

**Validation Report**  
August 2021

# India: Sustainable Coastal Protection and Management Investment Program—Tranche 1

Reference Number: PVR-803  
Project Number: 40156-023  
Loan Number: 2679



*Raising development impact through evaluation*

## ABBREVIATIONS

|      |   |  |
|------|---|--|
| ADB  | – | Asian Development Bank                     |
| DMF  | – | design and monitoring framework            |
| EIRR | – | economic internal rate of return           |
| km   | – | kilometer                                  |
| MFF  | – | multitranche financing facility            |
| O&M  | – | operation and maintenance                  |
| PCR  | – | program completion report                  |
| PMDC | – | project management and design consultant   |
| PMU  | – | project management unit                    |
| PPP  | – | public–private partnership                 |
| RRP  | – | report and recommendation of the President |
| SEA  | – | state executing agency                     |
| SMO  | – | shoreline management organization          |

## NOTE

In this report, “\$” refers to United States dollars and “Rs” refers to Indian rupees.

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|-------------------------|--|
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| <b>Director</b>         | Nathan Subramaniam, Sector and Project Division (IESP)         |
| <b>Team Leader</b>      | Jerome Jovellanos, Associate Evaluation Officer, IESP          |

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## PROGRAM BASIC DATA

|                            |  |  |                       |                     |
|----------------------------|--|--|-----------------------|---------------------|
| Project number             | 40156-023  | PCR circulation date                     | 29 Jan 2021           |                     |
| Loan number                | 2679   | PCR validation date                      | Aug 2021              |                     |
| Project name               | Sustainable Coastal Protection and Management Investment Program—Tranche 1 |  |                       |                     |
| Sector and subsector       | Agriculture, natural resources, and rural development                      | Water-based natural resources management |                       |                     |
| Strategic agenda           | Environmentally sustainable growth<br>Inclusive economic growth            |  |                       |                     |
| Safeguard categories       | Environment  |  | A                     |                     |
|                            | Involuntary resettlement   |  | C                     |                     |
|                            | Indigenous peoples   |  | C                     |                     |
| Country                    | India  |  | Approved (\$ million) | Actual (\$ million) |
| ADB financing (\$ million) | ADF: 0.00  | Total project costs                      | 62.67                 | 50.25               |
|                            | OCR: 51.55   | Loan                                     | 51.55                 | 36.48               |
|                            |  | Borrower                                 | 11.12                 | 13.77               |
|                            |  | Beneficiaries                            | 0.00                  | 0.00                |
|                            |  | Others                                   | 0.00                  | 0.00                |
| Cofinanciers               | –  | Total cofinancing                        | 0.00                  | 0.00                |
| Approval date              | 6 Oct 2010   | Effectiveness date                       | 14 Nov 2011           | 28 Nov 2011         |
| Signing date               | 17 Aug 2011  | Closing date                             | 31 Dec 2014           | 20 Dec 2018         |
|                            |  | Financial closing date                   | –                     | 20 Dec 2018         |
| Project officers           |  | Location                                 | From                  | To                  |
|                            | R. Khan  | ADB headquarters                         | 2009                  | 2011                |
|                            | A. Cauchois  | ADB headquarters                         | 2011                  | 2013                |
|                            | H. Varma   | India Resident Mission                   | 2013                  | 2015                |
|                            | R. Yadav   | India Resident Mission                   | 2016                  | 2018                |
| IED review                 |  |  |                       |                     |
| Director                   | N. Subramaniam, IESP   |  |                       |                     |
| Team leader                | J. Jovellanos, Associate Evaluation Officer, IESP*                         |  |                       |                     |

ADB = Asian Development Bank, ADF = Asian Development Fund, IED = Independent Evaluation Department, IESP = Sector and Project Division, OCR = ordinary capital resources, PCR = program completion report.

\*Team members: E. Gozali (quality reviewer), F. De Guzman (Senior Evaluation Officer), B. Prakash and J. Lette (consultants).

