a plan, ordinarily documented in written form, specifies procedures an administration is to follow in the event of a disaster. It is "a comprehensive statement of consistent actions to be taken before, during and after a disaster".^[2] The disaster could be natural, environmental or man-made. Man-made disasters could be intentional (for example, an act of a terrorist) or unintentional (that is, accidental, such as the breakage of a man-made dam). Given organizations' increasing dependency on information technology to run their operations, a disaster recovery plan, sometimes erroneously called a Continuity of Operations Plan (COOP), is increasingly associated with the recovery of information technology data, assets, and facilities.

A series of long term activities framed to improve upon the repaired activities in the Reconstruction & rehabilitation phase are covered under Recovery phase. Recovery includes all aspects of mitigation and also incorporates the continuation of the enabling process, which assists the affected persons and their families not only to overcome their losses, but also to achieve a proper and effective way to continue various functions of their lives. The Recovery process is therefore a long-term process in which everyone has a role – the Government including the PRI members, NGOs and especially the affected people, their families and the community.

- Preparation of Recovery plan for displaced population, vulnerable groups, environment, livelihoods
- Organise initial and subsequent technical assessments of disaster affected areas and determine the extent of recovery works necessitated in addition to reconstruction & rehabilitation works.
- Evaluate the extent of works under SDRF/NDRF & other sources (damaged infrastructures)
- Explore opportunities for external aids like (International Agencies / Civil Society / Corporate Sector)
- Allocate funds for the stabilisation of the repaired & reconstructed infrastructure.
- Integrate Climate change & Disaster Risk Reduction features in the recovery programmes

Chapter- 16

Financial Arrangement

13.1 National Disaster Response Fund (NDRF)

The National Disaster Response Fund (NDRF) has been constituted by the Government of India as per the sub-sections (1) of section (46) of Disaster Management Act, 2005 and recommendation of the 13th Finance Commission. NDRF has been constituted by replacing the National Calamity Contingency Fund (NCCF). It is administered by the National Executive Committee (NEC).

In the event of a calamity of a severe nature when the State Disaster Response Fund (SDRF) is insufficient to meet the relief requirements, additional central assistance is provided from NDRF, after following the laid down procedure. The State Government is required to submit a memorandum indicating the sector-wise damage and requirement of funds. On receipt of memorandum from the State,

- An Inter-Ministerial Central Team is constituted and deputed for an on the spot assessment of damage and requirement of funds for relief operations, as per the extant items ad norms.
- The report of the Central Team is considered by the Inter-Ministerial Group (IMG) / A Sub-committee NEC constituted under section 8 of DM act, 2005, headed by the Home Secretary.
- Thereafter, the High Level Committee (HLC) comprising of the Finance Minister, the Agriculture Minister, the Home Minister and the Deputy Chairman, Niti Ayog considers the request of the State Government based on the report of the Central Team recommendation of the IMG thereon, extant norms of assistance and approves the quantum of assistance form NDRF.
- This is, however, subject to the adjustment of 75% of the balance available in the State's SDRF for the instant Calamity.

(Please refer page no. ___ of Volume-II for NDRF Items and Norms)

13.2 State Disaster Response Fund (SDRF)

As per the provisions of Disaster Management Act, 2005 sub-section (1)(a) of Section (48) and based on the recommendation of the 13th Finance Commission, the Government of Odisha has constituted the State Disaster Response Fund (SDRF) replacing the Calamity Relief Fund (CRF). The amount of corpus of the SDRF determined by the 13th Finance Commission for each year the Finance Commission period 2010-15 has been approved by the Central Government. The Central

Government contributes 75% of the said fund. The balance 25% matching share of contribution is given by the State Government. The share of the Central Government in SDRF is released to the State in 2 installments in June and December respectively in each financial year. Likewise, the State Government transfers its contribution of 25% to the SDRF in two installments in June and December of the same year.

Ministry of Home Affairs, upon being satisfied that exigencies of a particular calamity so warrant, may recommend an earlier release of the Central share up to 25% of the funds due to the State in the following year. This release will be adjusted against the installments of the subsequent year.

As per the Guidelines on Constitution and Administration of the State Disaster Response Fund (SDRF) laid down by the Ministry of Home Affairs, Government of India, the SDRF shall be used only for meeting the expenditure for providing immediate relief to the victims of cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloud burst and pest attack. The State Executive Committee (SEC) headed by the Chief Secretary SEC decides on all matters connected with the financing of the relief expenditure of immediate nature from SDRF.

(Please refer page no. ___ of Volume-II for SDRF Items and Norms)

13.3 Chief Minister Relief Fund (CMRF)

Chief Minister's Relief Fund aims to provide assistance to calamities and in distress condition, to indigent persons suffering from critical ailments and to undertake charitable activities for public welfare.

13.3.1 Cases Eligible for Assistance under CMRF

13.3.1.1 Poor and persons in distress: Relief to the poor, including grant and aid (financial or otherwise) to persons in distress.

13.3.1.2 Aged, differently able, orphans, AIDS affected :

Assistance for the relief and rehabilitation of the aged, differently able' orphans, HIV/AIDS affected persons/families and those otherwise differently able or incapable of earning their livelihood, by grant and aid (financial and otherwise) and / or maintenance, establishment and support of institutions and homes for the benefit of such persons.

13.3.1.3 Persons affected by calamities or violence:

Assistance for relief & rehabilitation of persons affected by natural or man-made calamities, communal violence', naxal violence or public disorder of a serious nature or any other calamity' affecting a family

or a community, which deserves extreme compassion and not covered under any existing assistance scheme of State/central Government.

13.3.1.4 Assistance for Rural Development:

Financial assistance out of CMRF may also be considered to undertake, promote, aid or otherwise support rural development including any programme for promoting the social and economic welfare of the public in any rural area either directly or through an independent agency following due procedure.

To assist more number of deserving person and for better utilisation of the Chief Minister's Relief Fund, the State Government have delegated powers to the Collectors for sanction of assistance out of CMRF so as to extend such assistance to the deserving persons immediately at the time of their need.

13.4 Release of Funds to Departments and Districts:

Funds required towards pure relief to affected persons / families for natural calamities in shape of emergency assistance, organizing relief camp / free kitchen / cattle camp, agriculture input subsidy and other assistances to affected farmers, ex-gratia as assistance for death cases, grievous injury, house building assistance, assistance to fisherman / fish seed farmers / sericulture farmers, assistance for repair / restoration of dwelling houses damaged due to natural calamities are administered through the respective collectors.

Part funds towards repair / restoration of immediate nature of the damaged public infrastructure are released to the Departments concerned. On receipt of requisition from the Collectors / Departments concerned, funds are released after obtaining approval / sanction of S.E.C. However, funds towards pure relief are released under orders of Special Relief Commissioner / Chief Secretary and the same is placed before the State Executive Committee in its next meeting for approval. To save time, Collectors have been instructed to disburse the ex-gratia assistance from the available cash and record the same on receipt of fund from Special Relief Commissioner.

13.5 Damage Assessments and Report after Flood/Cyclone

Private properties and properties of Government under different Departments are damaged by high floods and cyclones. As per para-75 of Orissa Relief Code, the Collector shall undertake assessment of damages to private properties as well as properties of Government. This assessment shall be done quickly soon after the abatement of flood in the prescribed formats prescribed in Appendix- X of Orissa Relief Code.

13.5.1 Submission of preliminary damage report (Para-76 of ORC)

1. The Collector as well as the district level officers under each Department of Government shall immediately after assessment of flood damage forward a copy of their report to their immediate Head of Department. The district level officers may also supply reports to the Collector.
2. The Heads of Departments after necessary scrutiny shall forward their reports to their respective Departments of Government with copy to Special Relief Commissioner, not later than two weeks from the date of abatement of flood.
3. The Special Relief Commissioner shall compile the State report and shall furnish the consolidated preliminary report to the Revenue Department within a week of the receipt of the reports from the Heads of Department.
4. The preliminary flood damage report should be prepared as accurately as possible, as the relief measures, if any, are to be based on the merit and statistical data of that report.

13.5.2 Submission of final flood damage report (Para-77 of ORC)

The concerned Heads of Departments as well as the Collector shall take immediate steps to compile the final report on flood/cyclone damage in the formats prescribed in Appendix- X soon after submission of the preliminary report.

Accidental errors, clerical mistakes, shortcomings, if any, noticed should be rectified in the final report. The final report shall be made available to Special Relief Commissioner as soon as possible and not later than one month from the date of abatement of flood.

On receipt of the reports from the different sources, Special Relief Commissioner shall forthwith compile the State report and furnish the same to the Revenue Department.

