

**National Cyclone Risk Mitigation Project (NCRMP)**  
**with World Bank Assistance**  
**[2004-2010]**

1. Hazard risk mitigation is key to sustainable development and this has been the policy of Government of India, which lays greater emphasis on prevention, preparedness and mitigation.
2. In line with the present policy, the Ministry of Home Affairs, entrusted with the mandate of disaster management, have launched multifaceted initiatives and projects aiming at mitigating hazard risks in the country and enhancing capabilities at various levels to effectively respond to emergencies. Three major projects have been drawn up namely **National Cyclone Risk Mitigation Project, National Earthquake Risk Mitigation Project** and **Strengthening Fire and Emergency Services** so as to address multiple hazard risks in the country. The Planning Commission has appraised these projects and accorded in –principle clearance.
3. The World Bank has offered to support the **National Cyclone Risk Mitigation Project** covering all 13 cyclone prone coastal and island States/UTs. These States and UTs are *Andhra Pradesh, Gujarat, Orissa, West Bengal, Maharashtra, Karnataka, Kerala, Tamil Nadu, Goa, Daman & Diu, Pondicherry, Lakshadweep and Andaman & Nicobar Islands.*
4. On receipt of formal communication from DEA, a four member Mission Team from the World Bank visited India in the last fortnight of September 2004. During their visit the Mission had elaborate discussions with various stake holders whose involvement is envisaged under the project such as Indian Meteorological Department (IMD), National Centre for Medium Range Weather Forecasting (NCMRWF), Ministry of Environment and Forests (MoEF), Central Water Commission (CWC), National Institute for Disaster Management (NIDM), IITs etc. The Mission held extensive discussions with officers of NDM Division on the scope of the project and methodologies for implementation. A one-day brainstorming session was also held with representatives of States/UTs (proposed to be covered under the project) where the Mission Team discussed in detail the programme implementation/management modalities. It is noted that the Project was developed in a consultative manner based on the deliberations made in a two-day workshop held in February, 2003 at Kolkata and attended by States/UTs prone to cyclones and other relevant Central Ministries/ Departments and Agencies.
5. The World Bank Mission has estimated the overall cost of the proposed National Cyclone Risk Mitigation Project at around Rs. 1642.50

crore<sup>1</sup> (US \$ 365 million)<sup>2</sup>. World Bank/IDA funding is proposed at Rs. 1350 crore (US \$ 300 million). Four identified key components that are to be supported under the project are indicated below;

- **Component A-**  
Upgradation of the Cyclone Forecasting, tracking and warning system
- **Component B-**  
Cyclone Risk Mitigation Investments
- **Component C-**  
Technical Assistance for Hazard Risk Management Capacity Building
- **Component D-**  
Project Management and Monitoring

- **Total- Rs. 1350 crore (US \$ 300 million)**

*MHA will decide on allocation of resources among four broad components of the project mentioned above.*

**6. Areas of support and expected outputs under these four components are given below:**

**a. Component A: Upgradation of the Cyclone Forecasting, tracking and warning system** - The activities that are to be supported under this component envisage upgrading the cyclone modeling, forecasting, tracking, and warning system. Under this component **Indian Meteorological Department (IMD)** will be strengthened by installation of Doppler Radars using digital processing for weather and cyclone forecasting. In addition, the sensor infrastructure will be upgraded where required. The computer processing capabilities of **National Centre for Medium Range Weather Forecasting (NCMRWF)** will be improved and the concerned staff members will be trained in the use of the new infrastructure and state-of the art cyclone forecasting models. The expected outcome will be putting in place a modern system of cyclone warning with longer lead time in warning potentially affected people in the coastline to move to shelters and place cattle and other animals in areas where losses could be minimized. In addition fishermen will be equipped with communication devices to better prepare themselves in case of cyclone track changes.

**b. Component B: Cyclone Risk Mitigation Investments in States/UTs** - Cyclone Risk Mitigation Investments in States/UTs is the major component of the project which includes identification and implementation of high priority activities for cyclone risk mitigation (i.e., construction of cyclone shelters, shelterbelt plantation, mangrove regeneration, construction of embankments to stop sea water inundation etc.) in the project States/UTs and commissioning

<sup>1</sup> This includes 25% contribution from States towards Component B. 75% resources will be provided from this project to the State Govts.