## I. PROGRAM DESCRIPTION

### A. Rationale

1. India has a coastal shoreline of 7,525 kilometers (km)—mostly found in the rural areas and some located in large urban areas like Mumbai in the state of Maharashtra. It is estimated that 1,100 km of the coastline is vulnerable to erosion and 330 km of which require protection. Coastal erosion is caused by natural factors, such as storms and currents; and anthropogenic factors, such as littoral barriers, groynes, jetties, and ports, among other things. Given the slope and configuration of India's coastline, an increase of one meter in sea level could result in a loss of 5,764 square km of land, which could displace more than seven million people and damages to crop areas, housing, and infrastructure. Thus, environmental and climate change effects, and coastal erosion could bring large economic damages and result in long-term losses.

2. The Ministry of Jal Shakti is responsible for coordinating coastal protection projects and policies at the national level. However, the mandate for designing and implementing coastal erosion mitigation projects is entrusted to the state level. This enables conformity of shoreline maintenance and coastal protection measures with the unique features of each state. As such, the Asian Development Bank (ADB) aimed to focus on strengthening the state-level capacity for coastal protection in the states of Goa,<sup>1</sup> Karnataka, and Maharashtra under an investment program.<sup>2</sup> This program was to be financed partly under ADB's multitranche financing facility (MFF). This modality enabled ADB to allow the interventions be designed, based on the specific needs of each state's executing agency, including the protection of land and beaches and addressing the causes of erosion, and the provision of natural protection measures using dunes or mangroves.

3. The program was envisioned as a pilot for national coastal protection and was prepared with the support of ADB's project preparation technical assistance,<sup>3</sup> the MFF program, and the Sustainable Coastal Protection and Management Investment Program–Tranche 1.<sup>4</sup> It was approved in October 2010 and became effective in November 2011. The MFF was designed to comprise four tranches over a 9-year implementation period.<sup>5</sup> Tranche 1 (the program) was focused on a segment of the western coast of the peninsular India in the states of Karnataka (particularly on Ullal reef) and Maharashtra (focused on Mirya Bay). It was estimated to cost \$62.7 million—with Karnataka at \$48.5 million (77%) and Maharashtra at \$14.1 million (22.5%). ADB was to finance tranche 1 with a loan of \$51.6 million (82.3%). Tranche 1 envisaged separate implementation arrangements for each state to enable environmentally and socially appropriate institutional arrangements, including community and private sector participation.

## **B. Expected Impacts, Outcome, and Outputs**

4. The program's envisaged impact was improved income and reduced poverty among the coastal communities in Goa, Karnataka, and Maharashtra states in India. The expected outcome was protected and managed shorelines in the three states, and a protected environment that meets the needs of stakeholders. This outcome was to be achieved through (i) developing sustainable plans and managing the shorelines, (ii) reducing coastal erosion and instability, and (iii) enhancing the capacity for planning and for developing the shoreline. In keeping with the focus of tranche 1, only the states of Karnataka and Maharashtra prepared a separate design and monitoring framework (DMF) (footnote 4, p. 24).

## **C. Provision of Inputs**

5. The total cost of tranche 1 at appraisal was \$62.7 million. This amount covered the following components: (i) planning and design (11.6%), (ii) coastal protection and management (77.0%), and (iii) effective institutions and project management (11.5%). The costs included civil works related to remedying shoreline erosion (\$36.8 million or 68.0%), and for consulting services (\$7.3 million or 13.3%). It also supported the procurement of some equipment (\$0.5

<sup>1</sup> Although the MFF included three states, Goa did not participate in this investment program.

<sup>2</sup> ADB. 2010. *Report and Recommendation of the President to the Board of Directors. Proposed Multitranche Financing Facility in India: Sustainable Coastal Protection and Management Investment Program*. Manila.

<sup>3</sup> ADB. 2007. *Technical Assistance to India for Preparing the Sustainable Coastal Protection and Management Project*. Manila.