13.6 Central and State Government programmes and Schemes on Natural Calamities

Mainstreaming Disaster Management in development planning is the most critical component to mitigate disaster risks. That's why it's important to make note of financial resources which are used in the implementation of such programmes and schemes which can lessen the risk from disasters by reducing vulnerability. It is also crucial to build communities resilience to deal with them. Moreover, as mandated by Ministry of Finance & Ministry of Home Affairs on 01st and 03rd June, 2014 respectively, 10 % flexi-fund within the centrally sponsored schemes (CSS) to be utilised, inter alia for mitigation / restoration activities in the event of natural calamities in the sector covered by CSS. Thus, relevant Central Government and State Government funded schemes are

identified which are crucial to build over resilience of communities in the context of the district.

13.7 Roles of District Planning committee on financial outlay on mainstreaming Disaster Risk Reduction (DRR) in development programmes.

Note: Roles and jurisdiction of District Planning Committee to be elaborated

As per the Orissa District Planning Committee Rules 2000, the District Planning Committee, Keonjhar consists of 20 members as per details given below.

- a. 11 members to be elected out of Zilla Parishad members
- b. 5 members to be elected out of Councilors/Corporators of ULBs.
- c. 2 Expert Members to be nominated by Govt.
- d. Minister of the State nominated by Govt. is the Chair Person of the Committee and Collector is the Member Secretary of the Committee.

Hon'ble MPs & Hon'ble MLAs are the permanent invitees of the concerned District Planning Committee.

Now the aforesaid Rule has been modified as Odisha District Planning Committee (Amendment) Rules, 2016. As per modification,

- a) As nearly as may be, but not less than one-half of the total number of the elected members shall be reserved for Women.
- b) The term of office of elected Members shall be 3 years commencing on the date of his/her Election unless remove earlier, provided that the term of the office of every elected members shall be co-terminus with his/her membership in the Zilla Parishad or, as the case may be, the Municipality.
- c) The term of Office of nominated members shall be 3 years commencing from the date of his/her nomination unless remove earlier.
- d) A Minister in the Council of Ministers of the State or a Member of the Legislative Assembly of the state representing the constituency which comprises wholly or partly any area of the district, as may be nominated by the Govt., who shall be the Chairperson.
- e) The Vice Chairperson shall be nominated by the Government from among the elected members.

Role of DPC

1. The list of projects to be taken up under Gopabandhu Grameen Yojana shall be approved by the District Planning Committee.
2. Technical committees will be constituted in the District level, Panchayat level, Block level & ULB level for preparing Integrated Draft Development Plan every year in respect of 47 nos. of District Sector Schemes

3. Consolidation of Draft Development Plan for approval in the Committee.

Besides, Power has been delegated by the Govt. to the Chairperson of District Planning Committee to sanction funds out of "Critical Gap Fund for District Plan" placed at his disposal to

address the basic rural infrastructure needs as priority with special emphasis on zero connectivity areas, Health, Drinking Water, Street Lights etc. During the Financial Year 2016-17, Govt.

Chapter 17

Lessons learnt and Documentation

- 1. Note: In this chapter lessons learnt from past disaster in the district should be elaborated. Emphasis should be given on what went wrong and what were the best practices during managing any past disaster.**
2. Analysis of Keonjhar District deaths due to different disasters like Lightning, Drowning, Snake Bite etc. to be mentioned here.

Drowning: Drowning is a very common case in Keonjhar district, mostly the drowning cases are coming out from the Anandapur Subdivision. Since in this Sub-Division major rivers are flowing like river Baitarani, Kusei, these rivers have many tributaries which are perennial by nature. The people of this subdivision primarily depend upon the water bodies for irrigation, daily bath & sanitation etc.

Lightning: Every time the sky becomes overcast, scourge of lightning begins to haunt people in the district with the "bolt from the blue" steadily claiming lives here in a periodic intervals. Keonjhar district is more vulnerable to the lightening other than flood and sun-stroke. In the year -2015-2016 alone total 23 numbers of human lives have been lost in the past three years due to lightning strike in the mineral-rich district. Lightning accounts for 27 per cent of the total number of disaster deaths in the district. District and state administration taking proactive steps to arrest the lightening death cases in the district. Mass awareness activities are being carried out the administration to spread the awareness. School level and college level awareness camp organized in a regular basis. where other causes of disaster include fire, sunstroke, hailstorm, flood, cyclone, boat capsize, drowning and snakebite. The Balasore district topped the list in the state in recording the highest lightning deaths at 130 followed by Mayurbhanj district (95) and Ganjam and Keonjhar districts (89 each).

Snake Bite: Lots of lives have been lost due to Snakebite in Keonjhar district. Since its a tribal people dominated area the people believe in Exorcist (Gunia) work so they are applying the suggestion of Gunia to treat the patient rather than taking him to medical. Due to lack of awareness among the tribal people of Keonjhar district a large no of deaths occurred due to timely medical treatment. During last three years a large number of Snakebite deaths had been occurred in this district. A total of 22 nos. of human casualties were reported during the year 2015-16. Similarly during the year 2016-17, 38 nos. of

death were reported and during last year a total of 72 nos. of human casualty had been reported in the district.

Extremely severe cyclone (ESC) Cyclone FANI Response at Keonjhar district And lesson learnt So far.....

PRELUDE: - A low-pressure area was formed over east equatorial Indian Ocean (EIO) and adjoining southeast of Bay of Bengal (BoB) on 25.04.2019 intensifying into a Severe Cyclonic Storm over southeast & adjoining southwest BoB. It further intensified into Extremely Severe Cyclonic Storm 'FANI' over west central & adjoining southwest of Bay of Bengal on 01.05.2019 hitting one of the poorest coastal states of India - Odisha. The Extremely Severe Cyclonic Storm 'FANI' made landfall on the Odisha Coast south of Puri on 3 May, 2019 and the eye of the system was completely moved into land by 1000 hrs at the wind speed of 175-185, gusting up to 205 kmph. Cyclone Fani, which has been classified as an extremely severe cyclone (ESC), is the 10th such cyclone to hit India in May in past 52 years. Data from the India Meteorological Department (IMD) show that the last time an extremely severe cyclone hit India in May was in 2004. The other years when such cyclones were witnessed in May are: 1968, 1976, 1979, 1982, 1997, 1999 and 2001.

Generally, extremely severe cyclones hit India's east coast in the post-monsoon season (October-December). IMD data on cyclones that hit India between 1965 and 2017 show that the country has weathered 39 extremely severe cyclones in these 52 years. Of these, nearly 60 per cent (23) were between October and December. The India Meteorological Department (IMD) classifies cyclones on the basis of the maximum sustained surface wind speed (MSW) they generate. Over 64 thousand people were affected and 630 houses were damaged in the disastrous Cyclone FANI in Keonjhar district, (Extent Damage report of DEOC, Keonjhar).

District administration response –

According to the alerted Report of the IMD on Extremely Severe Cyclonic Storm FANI released by the State Emergency Operation Centre (SEOC), total 1,50,94,321 population in 14 districts were affected in the cyclone. Keonjhar is the one of the district among the other affected districts of Odisha.

As per the latest IMD bulletin, during cyclone Fani landfall, the storm surge of about 1.5-meter height above astronomical tide is very likely to inundate low lying areas of Ganjam, Khurda, Puri, Jagatsinghpur'; Orange warning issued for 6 districts for May 2, Red alert for 17 districts for May 3-4." Keonjhar is One of the district among the red alerted 17 districts The District Crisis Mgmt Committee (DCMC), Under the chairmanship of District Collector and DM on 01.05.2019, met with District officers and concerned line departments of Government of India and reviewed the preparedness to deal with the situation arising out of the Cyclonic Storm Fani. Same day

Collector and DM ,Keonjhar briefed Hon'ble C.M , Odisha on the Precautionary and preparatory measures were undertaken to tackle the Sever cyclonic storm FANI .

Preparatory and precautionary measures

14000quintal Chuda.Gur ,10000litter kerosin, Candel, Match box was stored for Relief

NDRF team alerted at Anandpur division to cover Ghashipura, Hatadhi. Anandpur most vulnerable pocket of the district under the Inspector Rohit Kumar

Fire personal along with Aska light, Power boat, Cutter was alerted at Keonjhar and AnadpurDivision .

24X7 DEOC and BEOC was alerted and operated from 1.05.2019

Brahmani and Baitarani River basin EE was alerted to measure the water level at water gauge station release to river and breeches may closed by sand sacks.

JCB and Pocklen machine were kept at Anandpur subdivision and keonjhar HQ for road cleanness and debris cleanness

Rain fall will monitor daly two time and observed and reviewed by Collector and DM,Keonjhar.

EWS was alerted by Local TV Scrolling in Screen and Radio, Milking is used in Early warning system .

Evacuation started on 2.05.2019 at Anadpur, Ghasipura, Hatadhi, Harichandanpur and Ghatagoan .