<sup>2</sup> 1 USD= INR 45.00

of technical assistance/studies to sustain these initiatives. It is envisaged that the project States/UTs will draw up proposals as per their local needs by identifying priority areas where interventions are most crucial for effective mitigation of cyclone risks in line with the State/UT Disaster Management Policy. This would ensure that proposals/schemes firmed up by states/UTs are need based and specifically address the cyclone risk mitigation aspects. Detailed sets of guidelines will be prepared by MHA to help States/UTs in formulating comprehensive project proposals as per the World Bank norms.

Considering the occurrence of cyclones, size of population and the existing institutional mechanisms for disaster management the States/UTs can be categorized into two categories:

**Category-I:** higher vulnerability (Andhra Pradesh, Gujarat, Orissa and West Bengal) and

**Category-II:** lower vulnerability (Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Daman & Diu, Pondicherry, Lakshadweep and Andaman & Nicobar Islands). Category-II States/UTs can be further divided into two sub-categories i.e., Category-II (A) and Category-II (B) considering their geographical size.

i. Taking into account the vulnerability of States/UTs to cyclones, and size of population and availability of financial resources, it is proposed that the allocation of cyclone mitigation investments in States/UTs should be pre-determined. The table below shows the categorization of States/UTs and the resource allocation to each State/UT as per their categorization.

<b>Category</b>	<b>States/Union Territories</b>	<b>Allocation per State/UT from World Bank (75%)</b>
I-Highly vulnerable	Andhra Pradesh, Gujarat, Orissa and West Bengal	Rs. 176.0 crore for each State <sup>4</sup> = Rs 704 crore
II (A)-Low vulnerability	Maharashtra, Karnataka, Kerala & Tamil Nadu	Rs. 26.00 crore for each State <sup>4</sup> =Rs 104 crore
II (B)- Low vulnerability	Goa, Daman & Diu, Pondicherry, Lakshadweep and Andaman & Nicobar Islands	Rs. 13.5 crore for each State <sup>5</sup> =Rs 67.5 crore
<b>Total Component B</b>		Rs 877.5 crore(USD 195 million)

**c. Component C: Technical Assistance for Hazard Risk Management Capacity Building** - The elements in this component inter-alia includes strengthening of national and regional training institutions, putting in place the techno-legal regime for cyclone mitigation and commissioning of different studies on risk assessment and cost-benefit analysis of cyclone risk mitigation measures. Strengthening of NIDM and NDM cells in the ATIS in the project States will be undertaken with a view to improve the quality of training programmes in disaster management. A few training programme in these institutes are also proposed to be supported under this component. NIDM will be the nodal implementing agency for the component addressing capacity building of training institutions. BIS will be assisted in establishing a protocol for revision of codes, development of guidelines/ documents/ explanatory handbooks etc. and provide technical assistance to the States in putting in place a new techno-legal regime for cyclone mitigation. Need based studies in the field of storm surge modeling, multi-hazard quantitative risk assessment, cost-benefit analysis of cyclone risk mitigation measures etc., will be carried out by different institutions with necessary expertise and managed by MHA.

**d. Component D: Project Management and Monitoring** - Since the project will be implemented in 13 States/UTs and envisages partnership with multiple Ministries/ Departments/agencies, a strong management/monitoring arrangement needs to be put in place. This component will provide support for putting in place a management and monitoring system for the project at the national level and State level implementing agencies.

**7. Project Management Arrangements:** At the central level Ministry of Home Affairs, will be the Nodal and executing agency(EA) for the project. Different components of the project will be implemented by different Ministries/Departments/agencies—IMD & NCMRWF for Component A, NIDM & BIS for Component C and 13 States/UTs for Component B will function as the implementing agencies (IA). In order to coordinate the activities under various components and also advise the Implementing Agencies, a project Management Unit (PMU) will be set up at MHA under the supervision of JS(DM) & CRC MHA. Project Implementation Units (PIUs) will be set up in each of the State Disaster Management Departments of 13 project States/UTs, one each in IMD, NCMRWF, NIDM and BIS. The implementation responsibility for procurement of works, goods and services for the specific components will be the responsibility of the concerned States/UTs/ Ministries/Departments/Agencies under the overall guidance and supervision of MHA.

