

Environmental Assessment Report

Environmental Assessment and Review Framework (EARF)
Project Number: 40156
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India: Sustainable Coastal Protection and Management Investment Program

Prepared by the Goa Department of Water Resources, the Karnataka Ports and Inland Waterways Department, and the Maharashtra Maritime Board for the Asian Development Bank (ADB)

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INDIA: SUSTAINABLE COASTAL PROTECTION AND MANAGEMENT INVESTMENT PROGRAM: ENVIRONMENTAL ASSESSMENT AND REVIEW FRAMEWORK (EARF)

A. Introduction

1. The Asian Development Bank (ADB) is supporting the Government of India (GOI) and State Governments through the Sustainable Coastal Protection and Management Investment Program. The Program is being implemented in the states of Goa, Maharashtra and Karnataka. The environmental assessment and review procedures to be applied to Program subprojects are outlined in this document. The Program has been developed using a MFF lending modality based upon an agreement with the GOI. The agreement with the GOI defines the sector development framework that includes particular needs, proposed interventions, and the role of development partners in reaching development objectives. Active stakeholder participation was acquired throughout the project preparation technical assistance (PPTA) to ensure that local needs are incorporated into the site-specific, geographically focused subproject designs.

B. Overview of Types of Subprojects to be Assessed

2. The first group of investments (Project 1) includes the implementation of 3 subprojects for shoreline protection and beach management following subproject proposals prepared during the PPTA. Environmental impact assessments (EIAs) were undertaken for each subproject. Extensive numerical modeling was used to identify erosion-causes and develop environmentally sensitive plans and designs. During discussions among the PPTA team, state environment agencies and MOEF the proposed solutions were agreed to be largely soft solutions designed to correct environmental damage and under GOI requirements would not create significant environmental issues. Coastal erosion control is a permitted activity under Coastal Regulation Zone requirements. Subprojects for the Program first tranche were identified through a participatory process involving the executing agency, implementing agencies and stakeholders including consultation at the grassroots level. Future selection of subprojects will be based on a process of participatory shoreline planning, a rigorous process of assessment with stakeholder participation. Potential sub-projects identified during the PPTA include a range of site-specific measures to provide erosion protection, address causes of erosion and/or coastal stability, use of natural protection methods, and support to other coastal management initiatives and facilities.

C. India's Environmental Assessment and Review Procedures

3. The Environmental (Protection) Act, 1986 (EPA) is the umbrella legislation providing for protection of the environment in the country. The Environmental Impact Assessment (EIA) Notification, 1994 and various amendments thereto have been notified under this act. The Ministry of Environment and Forests (MOEF) is responsible for protection and management of the environment and has enacted new notification under the Environmental Protection Act, 1986 related to environmental clearance (EC) of development projects with effect from September 14, 2006. The MoEF, the Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCB) constitute the regulatory and administrative core of environmental management. Since 1991 this has been strengthened by establishment of State Coastal Zone Management Authorities. Other central ministries and state level agencies support the MoEF with regard to relevant subject matters. The EIA Notification of 2006 provides a schedule of development projects that require EC prior to start of construction works; the schedule places projects into two categories (A and B) based on spatial extent of potential impacts and potential impacts on human health and natural and man made resources. All projects in Category A require an EC from MOEF. All projects in Category B require EC from the State/Union territory EIA Authority.

Applications for Category 'B' projects are screened to determine whether or not the project or activity requires further environmental studies for preparation of an EIA for its appraisal prior to the grant of EC depending up on the nature and location specificity of the project; the projects requiring an EIA report are termed Category 'B1' and remaining projects are termed Category 'B2' and do not require an EIA report.

4. In order to protect the fragile coastal zone of the country from degradation, GOI introduced the regulatory regime of coastal zone by the Coastal Regulation Zone (CRZ) Notification¹. The main purpose of this notification is to control and minimize environmental damage to coastal stretches including estuaries and backwaters. All coastal states of India were bound to formulate coastal zone management (CZM) plans classifying coastal stretches as coastal regulation zones, based on the nature of existing ecosystems and/or development. Areas of particular concern to this project are CRZ intertidal zones and the area above high tide to 200 m inshore. Proposed Project 1 sub-project designs complied with CRZ regulations. If projects are either below the low tide line or part of a greater shoreline protection and management scheme then activities are deemed permissible in reference to certain notifications.