Action Taken by the Government: Post Disaster

- Clearing of roads is going on.
- Power restoration process is in full swing.
- Road communication in Ghasipura , Anandpur and Hatadhi completely restored. Road clearance and restoration works in other blocks including Joda, BarbilHarichandanpur city is going on.
- Considering the serious disruption of electricity supply, road communication, telephone and mobile connectivity, additional support has been restored. Additional teams for road clearance, police for Law and Order, distribution of dry food such as Chuda and Gud, Polythene mobilized to the district.
- 13 numbers of tourists safely evacuated from Ghatagoan, Ghagara, Sitabinz of the districts.
- 4507 number of polythene rolls has been distributed by Tahasildars and NAC
- Train services resumed to normalcy from KeonhjarGargh .
- 1500 water pkts. and 4500 chlorine tablets has been distributed among the 1765 HH.

Lesson Lereant

The government has clearly demonstrated that the cyclone preparedness in Keonjhar had undergone drastic change. But then what is important now is to analyse the reasons for such natural calamities.

- Need of long-term preparedness/ mitigation activities
 - Capacity Building of all officials
 - Community awareness
 - Need of more construction and maintenance of Flood/ Cyclone Shelters
 - Assist in drawing up/ updating DM Plans at State/ district levels
 - Advise Govt. on planning, policy aspects of DM, damage assessment, evaluation, documentation for learning
 - Coordination with non-state actors/other agencies in DM
 - Link DM with community safety
 - Communication Network.
 - Prepositioning of HAM Radio or VHF in all district Offices & Block Offices for communication purpose.
 - Identification of places for prepositioning of Cell on Wheels in Dist. Hqrs as well as in each Blocks for early restoration of Tele communication networks.
 - Safety audit of Govt. buildings, electronic gadgets, etc. removal of LED display screens & High mast street lights, etc. will be made before any disaster like situation.
 - Identification of locations for prepositioning of plasma cutters & hydra for immediate restoration of power supply and clearance of road blockage.
 - Provision of Walkie Talkies to all District level officials along with one police personnel for its operation.
 - Availability of sufficient foods and drinking water for the persons engaged in restoration works like electricity, drinking water supply, sanitation, etc.
 - Separate cells should be opened for coordination of restoration works.
 - More numbers of farmers should be included under the Pradhan Mantri Fasal Bima Yojana (PMFBY) for getting benefit during any disaster.
 - Building of an extra disaster resilient ward in District Head Quarter Hospital for 200 patients which may be used at the time of any disaster situation.
- Fourteen Mobile Medical Van (1 for DHH & 13 CHCs) with all equipments should be procured for immediate service to the affected people at the time of disaster.

As event documentaion a power point presentation prepared and presented before DDMA as post disaster activities.



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Cyclone-YAAS: 26th May 2021

- ♦ Very severe cyclonic storm (IMD scale)
- ♦ Category 1 tropical cyclone (Saffir-Simpson hurricane wind scale)
- ♦ Cyclone YAAS shortly before landfall on May 26 near peak intensity
- ♦ Formed May 23, 2021
- ♦ Dissipated May 28, 2021
- ♦ Highest wind speed 80 km/h (50 mph)
- ♦ Lowest Pressure 970 hPa (mbar)
- ♦ Fatality Reported
- ♦ Damage-All 13 blocks & 05 ULBs in the district affected
- ♦ Area Affected-All 13 blocks & 5 ULBs of Keonjhar Districts
- ♦ Storm surge was up to 4 meters along the coast in Bay of Bengal near the point
- ♦ Landfall near MASARI in Balasore District at 10.30 on 26 May 2021
- ♦ Impact- Gusty wind and very heavy rain witnessed in the northern part of district : after the cyclone river Batarani had swollen , Anandpur Subdiv experienced the flood like situation.

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SOP FOR THE DEPARTMENTS TO BE DONE ACCORDINGLY

Standard Operating Procedures (SoPs) for District and Sub-district level Officials for management of Heat Wave Conditions

1. Collector/ ADM/PD, DRDA

- i. Updating the Heat Action Plan for the District in the month of January
- ii. Action plan for mitigating water scarcity problems in different towns and villages to be prepared in the January
- iii. Water scarcity areas to be identified in advance and supply of drinking water and for other uses through tanker to those areas to be ensured
- iv. Prepare list of water tankers and earmark them to water scarce area wise
- v. Preventive maintenance of tube wells has to be ensured
- vi. Suitable arrangements also to be made to promptly respond to reports of water scarcity anywhere in the district
- vii. Ensuring Public Awareness campaign through electronic and print media on heat wave precautionary measures (Dos and Don'ts) from February onwards
- viii. Involve Civil Society Organization and Panchayati Raj Institutions (PRI) members in awareness campaign and other measures to tackle the situation arising out of Heat Wave
- ix. Issue directions to line departments officials for taking measures to tackle heat wave situations in the month of February
- x. Issue direction to BDOs to convene meeting of PRI representatives-in the month of February
- xi. Issue direction to ULBs/GPs for opening of "**Jal Seva Kendra**" (Water Kiosk) at market places, bus stands and other congregation points. Ensuring sanitation and hygiene of water distribution points.
- xii. Convene meeting of the Civil Society Organization to seek their assistance in Heat Wave mitigation activities including opening of "**Jal Seva Kendra**"
- xiii. Issue direction to CDVO/BDOs for construction/repair of vats for ensuring drinking water for roaming livestock

- xiv. Issue instructions to BDOs, District Education Officer and District Social Welfare Officer for making drinking water arrangements in all schools
- xv. Principals of all Government and Private colleges are to be instructed to make drinking water arrangements in their institutions
- xvi. Rescheduling of timing of classes and examination in schools and colleges during summer as per the directions given by SRC/School & Mass Education Department
- xvii. DSWO/CDPO/Dist. Child Protection Officer are to be instructed to facilitate availability of drinking water and health needs in all Child Care Institutions (CCIs) in the district
- xviii. District Labour Officer (DLO) to ensure rescheduling of the timing of working hours and make necessary arrangements for supply of drinking water, ORS packets and provision of rest shed at worksites as per directions of SRC/Labour and ESI department
- xix. Ensuring restriction of working hours in works under MGNREGA and other schemes
- xx. Give instructions to the Regional Transport Officer (RTO) to ensure availability of water and ORS packets in public transport vehicles. Timing of public transport services and plying of buses to be rescheduled as per directions of SRC/ C&T (Transport) Department
- xxi. To issue instruction to the Electricity Distribution Company to ensure uninterrupted power supply during heat wave period. Uninterrupted power supply to be maintained for critical facilities such as hospitals, urban health centres and water supply facilities
- xxii. If any information on casualty is received or report published in newspaper, it should be immediately enquired jointly by the medical and revenue officers
- xxiii. Prompt steps are to be taken for payment of ex-gratia to the bereaved family where, upon enquiry, the death is confirmed to be due to sunstroke
- xxiv. Issue direction to CDM & PHO for arrangement of Operational heat stroke room in DHH/SDH/CHC/PHC/New PHC level to avoid emergency situation arises due to Heat stroke.

- xxv. Issue direction to Forest department for arrangement of water tubs for of forest animals/secure perineal water body .and also management of forest fire.
- xxvi. Issue Instruction to DFO for control and mange of Forest fire and formation of fire squad for combatting forest fire in their range.
- xxvii. Issue instruction to DFO on combat the situation on Animal conflict with human like elephant, other forest animals.

2. Chief District Medical & Public Health Officer (CDM & PHO)

- i. IEC activities and Public Awareness in the districts relating to Heat Wave conditions/ advisories to be done from the month of February onwards
- ii. Take necessary steps for albedo/white painting of roof tops of hospitals, Community Health Centres (CHCs), Public Health Centres (PHCs) and patients resting areas in coordination with the concerned engineering Departments
- iii. Sufficient Storage of life savings medicines, ORS in dispensaries, PHCs, CHCs and District Head Quarter Hospitals to meet any crisis. ORS to be available with ASHA and AWWs
- iv. Arrangement of separate wards and beds and cool rooms for treatment of heat stroke patients in different hospitals
- v. Continuous monitoring and preventive measures against diarrhoea and other health hazards during summer season
- vi. Daily reporting of cases and deaths to H&FW Department, SRC and Collector
- vii. Copy of the post-mortem report of heat wave casualties to be shared with the Tahasildars to make the process of ex-gratia payment fast and smooth.
- viii. Instruct to Implement and monitor water kiosk in Village area under GKS fund and instruct to Organise IEC and awareness activities in VHND.
- ix. Instruct to PHC/CHC/New PHC Operational Sunstroke room and cool water kisok in each CHC, PHC from PHRS and RKS fund

3. Urban Local Bodies (ULB)/ Development Authorities

- i. Preventive maintenance of tube wells/pipe water supply-arrangements for distribution of water through water tankers in the water scarce areas

- ii. Awareness generation on Heat Wave Do's and Don'ts with Special attention to slums areas
- iii. Opening of "**Jal Seva Kendra**" (Water Kiosk) at market places, bus stands, slums, vending zones and other congregation points-Ensuring sanitation and hygiene of water distribution points
- iv. Identification of suitable resting places for street vendors during summer
- v. Increasing access to public parks, public libraries for providing cool resting places for the public
- vi. Regular sprinkling of water on roads
- vii. Promote cool roof initiatives (albedo painting of roofs)
- viii. Encourage use of K-glass, doubly gazed glass in buildings and vehicles.
- ix. IEC activities Digital display board in strategic point on Heat stroke management other disaster related awareness & information.
- x. Wall painting on Disaster and climate change related issues for public
- i. Not provide permission to operational mining for blasting during summer session.

