



## National Cyclone Risk Mitigation Project-II (P144726)

SOUTH ASIA | India | Urban, Resilience and Land Global Practice |  
IBRD/IDA | Investment Project Financing | FY 2015 | Seq No: 13 | ARCHIVED on 28-Oct-2021 | ISR48269 |

Implementing Agencies: Department of Economic Affairs, Maharashtra: Department of Relief and Rehabilitation, West Bengal: Department of Disaster Management, Gujarat: Gujarat State Disaster Management Authority, Kerala: Department of Revenue and Disaster Management, Karnataka: Department of Revenue and Disaster Management, Goa: Water Resources Department, National Disaster Management Agency

## Key Dates

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Bank Approval Date: 28-May-2015

Effectiveness Date: 09-Nov-2015

Planned Mid Term Review Date: 17-Sep-2018

Actual Mid-Term Review Date: 04-Jun-2018

Original Closing Date: 15-Mar-2021

Revised Closing Date: 15-Sep-2022

## Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The Project Development Objective is to reduce vulnerability to cyclone and other hydro-meteorological hazards of coastal communities in project States, and increase the capacity of the State entities to effectively plan for and respond to disasters.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

## Components Table

Name

Early Warning Dissemination Systems:(Cost \$17.77 M)  
Cyclone Risk Mitigation Infrastructure:(Cost \$181.18 M)  
Technical Assistance for Multi-Hazard Risk Management:(Cost \$13.33 M)  
Project Management and Implementation Support:(Cost \$16.12 M)

## Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	<input type="checkbox"/> Moderately Unsatisfactory	<input type="checkbox"/> Moderately Satisfactory
Overall Implementation Progress (IP)	<input type="checkbox"/> Moderately Satisfactory	<input type="checkbox"/> Moderately Satisfactory
Overall Risk Rating	<input type="checkbox"/> Substantial	<input type="checkbox"/> Substantial

## Implementation Status and Key Decisions

- **Component A - Early Warning Dissemination Systems:** Goa and Kerala are in advance stages of procurement of sirens and towers, and initiation of installation. Karnataka is still in the process of finalizing the identification and screening of sites. In parallel ongoing processes include development of institutional arrangements, application for licenses and any other regulatory clearances and development of SOPs.
- **Component B – Cyclone Risk Mitigation Structure: [Multi-purpose Cyclone Shelters (MPCSs)]** 207 MPCSs have been completed and 55 are under construction. For MPCSs under construction, a realistic review of completion dates and close monitoring of progress are critical. For completed and nearly completed MPCSs, formulating Cyclone Shelter Management and Maintenance Committees



(CSMMCs), handing over MPCs to CSMMCs, preparing standard operating procedures including maintenance plans, and setting up Corpus Fund requires continued attention. **[Roads]** Road works have been carried out in two states: Gujarat and Karnataka. While all planned 43 roads covering a length of 156.66 km have already been reported as completed, pending rectification works in one road package needs completion. In Karnataka, 15 packages covering a length of 48 km were reported as completed and completion certificates were issued. **[Saline Embankments]** One saline embankment package in Karnataka reported 52% physical progress by end of July 2021. For the two SEs in Maharashtra physical progress on Kachali Pitkari SE is reported as 30%, and for the Narvel Banavale SE as 45%. **[Under Ground Cabling]** Works in Maharashtra are delayed with an average physical progress of 40% across all three ongoing works. The package in West Bengal was completed and works in Goa have achieved 85% physical progress.

- **Component C - Technical Assistance for Multi-Hazard Risk Management:** Planned activities have been advanced including the Hazard Risk & Vulnerability Assessment, Benefit Monitoring & Evaluation, Comprehensive Multi-hazard Risk Financing Strategy (CMhRFS) and the Hydro Meteorological Resilience Action Plan. Design of the National Seismic Risk Mitigation Program is delayed and the Dynamic Web Based Composite Risk Atlas and Decision Support Tool is nearing completion.

## Risks

### Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	☐ Moderate	☐ Moderate	☐ Moderate
Macroeconomic	☐ Moderate	☐ Moderate	☐ Moderate
Sector Strategies and Policies	☐ Moderate	☐ Moderate	☐ Moderate
Technical Design of Project or Program	☐ Moderate	☐ Moderate	☐ Moderate
Institutional Capacity for Implementation and Sustainability	☐ Substantial	☐ Substantial	☐ Substantial
Fiduciary	☐ Substantial	☐ Substantial	☐ Substantial
Environment and Social	☐ Moderate	☐ Moderate	☐ Moderate
Stakeholders	☐ Substantial	☐ Substantial	☐ Substantial
Other	--	☐ Substantial	☐ Substantial
Overall	☐ Moderate	☐ Substantial	☐ Substantial