<sup>4</sup> ADB. 2010. *Framework Financing Agreement and Periodic Financing Request for Project 1*. Manila.

<sup>5</sup> The report and recommendation of the President (RRP) (para. 33) noted four tranches at design. However, based on the PCR (para. 7), the project design had three tranches which was later reduced to two in view of the slow progress of tranche 1. Tranche 3 is being subsumed into tranche 2 to better enable the achievement of project completion within the agreed period of the loan program.

million), training (\$0.6 million), studies and surveys (\$0.5 million), and community participation initiatives (\$0.8 million). At completion, the total program cost was \$50.2 million or 80% of the appraisal estimate.<sup>6</sup> Loan funds amounting to \$36.5 million (71% of total provision) were utilized and most were spent on coastal management civil works (\$31.3 million or 86%), and on consulting services and project management offices (\$5.1 million or 13.9%).

6. The program was expected to close in December 2014 but actual completion was delayed for 4 years. The engagement of the project management and design consultants (PMDCs) was initially delayed, which slowed down the resolution of project design and implementation issues. The program also experienced consultancy-related issues in Maharashtra. The PMDC contract had to be canceled, which contributed to the slow project implementation and delays.

7. The program was classified category A for environment and category C for both involuntary resettlement and indigenous peoples. Program activities were conducted offshore or on the shorelines. As such, there were no resettlement or indigenous peoples-related issues to be addressed. By protecting the coastal area and improving the shoreline, the program was expected to help improve the environment in the target area. The environment management plan was prepared and implemented. Consultations with the public and communities were carried out in each subproject area and posted on the ADB website. However, the project implementation review in 2018 found the contractors' performance in environmental management less than adequate.<sup>7</sup> Project management units (PMUs) in Karnataka and Maharashtra did not maintain qualified staff to support and supervise environmental management activities. The program experienced delays in obtaining timely clearance from government agencies, which was still to be completed at the time of the program completion report (PCR) preparation.<sup>8</sup>

## **D. Implementation Arrangements**

8. The program was to be implemented separately for each state—by the respective state executing agencies—guided by their own steering committees and state procedures. Each state was expected to have its own PMU headed by a project director and other associated staff. In Karnataka, the project director was a part-time officer, and the PMU have not identified the staff at appraisal. The Coastal Infrastructure Management Infrastructure in Karnataka was established only in 2015 and was not fully active until the time of PCR preparation. Although a PMU was established in Maharashtra, several positions remained unfilled. The envisaged Coastal Infrastructure Management Infrastructure in Maharashtra could not be established. These limitations, combined with the difficulties in consultants' engagement, rendered the PMU under-resourced.

9. The program included 66 covenants. Of these, 57 were complied with, 2 were partially complied with, 2 were not complied with, and 5 covenants were no longer relevant as resettlement was not needed when the project was implemented. The two covenants that were partially complied with pertained to women's representation in shoreline management organizations (SMOs) and the non-receipt of environmental clearance from the government.

<sup>6</sup> ADB. 2021. *Completion Report: Sustainable Coastal Protection and Management Investment Program— (Tranche 1) in India*. Manila.

<sup>7</sup> Footnote 6, (para. 38).

<sup>8</sup> Footnote 6 (para. 37). Environmental clearance for construction under the coastal management regulations was obtained following the normal process. The issue is the nonreceipt of clearance following project redesign. For Maharashtra, clearances were granted at all levels, except for the final confirmation from the national ministry.

The two covenants that were not complied with were on the implementation of public–private partnership (PPP) in coastal management.

## II. EVALUATION OF PERFORMANCE AND RATINGS

### A. Relevance of Design and Formulation

10. The PCR assessed the program (tranche 1) relevant. It noted that the program was fully aligned with the government's development priorities and on its emphasis on environmental considerations, based on India's Eleventh Five Year Plan, 2007–2012.<sup>9</sup> The project was also consistent with ADB's country partnership strategy during 2009–2012 in its emphasis on environmental protection and conservation and in undertaking sustainable coastal management.<sup>10</sup> The program continued to remain relevant until its completion and was consistent with ADB's Strategy 2030.