4. District Labour and Employment Officer (DLO)

- i. Monitoring and enforcement of rescheduling of working hours as per the instructions of SRC/ L&ESI Department
- iii. Monitoring provision of sufficient drinking water, ORS packets and first-aid, rest sheds at worksites
- iv. Instruct the Project Directors of all National Child Labours Projects (NCLPs) to reschedule the school timing for special schools running under NCLP in accordance with the timings prescribed by SRC/ School and Mass Education Department
- v. To ensure creation of awareness among the labourers and workers on risks, signs and symptoms of heat stress during probable heat wave like situations, preventive and precautionary measures including that through constructions agencies/contractors

- vi. Ensure the supervision of construction sites, quarries, factories and other vulnerable worksites, particularly during high temperature periods, to enforce labour laws related to heat safety
- vii. Ensure safety measures are enacted by supervisors and contractors to avoid accidental case in construction sites and factories/industries.
- viii. Ensure detail enrolment /registration of migration labours/families properly.

5. District Education Officer (DEO)

- i. Monitoring and enforcement of school timings and other restrictions.
- ii. Promoting IEC activities on Heat Wave prevention and management in schools
- iii. Ensuring training of the teachers and conduct of mock drills among students on health risks and management during heat waves through workshops, orientation programmes, special classes, etc.
- iv. Ensuring provision of safe drinking water, ice packs, ORS, etc. in schools and examination centres
- v. Encourage concerned authorities/schools for Albedo paintings on roofs of schools
- vi. Ensure school safety committee constitution and ensure School safety plan preparation in each school.
- vii. Ensure non-hazardous environment /campus in each school to avoid accidental incidents.

6. Executive Engineer-Electrical

- i. Identify overload energy points/transformers and take precautionary measures for uninterrupted power supply
- ii. Ensuring uninterrupted power supply for critical facilities such as hospitals, urban health centres and drinking water supply facilities
- iii. Keep energy gangs, equipment, spares ready at strategic locations for earliest restoration of power supply in case of outages
- iv. Setting up timing for power shedding, if absolutely required, and ensuring announcement of power shedding sufficiently in advance

- v. Record and monitor the peak load of primary substations/feeders regularly, so as to avoid breakdown due to failure of power transformers/ overloading and consequent snapping of conductors in co-ordination with competent authorities
- vi. Instruct all Junior Engineers (JEs)/Sub-Division Officers (SDOs) to monitor and record peak load status of the Distribution Transformers (DTs) (250KVA & both), so as to avoid burning of DTs due to over loading and consequent power outages there to

7. Regional Transport Officer (RTO)

- i. Taking initiatives on creating awareness among drivers and helpers of vehicles on Heat Wave
- ii. Encourage the Bus/Truck owner's association of the district and the local NGOs to involve themselves in public awareness campaign on Heat Wave
- iii. Ensuring functioning of Control room at RTO office round the clock during Heat Wave period
- iv. Issue instructions for restriction of Bus plying times during peak hours and rescheduling of timing of the public transport as decided by SRC/ C&T (Transport) department
- v. Enforce and monitor provision of safe drinking water, ice packs, ORS packets in buses and cool resting places at bus stops
- vi. Facilitate setting up of "*Jal Seva Kendra's*" (water kiosk) at bus stops and bus stands
- vii. Conducting regular meetings with stakeholders for sorting out issues pertaining to Heat Wave conditions
- viii. Ensure Water kiosks in NH road and other running routes where there is no habitation.
- ix. Ensure first aid kits along with ORS in each playing buses. Ensure Albedo painting on bus roofs.

8. Executive Engineers-Water Resources

- i. Prepare an action plan for storage of water in the reservoirs to meet the water requirement of drinking water supply facilities and irrigation

- ii. Monitoring release of water in canals for public use, to increase the underground water level and to reduce the atmospheric temperature during summer

9. District Mining Officer (DMO)

- ii. Issuing directives for heat wave prevention and management in industries and mines
- iii. Give instructions for and facilitate water sprinkling in mines and other areas to settle down the suspended particulate matter (SPM)
- iv. **Instruct operational mining to avoid blasting materials during summer session.**

10. District Tourism Officer (DTO)

- i. Issue instructions and monitor registration of tourists visiting the district
- ii. Disseminate safety tips (Do's and Don'ts) on Heat Wave at tourist points during summer
- iii. Ensure availability of water and rest sheds at tourist places
- iv. Rescheduling of visit hours at tourist places to avoid heat stress to the visitors
- v. **Establishment of sunstroke help along desk with first aid/ambulance kit for tourist persons.**

11. District Social Welfare Officer (DSWO)

- i. Use the Village Health Nutrition Day (VHND) for creating awareness and educate young girls and mothers regarding the dangers of Heat Wave, its related health impact and precautionary measures to be taken
- ii. Ensure display of IEC materials at Anganwadi Centres
- iii. Encourage Anganwadi workers to create awareness on Heat Wave with special focus on infants, children below five years, pregnant women, lactating mothers and geriatric population to protect them from dehydration.
- iv. Ensure provision of drinking water and first aid at all the Anganwadi Centres, old age homes and Child Care Institutions (CCIs)
- v. Sufficient ORS to be kept in Anganwadi Centres and with AWWs

12. Divisional Forest Officer (DFO)

- i. Identify water scarce locations in forest and prepare a plan of action for ensuring availability of water for animals and human habitation facing water scarcity inside reserved/protected forest
- ii. Keeping continuous watch in the forest areas to avoid forest fire.
- iii. Issue instruction and ensure arrangements for protection of the zoo animals from heat wave
- iv. Give instructions for conducting village meetings through NGOs prior to the hot weather seasons for making the villages aware for not setting forest fire
- v. Ensure proper afforestation (greenery) in public places

13. Project Administrator, Integrated Tribal Development Agencies (PA, ITDA)

- i. Generate awareness through IEC activities on Heat Wave prevention and management in tribal schools
- ii. Ensure availability of safe drinking water, ORS packets, Ice packs and other required first aid materials in tribal schools
- iii. Monitor and enforce school and examination timing as directed by SRC/SC&ST Department
- iv. Encourage concerned authorities/schools for albedo paintings on roofs of schools and hostel buildings

14. Chief District Veterinary Officer (CDVO)

- i. Issue advisory on animal care during heat wave by making provisions for drinking water for animals and birds with timely replacement at sheds
- ii. Generate awareness among animal owners for feeding the animals in early morning or during evening hours to avoid heat stress
- iii. Issue advisory for farmers for not leaving their animals outside the shed during peak hours of heat
- iv. Encourage the owners of livestock and poultry farms to plant bushy trees near the sheds
- v. Advisory to be issued for mixing electrolytes in drinking water of animals and birds to avoid dehydration

- vi. Issue instructions to the concerned authorities not to vaccinate or deworm the animals and birds during heat hours of the day to avoid any extra stress
- vii. Issue advisory to the farmers for restraining the animals from hard work in open areas during heat hour of the day

Standard Operating Procedures (SoPs) for District level Officials and other keystakeholders for management of Drought

1. Collector

- i. Submission of weather and crop situation report to the O/o SRC as per the provisions laid down under the paragraphs 24 and 25 of ORC
- ii. Convene meeting to review measures in line with the Crisis Management Plan
- iii. Direct all the district level line departments to participate in drought management, prepare contingency plans and mobilize their staffs and resources
- iv. Prepare District Agriculture Contingency Plans
- v. Implement all the decisions of Government related to drought management on the ground through line departments
- vi. Monitor all the indicators of drought on the ground such as collection of daily rainfall data, water storage, water availability, seeds supply and progress of sowing operations
- vii. Monitor local information related to demand of relief employment, prices of food grains and availability of fodders
- viii. Ensure timely collection of field information and ground truthing of sensor-based data and submission of periodical reports on all the important indicators to the Government
- ix. Assess the situation related to scarcity of drinking water and fodder and issue appropriate instructions regarding reservations and supply of drinking water, procurement and sale of fodders and setting up of fodder depots and cattle camps

- x. Supervise reservoir management with the help and support of Water Resources Department and decide the volume and timing of release of water in the canals
- xi. Review the progress of drought relief measures in the district from time to time
- xii. Make arrangements for efficient and timely distribution of food grains after declaration of drought
- xiii. Prepare relief employment plan in consultation with agencies
- xiv. Instruct to DAO, DLO, Lead Bank, Cooperative Society take necessary precautionary measures to minimise out migration in district.
- xv. Ensure 100 days work availability by BDO, under NREGA, forest department and, availability of work facilities in other industrial units

2. Chief District Medical & Public Health Officer (CDM&PHO)

- i. Organize Health Camps in drought affected areas to screen people for common ailments
- ii. Arrange clinical management of cases due to waterborne and vector-borne diseases
- iii. Deploy Rapid Response Teams (RRTs) for managing any outbreak of water borne or vector-borne diseases and surveillance through State Integrated Disease Surveillance Programme
- iv. Ensure laboratory facilities for diagnosis of water borne and vector borne diseases through public health laboratories, district headquarters hospitals, laboratories and medical colleges
- v. Promote awareness generation on risk of water borne and vector-borne diseases in the community
- vi. IEC material on Vector borne diseases (VBD) and Non-Communicable Diseases (NCD).
- vii. Promote awareness on VBD & NCD through GKS, VHND in drought prone area.