## Results

### PDO Indicators by Objectives / Outcomes

Reduce vulnerability to cyclone and hydro-meteorological hazards of coastal communities

► Proportion of the targeted coastal population covered by the EWDS (Percentage, Custom)

	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	25.00	25.00	75.00



Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	<p>State-level EWDS works have progressed in Kerala and Goa where the procurement of sirens and towers is in advanced stages and initiation of installation is underway. Karnataka is facing delays with this work but is expected to complete within project period with close monitoring. 200 sirens are expected to be installed across the the three States.</p> <p>Meanwhile, the deployment of the web dynamic composite risk atlas and decision support system (DCRA-DSS) at IMD developed under Component C of the NCRMP II has enhanced access to precise and timely early warning and forecasts to the targeted coastal population. 25% of the targeted population has gained coverage under the NCRMP II work on these national EWD systems.</p>			
► Proportion of vulnerable coastal population with access to Project financed emergency shelters (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	49.00	15.00	17.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	<p>The Project Restructuring in August 2021 revised the end target of this indicator from 30% to 17% to reflect the revised scope of Project financed emergency shelters to be undertaken. The reported actual percentage of 15% in this ISR follows the logic of calculation as consistent with this revision.</p> <p>To illustrate, At the time of project appraisal, 500,000 people were identified as having need of MPCs out of 1,666,666 people (30%). Based on the revised investment figures, it is estimated that the 262 project-financed MPCs would accommodate 295,050 (17%) of vulnerable coastal people according to the anticipated shelter accommodation capacity With the completion of 207 shelters, 258,900 people now have access to Project financed emergency shelters, which is 15% of the total vulnerable population.</p>			

Increase State capacity to effectively plan and respond to disaster events				
► Results of the vulnerability assessment presented to officials of NDMA for investment planning (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	<p>Multi-hazard risk modelling and assessment for all coastal states and UT is under progress and has been presented to the NDMA at different stages of preparation, testing and operationalization during recent cyclones. Improvements to this system are underway through repeated testing during cyclones, including two cyclone events in May 2021. It is estimated that the incorporation of lessons from this testing will be finalised by October 2021</p>			
► Results of the comprehensive multi-hazard risk financing strategy presented to and used by officials of NDMA for policy making (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	No	Yes
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	<p>The development of this strategy is now underway under the leadership of PMU-NDMA.</p>			



Intermediate Results Indicators by Components

Early Warning Dissemination Systems				
▶ Number of sirens installed (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	200.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	State-level EWDS works have progressed in Kerala and Goa where the procurement of sirens and towers is in advanced stages and initiation of installation is underway. Karnataka is facing delays with this work but is expected to complete within project period with close monitoring. 200 sirens are expected to be installed across the the three States.			

Cyclone Risk Mitigation Infrastructure				
▶ Number of multi-purpose cyclone and flood shelters completed (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	190.00	207.00	262.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	207 MPCSSs have been completed and 55 are under construction.			
□ Number of people with access to multi-purpose cyclone and flood shelters built or rehabilitated under the Project (Number, Custom Supplement)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	246,900.00	258,900.00	295,050.00
▶ Roads rehabilitated, Rural (Kilometers, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	205.00	205.00	205.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	Road works have been carried out in two states: Gujarat and Karnataka. In Gujarat, all planned 43 roads in total 157km are completed, yet it requires close attention for rectification of construction defects. In Karnataka, total 48 Km length was reported to be completed.			
▶ Number of bridges completed under the project (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	0.00	0.00	0.00	2.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	2 bridges are under construction in Karnataka.			
<b>► Kilometers of embankments rehabilitated under the Project (Kilometers, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	30.00
Date	18-Mar-2016	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	Out of 3 planned embankment, works are on ongoing in one embankment in Karnataka and two in Maharashtra			
<b>□ Square kilometers protected by embankments rehabilitated by the Project (Square kilometer(km2), Custom Supplement)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	0.00	29.00
<b>► Kilometers of HT and LT lines moved underground (Kilometers, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	199.60	448.00	1,286.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	UGC works in Goa (1 package) and Maharashtra (3 packages) are ongoing, while the UGC works in West Bengal have been completed.			

<b>Technical Assistance for Multi-Hazard Risk Management</b>				
<b>► Multi-hazard risk assessment for selected areas completed (Yes/No, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	Multi-hazard risk modelling and assessment for all coastal states and UT are advanced and presented to relevant government officials, while undergoing improvements through the experience of being tested during cyclone events.			
<b>► Physical structural assessment of lifeline infrastructure completed (Yes/No, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	No	No	No	Yes
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	This activity is being carried out as part of a study: the Design of the National Seismic Risk Mitigation Program under Component C (Sub Component C5) and is facing delays.			
▶ Probabilistic risk model for selected areas completed (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	No	Yes
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	Multi-hazard risk modelling and assessment for all coastal states and UT are advanced and presented to relevant government officials, while undergoing improvements through the experience of being tested during cyclone events.			
▶ Hydro-meteorological Resilience Action Plans completed (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	No	Yes
Date	15-Dec-2014	18-Mar-2021	08-Sep-2021	15-Sep-2022
▶ Number of training modules on disaster damage assessment implemented (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	14.00	14.00	8.00
Date	15-Jun-2015	18-Mar-2021	08-Sep-2021	15-Sep-2022
Comments:	Additionally, 10269 participants have been trained till date on DRM through 432 modules and 16747 community members on shelter level training through 937 trainings.			