11. The project's main feature sought to address shoreline erosion and coastal management problems using natural, environment friendly, and long-term solutions, instead of simply building walls and groynes. It piloted a new approach involving dune restoration and the use of submerged breakwaters and reefs, bypassing circulation of water currents. Such an innovative approach to coastal management was a departure from the practice of relying on hard structures toward a more natural process, which was based on the underlying causes of shoreline and coastal erosion. The approach, thus, entailed long-term remedial measures rather than mere stop-gap measures of building infrastructure to halt the ingress of seawater.

12. Implementing agencies had limited exposure to the program's new activities, such as the hybrid solutions with offshore reefs. Based on the assessment at design stage of the executing agency's limited capacity for the new approaches, experts were provided under the PMDC to remedy such limitations. This was also to support the designed project activities that cut across multiple layers of government agencies at the national, state, and district levels. These included sector agencies dealing with water, marine resources, defense, science and technology, construction, fisheries, mining, trade, shipping, and tourism.

13. The multiple agencies with uneven or overlapping mandates had project management challenges which required greater coordination efforts. Given the nature of the whole program, the difficulties should have been anticipated and dealt with during program design. Most of the agencies were inexperienced in implementing the envisaged program activities. Under these circumstances, the program was constrained from delivering the outcome targets.

14. Private sector role was limited in the program as there were no feasible private sector investments. As a result, the envisaged role of the private sector in coastal management, as stated in the report and recommendation of the President (RRP), did not materialize. The envisaged involvement of residents, fishing communities, traders, and tourist organizations in coastal protection initiatives was through the SMOs. Community outreach was done appropriately during program preparation and implementation.

15. Several factors affected the program's relevance. It pursued an innovative approach on which neither the government agencies nor the private sector had enough experience. Also, there were too many agencies and levels involved, with no single overarching guiding institution

<sup>9</sup> Government of India, Planning Commission. 2008. *Eleventh Five Year Plan: 2007–2012*. New Delhi.

<sup>10</sup> ADB. 2009. *India: Country Partnership Strategy (2009–2012)*. Manila.

to lead developments in the sector. The agencies involved need to upgrade their capabilities under the subsequent tranches to be able to render improved performance. This remains to be seen until the facility's completion. In recognition of the innovative nature of this intervention, this validation assesses the program (tranche 1) relevant.

## **B. Effectiveness in Achieving Project Outcomes and Outputs**

16. The PCR assessed the program effective. The DMF identified four outcome targets. These were the (i) protection and management of coastline using soft technologies, (ii) involvement of the communities and private sector in coastal protection and management, (iii) increase in the number of businesses operating on the beaches, and (iv) increase in coastal shipping and fish catch landing. The PCR indicated that these outcome targets were achieved, except for target 2 which pertained to the involvement of communities and private sector in coastal protection and management. This was substantially achieved.<sup>11</sup> The options for attracting PPPs, however, could not be pursued and these were not realized in both Karnataka and Maharashtra states. The PCR noted that the involvement of the private sector under the program was secondary and peripheral. As the involvement of the private sector is a facility-wide result, the PCR maintained that it was premature to conclusively assess it under tranche 1. Beaches are managed and maintained by the communities and stakeholders. Details of the outcome per state are discussed below.