3. Chief District Veterinary Officer (CDVO)

- i. Ensure availability of fodder, feed, and water for cattle
- ii. Ensure quality of feed and fodder supplied through the fodder depots and cattle camps
- iii. Undertake awareness campaign for farmers in drought-affected areas on cattle health relating to fodder, feed, vitamin, minerals and other sanitation issues
- iv. Ensure provision of minerals, vitamins, medicines and vaccines to the livestock owners
- v. Carry out necessary inspection and check in drought-affected areas to ensure that cattle are maintained in good health
- vi. Depute Livestock Inspector (LI) for checking the health of cattle at least once in a week and undertake all precautionary measures to avoid outbreak of any disease
- vii. Vaccinated to all cattle and aware on different cattle health issues like (Phatua,Bajabjia)

4. Chief District Agriculture Officer (CDAO)

- i. Ensure preparation/ updating District Level Crop Contingency Plan in consultation with Krishi Vigyan Kendra (KVK)
- ii. Identify and assess the requirement for important agricultural inputs like-seeds, fertilizers and pesticides at subsidised rates for the farmers through Primary Agricultural Cooperative Societies (PACS) and private dealers
- iii. Sufficient prepositioning of drought resilient seeds and fertilizers in different strategic locations
- iv. Promote awareness on crop insurance and ensure timely enrolment of non-loanee farmers under "**Pradhan Mantri Fasal Bima Yojana**" (PMFBY)
- v. Apprise the District Drought Monitoring Cell (DDMC) on crop weather situation on weekly basis
- vi. Ensure rapid damage assessment during early season drought and facilitate availability of seeds for immediate sowing by the farmers
- vii. Promote diversification of crops with suitable low water consumption crops like- millets and oilseeds over rice in the drought prone areas

- viii. Capacity building of farmers through Agricultural Technology Management Agency (ATMA) for alternate livelihood options like mushroom cultivation, goatery, poultry, fruit trees etc. in the drought prone areas
- ix. Facilitate for short term loan proved to farmers from their local cooperative society /bank.
- x. Promote short term vegetable production for victimised farmers.

Standard Operating Procedures (SoPs) for District level officials in the management of Floods and Cyclones

1. Collector/ADM/Sub-Collector

A. Pre Flood Arrangements

- i. Convene meeting of the DLCNC during the month of May
- ii. Make inventory of private/country/power boats to be used for relief and rescue operation
- iii. Ensure deployment of Boats at strategic points
- iv. Ensure regular submission of rainfall reports to the O/o SRC
- v. Ensure proper functioning of Control room round the clock with adequate manpower having knowledge about the situation
- vi. Identification of safe buildings to be used as flood shelters
- vii. Inventory of non-official and voluntary organization for carrying out relief and rescue operations
- viii. Awareness generation activities on flood Safety (Dos and Don'ts)
- ix. Ensure regular updating of IDRN
- x. Instruct irrigation department for monitoring of water level frequently.
- xi. Safe building for immediate evacuation and alternate road ways for relief operation .

B. Arrangements during Flood

- i. Convene immediate meeting of all line department officials, all BDOs, Tahasildars, District heads of NDRF, ODRAF and Fire Services to review the situation and issue necessary instructions to all the concerned to make arrangements accordingly
- ii. Ensure evacuation of marooned and people residing in the low-lying areas to safe shelters and arrangement of free kitchen
- iii. Instruction to be given for taking special care of old, PWDs, women and children while evacuating
- iv. Instruction to be given to concerned authorities for evacuation of livestock and domestic animals to safe shelters
- v. Ensure provision of emergent relief for the affected people
- vi. Ensure arrangements of proper sanitation measures in the shelters
- vii. Timely submission of daily situation reports in the prescribed to the O/o SRC.
- viii. Review ,instruct and Ensure stock of dry foods and medical care support for victims /low laying area people.

C. Post Flood Management

- i. Issue instructions for proper disposal of dead bodies
- ii. Ensure damage and loss assessment of private properties and submission of report to Government for release of assistance
- iii. Review the restoration of damaged roads, bridges, embankments and other public properties
- iv. Ensure proper enumeration of house damage, crop damage and prepare list of beneficiaries along with their bank account numbers for immediate payment of disaster relief
- v. Ensure proper documentation of the relief and restoration activities for records
- vi. Submission of final damage report to the O/o SRC
- vii. Provision of employment to the able-bodied persons under the plan and non-plan schemes of the government ensuring labour employment programmes
- viii. Instruct to CDM& PH/SDM&PH form a doctors and paramedic teams /mobile health units for epidemic control in flood/Cyclone affected area.

D. On receiving Cyclone warning

- i. Convene immediate meeting of all line department officials, all BDOs, Tahasildars, District heads of NDRF, ODRAF and Fire Services to review the situation and issue necessary instructions to all the concerned to make arrangements accordingly
- ii. Instruct the BDOs to conduct Block level preparatory meetings involving Sarpanches/Secretaries of CSMMC/FSMMC, NGOs/CSOs and other stakeholders for taking up preparatory measures
- iii. Issue instructions for operation of the District Emergency Operation Centres and control rooms of other offices round the clock. Adequate manpower to be deployed in the control rooms
- iv. Issue notice to keep Govt. Offices to remain open, cancel government holidays (if required), recall the officers on leave (if required) and instruct government officials to remain alert
- v. Take steps for dissemination of correct and updated information on the impending cyclone to people with advice not to panic
- vi. Check the operationality of the communication equipment like Satellite Phone, Fax and other communication systems
- vii. In six coastal districts, besides satellite phones, other communication systems like Digital Mobile Radio (DMR), Satellite Based Mobile Data Voice Terminal (SBMDVT), Alert siren towers under EWDS project, are to be tested and kept in readiness
- viii. Ensure deployment of boats of Special Relief Organizations at strategic locations for transportation of relief materials and relief parties to inaccessible areas, if required.
- ix. Adequate quantities of POL to be arranged. POL stocks also to be arranged for boats of NDRF, ODRAF and Fires Services for carrying out SAR operations and distributions of relief materials.
- x. Instruct the concerned line department officials for making arrangements for power back up as power supply is likely to be cut off during Cyclones.

Generator available in different offices including health institutions should be checked immediately and adequate fuel to be stored.

- xi. Instruct the BDOs to monitor the readiness of MCS/MFS and report to the Collector/ADM/DEO
- xii. Give instructions to the Sarpanch and Secretaries of CSMMC/FSMMC to organize the meetings of CSMMC/FSMMC and make proper arrangements in the MCS/MFS.
- xiii. Instruct the BDOs to coordinate with the Sarpanch and Secretaries of CSMMC/FSMMC to check the water supply systems, generators, inflatable tower lights, mechanical cutters, and other equipment available in the shelters to be put to test run and the defective one gets immediately repaired. Fuel arrangements for generators and other equipment to be made
- xiv. Give instructions to BDOs/Sarpanches and Secretaries of CSMMC/FSMMC to identify the vulnerable people and evacuating them to safe shelters
- xv. Instruct the BDOs for evacuating people living in kutcha houses or living near the coast or in low lying areas in the coastal and adjoining districts to safe shelters
- xvi. Instruct other line department officials to assess the situations and take steps to evacuate people
- xvii. Instruction to be given for taking special care of old, PWDs, women and children while evacuating
- xviii. In case of a possible storm surge instructions to be given for evacuating people living in coastal areas even in two-storied buildings after assessing the situations
- xix. Instruction to be given to concerned authorities for evacuation of livestock and domestic animals to safe shelters. No cattle should be left tied in kutcha houses
- xx. Issue instructions to the concerned authorities for checking the safety of residential schools, child care institutions, old age homes and similar institutions, and if necessary, the inmates may be shifted to shelters. Ensuring

the availability of sufficient food stuffs, drinking water, essential medicines for the inmates of such institutions

