

2. Study of a the secondary data available with the Ministry of Home Affairs(MHA),National Disaster Management Authority(NDMA), Indian Metrological Department (IMD), Odisha State Disaster Management Authority (OSDMA), other related Ministries / Departments of Central and State Governments
3. Study of reports of the Parliament and State Governments
4. Related books, articles and other literature available
5. Related materials available on internet and media
6. Empirical data through interviews with the elected representatives of State's Legislative Assembly, students, elected representatives from Panchayats, NGOs, academicians and researchers
7. Open courseware from universities and research institutions.
8. Materials available on e-knowledge networks and other portals of Disaster Management
9. Consultation with officials of international agencies like UN , World Bank ,Asian Development Bank

Chapterisation Scheme:

Chapter-I: Introduction:

Basically, the rationale , scope and justification behind undertaking a comparative study of Odisha's two super cyclones would be introduced .This chapter would cover brief introduction to the subject of Odisha's experience in handling hydro –meteorological disasters like cyclones with particular reference to the super- cyclone 1999 and Phailin of 2013 and would give a brief outline as to why the State received worldwide notoriety for poor handling at one end and

immense fame for handling threat of cyclone Phailin (or level V typhoon in America's assessment). Though the matter would not be discussed in detail but reasons behind handling of both the cyclones would be introduced. A brief outline of reasons behind undertaking of a comparative study of both the cyclones would be introduced. The reasons such as preparedness or lack of preparedness behind both the cyclones would be touched upon briefly. The related subject of Early Warning and CBDP would also be briefly explored while discussing preparedness. The transition from relief and response centric approach to risk reduction including preparedness would be introduced. Then the success achieved in handling Phailin would be highlighted to understand the contrasting outcomes between two events to arouse the curiosity of the 'Disaster Management' (DM) practitioners about what happened in the intervening fifteen years that led to effective handling of Phailin? Was it efforts of disaster preparedness that led to reduction of casualty from over ten thousand in 1999 to less than fifty in 2013? Or was/were other reason/s that led to achieving terrific results during Phailin?

Briefly the reasons for success behind handling of Phailin like preparedness, planning, capacity building efforts, evacuation, transmission of EW alerts, creation of legal and institutional structures like OSDMA, political commitment and ownership of DM agenda would be highlighted.

The research questions would be formulated too. The research methodology would also be highlighted in this part.

Chapter II: Literature Review

This chapter would discuss the important materials available on the subject and would analyse the contentions and theories posed by these existing written materials. The chapter would

examine critically the materials available and comment my specific critique of the referred materials.

Chapter III: Hazard Profile of Odisha:

This chapter would discuss the hazard profile of Odisha with particular reference to the cyclone risk. For comparative understanding, the developments in hazard mapping of areas of cyclone risks in international and national context would be touched upon. In other words, the vulnerability assessment of Odisha would be discussed to see whether there have been significant improvements in vulnerability mapping in the intervening fifteen years -since the super cyclone of 1999. The risks emanating from the climate change would also be briefly discussed. The efforts made by the State and Union Governments in vulnerability assessment would be highlighted to assess whether the efforts are adequate or more action is required? The lessons learnt from some of world's best practice cases that may be relevant for Odisha would be highlighted.

Chapter-IV: Super Cyclone of 1999:

This chapter will outline some of the factual details about catastrophic experience of super cyclone of 1999 and would list out some of the main reasons that were responsible for making the impact so numbing and nerve racking to the national/State Government and the community. The details about the track of the cyclone, delay in its landfall would be elaborated along with the response of the State government to the EW alerts of the IMD, the relative lack of preparedness which affected the immediate response such as inadequate evacuation of vulnerable population and deployment of personnel and other teams. This chapter would delineate the contours of lessons learnt specifically from this disaster and how these lessons were incorporated

immediately into specific areas of action. Basically, the chapter would form the basis of understanding on what went wrong during 1999 and how the gaps in preparedness became the pointers for the State government to take corrective action for dealing with the future disasters.

Chapter V: Preparedness of Country, State and Community - Early Warning and Community Cased Disaster Preparedness

This chapter is the most elaborate one as it discusses the comparative experiences of the two super cyclones of Odisha in terms of all the action taken in the domain of entire disaster risk reduction in the intervening fifteen years. The chapter elaborates each action in detail to indicate how the State Government primarily learnt lessons from the disastrous experience of 1999 super cyclone. The reasons would be analysed in detail specially with reference to why the same action either failed to achieve the results or why the same action was possible or not possible during 1999 super-cyclone. Then, the links between preparedness, mitigation, prevention and the actual event would be discussed. The chapter would seek to understand the comparative role of both the EW and CBDP elements in both the cyclones and draw conclusions on their roles in disaster preparedness during both the cyclones. The chapter would also whether primacy needs to be accorded to only EW or whether the importance needs to be accorded to a combination of action taken by all the stakeholders. This chapter is most analytical to derive conclusions on the roles by several factors.

Chapter VI: Results and Discussion

This chapter would discuss in detail the conclusive findings to the two research questions posed in the chapter I. The analysis would lead to the conclusions based on the facts analysed in the previous chapters. The chapter would seek to arrive at the conclusions based not only details

available so far strictly in DM domain and would in fact obtain factual details , if need be , from other fields. Then only my research findings can be backed up with proof. In other words, this chapter would try to back the research questions with facts and facts alone. The findings would also validate or invalidate the disaster management maxims posed in our research questions.

Chapter VII: Lessons Learnt

This chapter would contain what lessons were learnt from these two referred cyclones and whether these lessons are relevant for other States of India and other countries. An analysis would also be done as to whether lessons learnt in 2013 are being carried forward or not; and what more still can be done and needs to be done.