### Performance-Based Conditions

#### Data on Financial Performance

#### Disbursements (by loan)

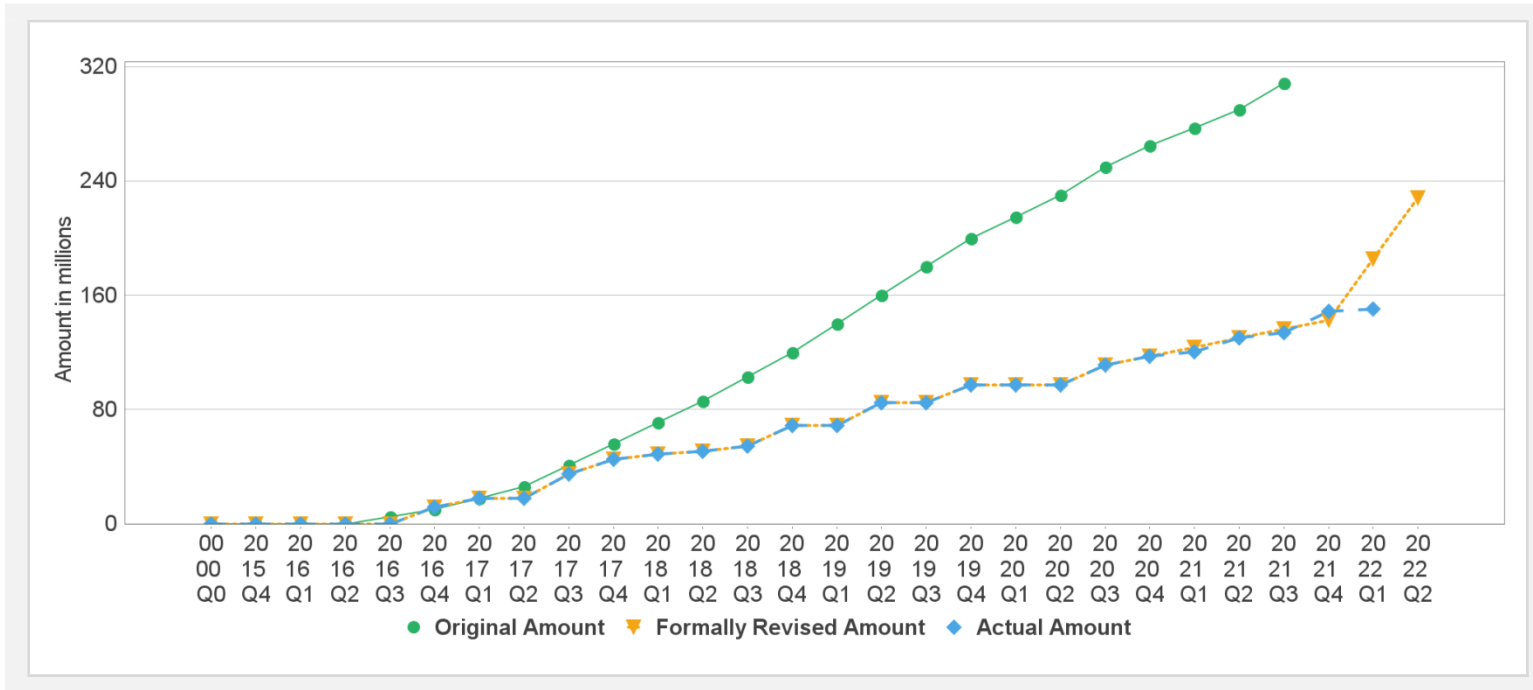
Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P144726	IDA-56930	Effective	USD	308.40	228.40	80.00	150.56	77.84	66%

#### Key Dates (by loan)



Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P144726	IDA-56930	Effective	28-May-2015	11-Aug-2015	09-Nov-2015	15-Mar-2021	15-Sep-2022

**Cumulative Disbursements**



**PBC Disbursement**

PBC ID	PBC Type	Description	Coc	PBC Amount	Achievement Status	Disbursed amount in Coc	Disbursement % for PBC
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**Restructuring History**

Level 2 Approved on 16-Feb-2021 ,Level 2 Approved on 03-Sep-2021

**Related Project(s)**

There are no related projects.