- xxi. Instruct the BDOs, Presidents and Secretaries of CSMMC/FSMMC for arrangements of cooked food through free kitchen, safe drinking water, lighting, health & sanitation facilities at the MFS/MCS
- xxii. Instruct the concerned authorities for making arrangements for supply of safe drinking water to the people in the affected areas including measures to run the pumps with generators in absence of electricity and make necessary arrangements for supply of water through portable water tankers and water pouches in the affected areas including the shelters
- xxiii. Give requisition to SRC for deployment of ODRAF / NDRF and Fires Services teams in the likely to be affected locations of the districts.
- xxiv. Arrangements for immediate food assistance in the shape of rice, chuda, gur etc. and other essentials items to be made
- xxv. Check availability of polythene, assess the requirement and requisition placed with SRC
- xxvi. Arrangements to be made for keeping the mobile health units and veterinary teams ready in advance for deployment in the affected areas. Feed and fodder to be arranged for the animals
- xxvii. Issue warning messages to the fishermen not to venture into the sea and recall the fishermen inside the sea to the shore
- xxviii. Entrust responsibilities to specific officers and teams to undertake the above tasks in seamless manners and monitor it frequently

E. During Cyclone

- i. Coordinating with BDOs and other Block Officials of affected areas and take stock of the situation
- ii. Disseminate latest updates on Cyclone at the earliest to the concerned as & when received from SEOC/State
- iii. Coordinate with SEOC, Army, Air Force, Navy, NDRF & ODRAF for support towards evacuation and rescue

F. Post Cyclone

- i. Convene an emergency meeting and take stock of the situation
- ii. Soon after Cyclone abated, food assistance in shape of rice, chuda, gud etc. and other essentials items to be provided to people immediately
- iii. The households whose houses are damaged in cyclone/heavy rain need to be provided with temporary shelter materials (polythene sheets) without delay
- iv. Ensuring immediate restoration of road communication for movement of relief materials. Instruct the concerned departments for restoration of damaged roads immediately after Cyclone
- v. Immediate restoration of electricity and tele-communication including internet services to be ensured
- vi. Instruct the BDOs and concerned officials for enforcing and monitoring proper relief distribution
- vii. Issue instructions to the district heads to initiate damage assessment
- viii. Convene meetings of NGOs, Youth Clubs, Self-Help Groups, etc., in the district, and assign them specific responsibilities for relief, recovery and rehabilitation
- ix. Enforce, Facilitate & Monitor Ex-gratia & Compensation to the disaster affected families
- x. Ensure submission of Situation & Daily report to office of Special Relief Commissioner

2. Chief District Medical & Public Health Officer

A. Pre flood Arrangements/ On Receiving Cyclone Warning

- i. Convene meeting with other stakeholders for taking all preparatory measures
- ii. Prepare contingency plan for monitoring hygiene and sanitation
- iii. Taking stocks of essentials medicines for flood related diseases, water purifying (Halogen) tablets, anti-snake venoms in District H.Q. hospitals, CHCs and PHCs
- iv. Ensuring sufficient stocks of bleaching powder, chlorine powder, lime powder etc.
- v. Relocate the patients to the safe areas within the hospital

- vi. Power backup arrangements to be made in all CHCs, PHCs and DHH and other hospitals
- vii. Issue instruction for shifting of pregnant women to MAA Griha immediately on receipt of Cyclone/ Flood warnings
- viii. Identifying & shifting patients requiring intensive care to safer places well in advance
- ix. Constitute Mobile Health Units (MHUs) consisting of a doctor, health workers and ANMs. Each mobile health unit should be capable to cover at least one relief centre in a day
- x. Deploy Mobile Health Units along with required medicines to the vulnerable/ likely to be affected areas in advance
- xi. Initiate vaccination in the likely to be affected areas (as & when necessary) for prevention of communicable diseases
- xii. Ensure availability of medical equipment and essential drugs
- xiii. Ensure power backup in hospitals
- xiv. Ensure availability of safe drinking water in hospitals
- xv. Earmark separate wards in the hospital for treatment of injured persons.

B. During Flood/Cyclone

- i. Deploy Rapid Response Teams and carry out health care services
- ii. Prepare a maternity facility for pregnant women in every Response Base/ Advance Medical Post

C. Post Flood/Cyclone

- i. Establish Helpline for providing information to the affected population.
- ii. Initiate, ensure post disaster disease surveillance system and monitor the outbreak of epidemic
- iii. Promote Psycho-Social Counselling camps for the disaster affected population
- iv. Coordinate with Private Hospitals for treatment of the affected population, if required
- v. Enforce & ensure proper dead body management & early submission of post mortem report to the concerned authority

- vi. Arrange transportation/ambulance for seriously injured/sick patients from PHCs/CHCs to referral hospitals.
- vii. Ensure timely submission of reports to the Collector & H&FW department

3. Superintendent of Police

A.Pre-Flood Arrangements/ On Receiving Cyclone Warning

- i. Ensure functioning of the communication systems
- ii. Ensure proper functioning of the control room round the clock with public helpline number
- iii. Prepare a Plan for deployment of police/response force to activate search & rescue operation, maintain law & order and traffic management
- iv. Provide necessary support to district administration and others for expediting rescue and relief operations
- v. Review and update emergency measures, procedures, and take necessary steps to protect emergency equipment

B.During Flood/Cyclone

- i. Remain in close coordination with the district administration
- ii. Keep close watch on the situation and activate Search & rescue operations
- iii. Ensure that all field staff and stationed officers submit the necessary action reports to the Control Room
- iv. Ensure security of key installations like power, water supply, telecommunication, etc.
- v. Restrict plying of vehicles on over topping roads and bridges
- vi. Coordinate with the administration for law-and-order situation during distribution of relief to the affected people

C.Post Flood/Cyclone

- i. Ensure safety of the evacuees during stay at shelters & back at home.
- ii. Ensure security measures at different storage points & relief distribution centres
- iii. Ensure functioning of control room with public helpline number
- iv. Provide adequate security to personnel of International Agencies for Medical Assistance, relief operations etc.

4. Chief District Agriculture Officer

i. Pre-Floods Arrangements/ On receiving Cyclone warning

- i. Activate the field functionaries
- ii. Issue necessary instructions to the staff & advisory to the farmers to safe guard their crops (in case of heavy rain warning, to cover up the paddy or other crops already placed in the house premises)
- iii. Close watch on the situation, review & update precautionary measures and procedures
- iv. Develop a pest and disease monitoring system so that timely steps can be taken to reduce damage to crops
- v. Take necessary steps to aware and enrol farmers on ***“Pradhan Mantri Fasal Bima Yojna”***

ii. During Flood/Cyclone

- i. Close watch on the flood situation, and chalk out a farmers’ awareness plan depending upon the severity of the situation

iii. Post Flood/Cyclone

- i. Call for emergency meeting to take stock of the situation. Develop strategy and objectives for early recovery
- ii. Assess the extent of damage to soil, crop, plantation, micro-irrigation systems and storage facilities and ascertain the requirements of seeds, pesticides, equipment, etc. to salvage the situation or go for re-plantation
- iii. Assist the district administration for enumeration of crop loss and identification of beneficiaries for providing assistance
- iv. Review of stock of seeds available and timely transportation of the seeds to the affected areas
- v. Suggest variety of seeds and cropping pattern, which can reduce losses and reduce the risks to farmers
- vi. Coordinate the provision of agricultural services with irrigation department and soil conservation
- vii. Establish a public information centre with means of communication, to assist in providing updated information to people

- viii. Assist farmers to re-establish their contacts with agriculture produce market and ensure that produce gets proper support price

5. Executive Engineer- Rural Development

i. During Flood/Cyclone

- i. Remain in alertness and close watch on the situation
- ii. Coordination with district administration and keeping a strict vigil over the situation and act accordingly
- iii. Co-ordinate with District Administration, Enforce, Organize & Ensure round the clock inspection and repair of 1. low lying roads 2. critical buildings 3. bridges 5. culverts 6. overflow channels 8. pumps 9. generators 10. motor equipment, 11. station building, etc.

ii. Post Flood/Cyclone

- i. Immediate restoration of the relief lines
- ii. If there is a cut off in communication, then provision of alternative communication roads for relief operation
- iii. Identification of areas for clearance, delegation of team, monitoring of work
- iv. Initiate damage assessment & submission of proposal to the government for repair and restoration
- v. Continue round the clock inspection and repair of passage ways bridges, culverts, overflow channels, etc.
- vi. Clear the passage ways, on an on-going basis, in order to ensure that relief lines are unobstructed
- vii. Use information formats and monitoring checklist for programme monitoring and development, and for reporting to District Emergency Operations Centre (DEOC)

6. Executive Engineers- Works

i. Pre-Flood Arrangements/On receiving Cyclone Warning

- i. Appoint Nodal officers (technical officers) and ensure they meet the staff to review emergency procedures in their jurisdiction