17. In Karnataka, Ullal's coastline of 5.3 km was protected and managed under the program—from a target of 6.0 km, which is the estimated length of Ullal beach. This encompassed physical works under the project, including installation of artificial reefs, beach nourishment, and dune management. Some of the local communities were active in coastal protection and management through two SMOs that were created in Karnataka. SMOs were involved in beach maintenance tasks. The program invested only a small amount of funds (\$209,230) and reported modest gains. The program supported the establishment of community toilets, high mast lights, beach fixtures, and furniture. These amenities increased the beach market value and led to some increase in tourist footfalls. It also enhanced the potential of a few micro businesses in these beaches. Before the project, there were hardly any visitors or amenities in these beaches. As many as 20–30 families were reportedly employed in beach tourism and earned enhanced incomes of Rs 6,000–10,000 (\$80–\$130) per month. The beaches also supported 10–15 vendors and micro retailers using itinerant stalls and earned \$30–\$40 per day during weekends. Several groups are engaged in catching “clam mussels” in the Ullal reef, which enhanced the earning opportunities for some 15 families.

18. In Maharashtra, a coastline of 3.0 km in Mirya Bay has been protected and managed under the program—from a target of 4.0 km. In this state, communities are active in coastal protection and management through seven SMOs. Local village committee (*gram panchayat*) offices operate through these SMOs and undertake development activities. Activities supported include cold storage, beach entertainment and other facilities, and the day-to-day interaction with local authorities in managing the coastline. Businesses in the improved coastal regions have increased due to increased tourism and related economic opportunities. Much of the description is anecdotal, and the PCR did not report program-specific baseline data for measuring business activities.

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<sup>11</sup> The exact figures to measure actual increases in businesses, local fish catches, and coastal shipping are sparse (PCR, para. 45).

19. The outcome targets were generated by three project outputs: (i) sustainable plans and managed shorelines, (ii) reduced coastal erosion and managed instability, and (iii) enhanced capacity for shoreline planning and development. The DMF identified 22 output performance targets. Of these 22, 18 targets were achieved, 3 were partially achieved, and 1 was not achieved.

20. On output 1, sustainable plans and management of shorelines were developed. In Karnataka, all eight targets were achieved and shoreline management plans were developed for the three coastal districts. A shoreline management plan was also developed. In Maharashtra, seven targets were achieved, and one was partially achieved. In Mirya Bay, however, the communities supported a new jetty, which contravened the project's approach.

21. On output 2, coastal erosion and instability was reduced.<sup>12</sup> Of the four performance targets, two were achieved, one was partially achieved, and one was not achieved. The last one was on targeted private investment in coastal protection and management. However, this validation notes that the key target under output 2—which is the length of the coastline subject to erosion reduced from 530 km to 380 km (by 150 km)—is the target for the whole MFF and not for tranche 1.<sup>13</sup> The correct target for this indicator appears to be 10 km for the program (tranche 1). This is the same as one of the outcome targets discussed above, which was considered mostly achieved with 8.3 km coastline completed and protected. The confusion appears to originate from the DMF of tranche 1 (footnote 4), which mixed the entire program's target and that of tranche 1.

22. On output 3, some capacity for integrated shoreline planning and development was enhanced in both states. Of the 10 performance targets, nine were achieved and one was partially achieved in both Karnataka and Maharashtra. A total of 56 trainings were conducted for 66 staff. Training in Maharashtra was curtailed due to the withdrawal of the PMDC team. However, Maharashtra shared some trainings with Karnataka and used the training opportunities under the Climate Resilient Coastal Protection Management technical assistance. The project did not achieve some targets on the gender-related indicators. The PCR described the results partially achieved. The DMF indicated that 50 communities were expected with up to 30% women beneficiaries to be supported at the district level in each intervention. However, the performance was uneven. In Karnataka, women's participation in a few community organizations is currently less than 30%. SMO Bengre had only two women out of 13 total members, and Ullal SMO had no women participants out of seven total members. In Maharashtra, women's participation in some of the community organizations is also less than 30%. It is only in Mirya Bay SMO where 30% members are women.

23. The environmental impact of the program was positive as it addressed coastal degradation and shoreline erosion. These improvements were reflected in the increased mussel population on Ullal reef in Karnataka, and in the increased fish catches in Ratnagiri in Maharashtra. The state executing agencies from both Karnataka and Maharashtra indicated that the process for obtaining modified environmental clearances for the revised design was not completed, but it was underway at program completion.