5. The Water (Prevention and Control of Pollution) Act, 1974 resulted in establishment of CPCB and SPCB whose responsibilities include managing water quality and effluent standards, as well as monitoring water quality, prosecuting offenders and issuing licenses for construction and operation of development projects requiring water as a resource. The Air (Prevention and Control of Pollution) Act, 1981, empowers SPCBs to enforce air quality standards set by CPCB. During the construction phase of the project construction activities may require consent from the relative state government pursuant to the Water (Prevention and Control of pollution) Act of 1974, The Water Cess Act of 1977 and Air (Prevention and Control of Pollution) Act of 1981. This consent will be taken by the construction contractor and would be applicable to all sub projects of this loan program. The Wildlife (Protection) Act, 1972 has allowed the government to establish National Parks and Sanctuaries to protect and conserve flora and fauna of each state. The act will be applicable to this project if the command area of any sub project encroaches on any National Park or Sanctuary or houses habitats of wild animals. In 1988, the Indian Motor Vehicles Act empowered the State Transport Authority to enforce standards for vehicular pollution and prevention control. In August 1997, the *Pollution Under Control Certificate (PUC)* program was launched to crackdown on vehicular emissions in the States. All vehicles used in construction of subprojects will have to comply with the PUC norms set down under this act.

D. Specific Procedures to be used for Subprojects under the MFF Loan

1. Responsibilities and Authorities

6. The State Executing Agencies (SEA) will be responsible for preparing future subprojects including environmental assessment reports and implementing environmental management plans (EMP's) for subprojects as outlined in this framework. The SEA will be responsible for submitting these to ADB for review and approval prior to commencement of work/finalization of contracts. In the absence of a policy consistent with ADB's policy on Environment, this framework and environmental management procedural guidelines shall apply to all sub projects

¹ MoEF, 1991. Notification No.S.0114 dated 19th February, 1991, Ministry of Environment and Forest, Government of India, New Delhi.

under the loan so as to ensure that the environmental issues are appropriately addressed and mitigated to acceptable levels. A central project management unit (PMU) will be set up and will be responsible for overall implementation of the project including the EMP. Ministry of Environment and Forests (MOEF) and appropriate state government agencies, and coastal management committees where they exist, will review and approve EIAs/IEEs and EMPs. EIAs/IEEs and EMPs and associated supplementary and monitoring reports will be submitted to ADB for review and approval.

2. Environmental Criteria of Subproject Selection

7. The following environmental criteria for subproject selection will apply during implementation of the subprojects: (i) there should not be any disturbance to residents in areas surrounding subproject sites - where there are inhabitants, no long-term effects should prevail; (ii) subprojects should have no or minimal impacts on the natural coastal dynamics; any impacts should be properly assessed through high quality numerical modeling. No impact should be seen on the local water supply; (iii) subprojects will have no direct or indirect long-term effect on ecologically sensitive areas such as national parks, wildlife sanctuaries, marine reserves, or areas of historical or cultural importance; (iv) there will be no damage to internationally important areas of interest; (v) subproject sites shall not be altered in aesthetic value.

3. Procedures for Environmental Assessment of Subprojects

8. The environmental assessment (EA) of subprojects must fulfill requirements of ADB, as described in ADB Policy Safeguard Statement (2009), and GOI. At an early stage of subproject preparation, potential direct, indirect, cumulative and induced environmental impacts on and risks to physical, biological, socioeconomic, and physical cultural resources will be identified and their significance and scope determined, in consultation with stakeholders, including affected people and concerned NGOs. Subprojects will be screened to determine whether they should be classified as ADB category A or B. Depending on the significance of project impacts and risks, the assessment may comprise a full-scale environmental impact assessment (EIA) for category A projects, or an initial environmental examination (IEE) or equivalent process for category B projects. Initial information also will be used to guide preparation of final designs/plans/solutions and scope, methodology and terms-of-reference for EIA/IEE studies.

a. Preparation of EIAs and IEEs

9. The EIA/IEE studies will follow ADB Safeguard Policy Statement (2009). Documentation required for GOI approval includes: (i) a document detailing the project (including designs, processes, methods, and costs, supported by plans, maps, etc.); (ii) a document detailing the environmental impact; and (iii) a cover letter seeking environmental clearance. The letter and requisite documents would be sent to the SEA responsible for each subproject, who will submit these to the State Environment Agencies for review and clearance. The State Environment Agencies would submit the documentation to the MOEF. All environmental assessment documents must be sent to ADB for review and approval.