- ii. Move heavy equipment, such as front-end loaders to areas likely to be damaged and put them in a safe place
- iii. Ensure emergency inspection by mechanical engineer of all plants and equipment at the district workshops
- iv. Construct/ reinforce the connecting roads from villages to roads, canals and bundhs and raise their level so that people can access the high ground
- v. Inspect old buildings and suggest retrofitting of weak buildings/ demolition of dangerous structures

ii. During Flood/Cyclone

- i. Close watch on the situation
- ii. Immediate restoration of breached roads for clearance of relief lines and to restore traffic

iii. Post Flood/Cyclone

- i. Provide a work team carrying emergency tool kits, depending on the nature and extent of the disaster, essential equipment such as: 1. Towing vehicles 2. Earth moving equipment and 3. Cranes, etc.
- ii. Coordinate with Public Works Department and Zila Parishad
- iii. Mobilize community assistance for road clearing by contacting community-based organizations
- iv. Undertake clearing of ditches, grass cutting, burning or removal of debris, and the cutting of dangerous trees along the roadside in the affected area through area engineer's staff
- v. As per the decisions of the District Control Room, undertake construction of temporary structures required, for organizing relief work and construction of relief camps, feeding centres, medical facilities, cattle camps and Site Operations Centres
- vi. Keep an up-to-date report of all damage and repairs in the district office report book and communicate the same to the District Control Room

7. District Telecom Officer (DTO)

i. On receiving Cyclone Warning

- i. Remain in close contact with the district administration

- ii. Regular inspection of towers, initiate repair & maintenance, if required
- iii. Ensure stock pile of generators & sufficient fuels for emergencies
- iv. Identify and coordinate for additional technical manpower for immediate restoration of telecommunication

ii. During Flood/Cyclone

- i. Take steps as per the demand of the situation
- ii. All the staff needs to remain alert

iii. Post Flood/Cyclone

- i. Restore the telephone lines as per the priority

8. Chief District Veterinary Officer (CDVO)

i. Pre-Flood Arrangements/On receiving Cyclone warning

- i. Arrangement of vehicle for uninterrupted mobility of mobile health units in inaccessible areas
- ii. Organise Health awareness campaign & ensure vaccination of cattle population
- iii. Ensure repair of LI Centres and other necessary equipment & make provision for supply of yearly medicines
- iv. Ensure Storage of cattle feed and fodder in interior vulnerable strategic and key areas
- v. Regular co-ordination with district administration

ii. During Flood/Cyclone

- i. Record keeping, Information dissemination to concerned quarters (Sub-Divisional Vet. Officer)
- ii. Develop a system of monitoring outbreak of diseases to ensure that timely measures can be initiated to contain them

iii. Post Flood/Cyclone

- i. Identification of areas for clearance, delegation of team, monitoring of work
- ii. Damage assessment and reporting
- iii. Ensure feed concentrate and fodder for affected cattle population
- iv. Ensure that adequate sanitary conditions through cleaning operations are maintained in order to avoid outbreak of any epidemic

- 9. Regional Transport Officer/MVI**
 - i. Pre-Flood Arrangements/On receiving Cyclone warning**
 - i. Remain in close contact with the District Administration
 - ii. Provide necessary vehicles for evacuation, transportation of relief materials, team movement as and when required
 - ii. During Flood/Cyclone**
 - i. Remain in close coordination with the administration
 - ii. Control vehicular movements till normalcy
 - iii. Post Flood/Cyclone**
 - i. Provide required vans and ambulances for mobile health and animal husbandry teams
 - ii. Make available vehicles for supply chain management
- 10. Executive Engineer-WATCO**
 - i. On receiving Cyclone warning**
 - i. Ensure drinking water is filled in overhead tanks to provide safe drinking water
 - ii. Arrangement of water tankers, generator and fuel for emergency at the supply points
 - iii. Ensure provision of safe drinking water and availability halogen tablets, ORS packets in the shelters
 - ii. During Flood/Cyclone**
 - i. Close watch on the situation
 - ii. Keep track on the low-lying areas & drinking water supply system therein
 - iii. Post Flood/Cyclone**
 - i. Immediate restoration of water supply with additional human resources
 - ii. Damage assessment and reporting
 - iii. Disinfection of all overhead tanks and piped water supply systems for supply of safe drinking waters
- 11. Executive Engineer-Electrical**
 - i. On receiving Cyclone warning**

- i. Undertake inspection of high-tension lines, towers, sub-stations, transformers, insulators, poles, and other equipment
- ii. Ensure, regular identification of faults, checking and repair of weak points / transformers
- iii. Ensure prior maintenance of the transformers and high-tension lines, cutting of the branches of the trees to safe guard the supply lines
- iv. Ensure Stockpiling of equipment /accessories, skill development training/orientation
- v. Precautions/protections near high voltage electric equipment installed.
- vi. Disconnection of electricity in the event of an emergency
- vii. Arrangement of alternative energy sources such as generators and fuel for generators
- viii. Protect Power Stations from disaster. Raise the height of compound walls. Install pump sets for draining water in case of emergency

ii. During Flood/Cyclone

- i. Disconnection of electricity to the affected areas to avoid any causality due to short circuit
- ii. Arrangement of uninterrupted power supply at the Hospitals (PHC, CHC, etc.) / temporary shelters
- iii. Dispatch emergency repair groups equipped with food, bedding, tents, and tools
- iv. Provide information to the people about the state of power supply, as it is one of the most important sources of information
- v. Assist hospitals in establishing an emergency supply by assembling generators and other emergency equipment, if necessary

iii. Post Flood/Cyclone

- i. Restoration of electricity with additional HR
- ii. Ensure that the Power Supply department makes alternate arrangements of emergency supply in all critical infrastructures
- iii. Damage Assessment and reporting

Standard Operating Procedures (SOPs) for key stakeholder's in the management of Tsunami

1. State Emergency Operation Centre (SEOC)

A. On receiving Tsunami Alerts

- i. Functioning of the SEOC round the clock i.e 24x7
- ii. Activation of all the alert sirens systems from SEOC after getting the tsunami message from INCOIS
- iii. Sending Mass SMS through the Early Warning Dissemination System (EWDS) from SEOC
- iv. Sending Voice messages through the Alert Siren Systems from Block Emergency Operation Centres (BEOC)
- v. Using of Digital Mobile Radio (DMR) systems provided to the Alert Siren locations for two-way communication
- vi. Activation of Satellite Based Mobile Data and Voice Terminals (SBMDVT) and Satellite Phones provided to the districts to transmit the message
- vii. Dissemination of Tsunami Bulletins to the District Emergency Operation Centre (DEOC) of the six coastal districts through different communication modes, viz., Phone, Email, Fax, Social Media (Facebook & Twitter) for further transmission to the Block Authorities through Phone, Email, Fax, Social Media
- viii. Alert senior officers of Government like SRC, Chief Secretary, CMO, ADG (LAO), DG, Fire Service
- ix. Send message to electronic media with approval of the SRC

2. District Emergency Operation Centre/Collector/ADM/Dist. Emergency Officer

A. On receiving warnings

- i. Ensuring the Tsunami warning by contacting State Emergency Operation Centre
- ii. Once confirmed immediately activate the District Emergency Operation Centres
- iii. DEOC in Charge or District Emergency Officer to intimate Collector, ADM(s), senior officers of District Administration
- iv. Passing the warning message to the community members and PRI representatives through the existing communication modes i.e through Phones, E-mail, Fax and Social media

- v. Decision on evacuation should be taken as per the followings threat status
 - a. **Warning:** Public should be advised to move in-lands towards higher grounds, Vessels should be advised to move into deep ocean
 - b. **Alert:** Public should be advised to avoid beaches and low-lying areas. Vessels should be advised to move into deep ocean
 - c. **Watch:** No immediate action
 - d. **Threat Passed:** All clear determination to be made the local authorities
- vi. Determining the estimated time of tsunami arrival on reception of tsunami message from INCOIS/ SEOC
- vii. Ascertaining level of threat/impact
- viii. Deployment of Response Forces if required
- ix. In case of boats in harbours, estuaries and shallow coastal water should be advised to move from offshore to deep water
- x. Vessels already at sea should be advised to stay well offshore and remain there until further instructions
- xi. All Warning messages to be converted to local languages
- xii. Preparing the message with “what is the current situation and what is the advice to public”
- xiii. Evacuation plan is activated if threshold level is exceeded
- xiv. Ensuring the evacuation is done properly through the designated evacuation routes
- xv. Ensuring all possible evacuation modes to be used during evacuation
- xvi. Continuous monitoring of bulletins from TWC
- xvii. Reassess and review instructions
- xviii. Assessing safety for return
- xix. Issuing “**All Clear**” based on local evidence

B. Post Tsunami activities

- i. After situation gets clear immediately assess the ground situations from filed officials

- ii. Response Forces to start the search and rescue and First-Aid to be given the injured
- iii. Triage and temporary medical camps to set up immediately as per the needs
- iv. Starting of free kitchen at the temporary shelters
- v. Ensuring provision of safe drinking water, medicines and other necessary arrangements to be made at the shelters