8. **Implementation arrangements:** Each Implementing Agency will set up a Project Steering Committee to consider the investment/ project proposals under the project and recommend them to MHA for assistance. This Committee will ensure that all the proposals being recommended adhere to the norms to be prescribed for World Bank assisted project. This committee will be headed by Head of the agency in the case of Central Agencies(IMD, NCMRWF, NIDM & BIS) and Chief Secretary in the case of States/UTs. The proposals received in MHA will be further screened by a National Steering Committee (NSC) comprising of representatives of MOEF, DEA, DST, experts and subject matter specialists. This Committee to be headed by JS & CRC, MHA will recommend investment/proposals for disbursement under WB assistance. The status of project implementation in every State/UT and by other Ministries/ Departments/agencies will be closely monitored through these Steering Committees (SC) set up in all the implementing agencies and in MHA for overall coordination.

9. The modalities of assisting the States/UTs were discussed with DEA and the World Bank mission team. It has been decided in the Ministry that most appropriate way to assist the States should be on a 75:25 basis; where in 75% resources are provided by the Central Govt. as grant to States and the rest (25%) matching resources will have to be provided by the States/UTs for taking up various activities under the project. This would ensure greater ownership by States/UTs as the project will be seen as a joint venture of the State and Central Government and ensure sustainability of the initiatives taken under the project.

10. The World Bank mission in their note has praised the efforts made by Government of India in the field of disaster risk reduction and indicated their willingness to fund the project. The Bank is keen that project preparatory activities are initiated immediately. This was also discussed with DEA in the wrap-up meeting and it has been decided to undertake start-up activities so that disbursement can be expedited as soon as the project agreement is signed between Govt of India and the World Bank.

11. It is expected that the project would take-off in the third quarter of the financial year 2005- 2006. By the time the project gets approval in the Board (December 2005) it is required to be in a position to disburse investments/resources to the approved projects. The investment/project proposals including procurement documents must be ready and screened and recommended by the Steering Committees at different levels. Preparation of investment proposals by States/UTs and others concerned, getting it vetted so as to ensure that it has been prepared according to prescribed norms is a time consuming process for which action has to be initiated from now. This would essentially require undertaking of various project preparation activities, including project formulation and

implementation guidelines, preparation of environmental and social assessments, preparation of technical specifications and bidding documents etc. These actions will be initiated now by all Implementing Agencies so that the project launch is not badly delayed.

12. For the project preparation activities including establishment of project implementation structure, preparation of environmental and social assessments, preparation of technical specifications and bidding documents for cyclone forecasting and early warning systems by IMD & NCMRWF, preparation of bidding documents for cyclone risk mitigation investments at the State level and establishment of expert teams to assist the States in preparation of cyclone mitigation investment portfolio with a basket of projects assigning due priority, certain amount of resources will be required upfront. As per the WB's operational policy, a country can avail Project Preparation Facility (PPF) advance to get started with the preparatory work before the WB approves the project. PPF given in advance is a part of the total project amount. As per the WB's procedures the processing for a PPF advance can begin when the WB receives a letter from the country requesting advance indicating therein the purpose of PPF advance, and the expenditure it would finance, the expected period of project preparation and estimates for the items to be financed under the advance. It has been decided to request DEA for availing PPF advance for project preparation activities.

13. As this project will have to be a new plan scheme for MHA, it has been decided to request Ministry of Finance and Planning Commission for additional outlay in order to avail World Bank assistance for this project. MHA will write to DEA and Planning Commission for additionality to be provided in view of the World Bank assistance being made available for this project. Other implementing agencies and organizations including the State and UTs concerned will also have to take similar steps.

14. It has also been decided to approach the Planning Commission and Department of Expenditure for EFC/PIB approval and providing additionality in the plan scheme of the MHA.