10. The EIA/IEE will consider all potential impacts and risks of the project on physical, biological, socioeconomic (occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media) and physical cultural resources in an integrated way. Impacts and risks will be analyzed in the context of the project's area of influence, which encompasses (i) the primary project site(s) and related facilities (ii) associated facilities that are not funded as part of the project; (iii) areas and

communities potentially affected by cumulative impacts; and (iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project. Environmental impacts and risks will also be analyzed for all relevant stages of the project cycle, including preconstruction, construction, operations, decommissioning, and postclosure activities such as rehabilitation or restoration. The assessment will identify potential transboundary effects, such as air pollution, increased use or contamination of international waterways, as well as global impacts, such as emission of greenhouse gases and impacts on endangered species and habitats. The environmental assessment will examine whether particular individuals and groups may be differentially or disproportionately affected by the project's potential adverse environmental impacts because of their disadvantaged or vulnerable status, in particular, the poor, women and children, and Indigenous Peoples. Qualified and experienced experts will be used to prepare the environmental assessment and the EMP.

11. Where unanticipated environmental impacts become apparent during project implementation, the SEA will update the environmental assessment and EMP or prepare a new environmental assessment and EMP to assess the potential impacts, evaluate the alternatives, and outline mitigation measures and resources to address those impacts.

b. Environmental Planning and Management

12. Future subproject EMPs will be prepared by consultants responsible for the EAs following ADB EA Safeguard Policy Statement (2009). Each EMP will include the proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation of the environment. The EMP will define expected outcomes as measurable events to the extent possible and will include performance indicators or targets that can be tracked over defined periods. It will be responsive to changes in project design, such as a major change in project location, or in technology, unforeseen events, and monitoring results. The EMP will incorporate pollution prevention and control measures consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's *Environment, Health and Safety Guidelines*, measures to provide workers with a safe and healthy working environment, and preventative measures and plans to address risks to and potential impacts on the safety of affected communities.

c. Information Disclosure

13. The SEA will submit to ADB documents for disclosure on ADB's website pursuant to the ADB Safeguard Policy Statement (2009): (i) a draft full EIA (including the draft EMP), where applicable; (ii) the final EIA/IEE; (iii) a new or updated EIA/IEE and corrective action plan prepared during project implementation, if any; and (iv) the environmental monitoring reports. The PMU will provide relevant environmental information, including information from these documents in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. For illiterate people, other suitable communication methods will be used.

d. Consultation, Participation and Grievance Redress

14. The SEA will carry out meaningful consultation with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. The consultation process will (i) begin early in the project preparation stage and be carried out throughout the project cycle; (ii) provide timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) be undertaken in an atmosphere free of intimidation or coercion; (iv) be gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enable incorporation of all relevant views of affected people and other stakeholders into decision making. The consultation process and its results will be documented and reflected in EA reports. The SEA will establish a mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance.

e. Monitoring and Reporting

15. The PMU will monitor and measure the progress of implementation of the EMP. In addition to recording information to track performance, the PMU will undertake inspections to verify compliance with the EMP and progress toward the expected outcomes. This activity will include monitoring of (i) compliance with conditions stipulated by State Governments and GOI, in consent to construction contractors; (ii) compliance with conditions obtained from MoEF; (iii) compliance of environmental management plans prepared as part of EIAs/IEEs, and iv) good environmental practice and standards at an international level. The PMU will document monitoring results, identify necessary corrective actions, and reflect them in a corrective action plan, and will implement these corrective actions and follow up on these actions to ensure their effectiveness. The PMU will prepare periodic monitoring reports that describe progress with implementation of the EMP and any compliance issues and corrective actions. The PMU will submit at least semiannual monitoring reports during construction for subprojects likely to have significant adverse environmental impacts. Such periodic reports will be posted in a location accessible to the public. Project budgets will reflect the costs of monitoring and reporting requirements.

E. Confirmation that Environmental Assessment and Review Procedures Conforms to ADB's Environmental and Social Safeguard Policies

16. These procedures cover the responsibilities, process and resources required for EIA/IEE preparation in respect of sub-projects for shoreline protection and coastal management. The procedures satisfy the general objectives of EIAs/IEEs under ADB requirements.

F. Staffing Requirements and Budget

17. Staffing of the PMU includes representatives from SEAs and from State Environment Agencies as well as representatives from State CRZ committees. The PMU will include representatives from the Office of Panchayats, Local District Council and the Panchayat who will be responsible for establishment of the shoreline management organizations. The PMU will also directly hold a support budget to engage specialist and survey staff from National Institutes or from the private sector to provide technical support and field surveys as required.