3. Community

- i. Get the accurate information on the Tsunami threat from Block /Panchayat Office
- ii. Act as per the instructions (Warning, Alert Watch, Threat Passed) issued by the Sarpanchs/BDOs/District Administration
- iii. If instructed for evacuation use the designated evacuation route of the village
- iv. During evacuation special care to be given to the most vulnerable section like pregnant women, elderly and sick persons, children and PWDs
- v. The shelter level Task Force Volunteers and Apada Mitra volunteers to help evacuating the people
- vi. People needs to carry with them essential documents and other goods like (Land records, educational certificates, bank passbooks, daily consumed medicines etc.) while evacuating
- vii. Constantly get in touch with the Panchayat, Block Office regarding the status of the threat
- viii. Need to be evacuated to the identified shelters or other shelter located at the higher places

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10.7 Format for First Information Report (FIR)

on occurrence of natural calamity

(To be sent to Special Relief Commissioner, Orissa within maximum of 18 hours of occurrence of calamity)

From: District - _____ Date of Report:- _____

To

Special Relief Commissioner, Orissa

State Emergency Operation Centre (SEOC),

Rajiv Bhawan, Ground Floor, Unit-5, Bhubaneswar

Fax No: 0674-2534176, E-mail: relief_sr@yahoo.com/src@ori.nic.in

- a. Nature of Calamity
- b. Date and time of occurrence
- c. Affected area (number and name of affected Blocks)
- d. Population affected(approx.)
- e. Number of Persons
 - Dead
 - Missing
 - Injured
- f. Animals
 - Affected
 - Lost
- g. Crops affected and area(approx. in hect.)
- h. Number of houses damaged
- i. Damage to public property
- j. Relief measures undertaken in brief
- k. Immediate response & relief assistance required and the best logistical means of delivering that relief from State/National
- l. Forecast of possible future developments including new risks
- m. Any other relevant information

Authorised Signatory

District Emergency Operation Centre (DEOC)

District:- _____

NB: The Districts will submit a detailed report on each of the above points as soon as possible after submission of the above First Information Report (FIR).

10.8 Daily Status Report on Relief/ Restoration Measures Undertaken By Departments

1. Health Department.

- Medical Relief Centres Opened-
- Mobile teams deployed-
- Wells disinfected-
- ORS distributed-
- Halogen Tablets distributed-
- Minor Ailment Treated-

2.R.D. Department.

- Mobile vans deployed-
- Water tanker deployed-
- ORS powder distributed-
- Halogen Tablets distributed-
- Water pouches distributed-
- Bleaching powder distributed-
- Sintex Tanks available-
- Tube wells disinfected-

3.FS& CW Department

-Qtls. Chuda, Qtlsgur supplied to Blocks

(Qty .in quintals)

District	Chuda	Gur

- Qtls of rice has been allocated to the Districts mentioned below

Blocks Quantity allocated (in quintal)

Total:

4.Fisheries&A,R.D. Department

- Animals vaccinated-
- Animals treated-

Damages to Roads/River Embakments

1.R.D. Department.

Roads damaged-
CD/Breach occurred-
Breach closed-
Building damaged-
Building collapsed-
Pipe water supply affected-
Tube Wells affected-

2.Works Department.

Roads damaged-
Breach occurred-
CD works damaged-
CDs washed away-
Breach closed-

3.W.R Department.

Breach occurred-
Breaches closed-
Breach closing works in progress

Annexure

Important Contact Numbers

Sl. No	Name of the Officers	Designation	Office No.	Mobile No	Email. Id
1	Collector				
2	SP				
3	PD, DRDA				
4	ADM	ADM, General		9437172548	
5	Deputy Collector, Emergency		06766255437		deockeonjhar508@gmail.com
6	District Project Officer			7606868547	sddma.keonjhar@gmail.com
7	CDM & PHO			9439987004	
10	BDO	Keonjhar		9437645974	ori-bkeonjhar@nic.in
11	BDO	Banspal		9556913059	ori-banspal@nic.in
12	BDO	Telkoi		8455871018	ori-telkoi@nic.in
13	BDO	Harichandanpur		9777200560	ori-harichandanpur@nic.in
14	BDO	Ghatagaon		7008363110	ori-ghatgaon@nic.in
	BDO	Patna		8895896192	ori-patna@nic.in
	BDO	Saharpada		9437869232	ori-saharpada@nic.in
	BDO	Anandapur		9437190442 / 9853500171	ori-anandpur@nic.in
	BDO	Ghasipura		9437853607	ori-ghasipura@nic.in
	BDO	Hatadihi		9439917013	ori-hatadihi@nic.in
	BDO	Jhumpura		9437190442	ori-jhumpura@nic.in
	BDO	Champua		6370312488	ori-champua@nic.in
	BDO	Joda		9439023777 / 7978067789	ori-joda@nic.in
15		EO, Keonjhar		8144197833	

16	Executive Officer, ULB	EO, Anandapur		8895926340	
		EO, Joda		9438670650	
		EO, Barbil		8327720315	
		EO, Champua		8895196088	
17	City/ Municipal Engineer				
18	Executive Engineer, RWSS	EE, RWSS Anandapur		9437436638	
19	Executive Engineer, RWSS	EE, RWSS Anandapur		9437436638	
20					
21	Executive Engineer, Tata Power	SE, TPNODL		9438906108	
22					
23					
24					
25	Indian Red Cross				
26	NGO	Secretary WOSCA		8249296872	
		Secretary WORD		9437650215	
		Secretary PECUC		9437013723	pecuc@hotmail.com

Emergency contact numbers

Forest Division during Forest Fire, Season-2023

Sl. No.	Name	Designation	Mobile No.
1	Division Office Control Room		6370592099
2	Sri Dhanraj H.D. IFS	DFO Keonjhar Division	9437055315
3	Sri Ghanashyam Mahanta	ACF, Keonjhar Division	9437251487
4	Sri Ashok Kumar Das	ACF, Keonjhar Division	9439247391
5	Sri Bijay Kumar Mahanta	Forest Range Officer Keonjhar Range	9438443398
6	Sri Pravat Kumar Kuanr	Forest Range Officer Ghatagaon Range	8018799531
7	Sri Manas Kumar Murmu	Forest Range Officer BJP Range	7978301676
8	Sri Akshaya Kumar Chhatria	Forest Range Officer Champua Range	9437644174
9	Sri Ghasinath Patra	Deputy Ranger, I/C, Patna Range	8328919165
10	Sri Shibaji Mohan Rao	Forest Range Officer Telkoi Range	9861060308
11	Sri Amulya Kumar Senapati	Deputy Ranger, I/C, Barbil Range	7978633778

SL No.	Name of Official	RW & SS	Mobile No.
1	Sri Jagannibash Biswal, AEE (Estr)	Over all charge	9853360215
2	Miss Rebati Dandapat, Jr.Assistant	10.00AM to 6.00P.M	8917644963
3	Si Sujit Kumar Nath Jr.Assistant	6.00PM to 2.00A.M	9437702968
4	Sri Dipti Ranjan Indrajit.Jr.Assistant	2.00A.M to 10.00A.M	8249176510

WATCO,KEONJHAR

1	Sri Kashinath Beshra	O/o The Manager, WATCO Sub_Division, Keonjhar	7894302028
2	Sri Ghasiram Majhi	O/o The Assistant Manager, WATCO Section,Anandpur	7378640580
3	Sri Kanhai Tudu	O/o The Manager, WATCO Sub-Division, Joda	7008452934
4	Sri Baidyanath Majhi	O/o The Assistant Manager, WATCO Section, Barbil	8144921460
5	Sri Hrushikesh Mohanta	O/o The Assistant Manager, WATCO Section, Champua	8895306667

TPNODL

CIRCLE	DIVISION	SUB -DIVISION	SECTION	COMPLAINT COORDINATOR	FUSE CALL NUMBER
Keonjhar	KED Keonjhar	No. I Keonjhar S/D	No.I_KED_Keonjhar	cse_no1_keonjhar	8093092116
Keonjhar	KED Keonjhar	No. I Keonjhar S/D	No.II_KED_Keonjhar	cse_no2_keonjhar	8093092115
Keonjhar	KED Keonjhar	No. I Keonjhar S/D	No.III_KED_Keonjhar	cse_no3_keonjhar	8093092114
Keonjhar	KED Keonjhar	No. II Keonjhar S/D	RE-1	cse_re1	8093092117
Keonjhar	KED Keonjhar	No. II Keonjhar S/D	Telkoi	cse_telkoi	8093092112
Keonjhar	KED Keonjhar	No. II Keonjhar S/D	Banspal	cse_banspal	8480486130
Keonjhar	KED Keonjhar	Turmunga S/D	Turumunga	cse_turumunga	8093092110
Keonjhar	KED Keonjhar	Turmunga S/D	Saharpada	cse_saharpada	8093092109
Keonjhar	KED Keonjhar	Turmunga S/D	Patna	cse_patna	8093092108