24. While some outcome and output indicators were achieved, the program's performance in promoting private sector businesses, community participation, and representation of women

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<sup>12</sup> Footnote 6, Appendix 1.

<sup>13</sup> Footnote 6, Appendix 1. The cited figure of 150 km of coastline protected under output 2 is the same as the outcome target for the whole MFF.



were not achieved, as envisaged. There were hardly any baseline data available that could relate to these indicators. A firm and credible assessment would have to await the emergence of more evidence. In view of the comparatively better performance of Karnataka that accounted for the larger share of investments, this validation assesses the project effective.

### **C. Efficiency of Resource Use**

25. The PCR assessed the program efficient with the economic internal rate of return (EIRR) estimated at 21.9%. The Ullal subproject in Karnataka yielded an EIRR of 15.2% while the Mirya Bay subproject in Maharashtra had an EIRR of 35.9%. At appraisal, the EIRR estimates were 14.5% for Karnataka and 16.8% for Maharashtra. The economic benefits included in the reevaluation were from the (i) management of coastal erosion, (ii) reduction of threats from coastal flooding by developing more resilient coastal protection systems, and (iii) saving the land from coastal erosion. Other possible secondary benefits related to the environment, tourism, and security, among other things, were not included. The assumptions and methodology of economic efficiency were reasonable and acceptable.

26. On process efficiency, the program experienced significant issues and delays. These included the initial delays due to procurement and staff capacity, slow mobilization of experts, and termination of a consulting contract. There were few bidders for the contracts as the program sought to apply new technologies. The suppliers even faced difficulties in procuring geo-bags for inshore berms. The technical issues were complex, which delayed tendering and bid evaluation. All these factors culminated in slippages and delay in the completion of the program even with reduced tranches. The program did not involve nongovernment organizations for its soft components to support community participation, as initially envisaged. Considering the large benefits of coastal protection, this validation assesses the program efficient.

### **D. Preliminary Assessment of Sustainability**

27. The PCR rated the program likely sustainable. One of the program's positive features was the broad agreement with the technical solutions adopted by the program, which suggested that such approaches to coastal and shoreline management will continue to be pursued in the country. As the capacity increases, these are likely to prove more beneficial for environment conservation and climate change. The program focused on underscoring the need for improved capacity especially at the state levels and focused on empowering communities and businesses to have enhanced roles in protecting the shorelines and beaches. However, the support provided under the program was inadequate to elicit adequate support from the communities and private sector that could have helped in ensuring the sustainability of the program interventions. Under the program, no transparent system for channeling funds to organizations at the district and lower levels was established. In its absence, community participation is likely to remain uncertain.

28. During the PCR mission in Karnataka, the state executing agencies confirmed that program assets will remain with the Public Works Department for the initial years of operation until the capacity of the Karnataka Maritime Board is further developed. The agency is reported to have sufficient operation and maintenance (O&M) budget to meet the project's O&M requirements. However, no evidence was provided to ensure the provision of the annual O&M budget requirement of the Karnataka component. The soft approach, such as the development of O&M manuals as technical solutions, is inherently economical, but these manuals are not sufficient assurance for sustainability. The Maharashtra Maritime Board also has limited

engineering and project implementation capacity. Also, the absence of capacity-building support in tranche 2 exacerbates the subpar technical and institutional situation. This validation assesses the project less than likely sustainable.

### **III. OTHER PERFORMANCE ASSESSMENTS**

#### **A. Preliminary Assessment of Development Impact**

29. The PCR assessed the development impact of the program satisfactory. Early program results included the prevention of coastal flooding and erosion due to coastal protection interventions. Incremental benefits comprised improved business opportunities and increased fisheries, tourism, and other economic activities within the communities. These results may also bring about increased earnings.

30. However, development impact after program implementation needs tangible evidence. The soft technological solutions undertaken by the program require a long time before a major result can become apparent and verified. This applies to observing and verifying the response of the private sector, the communities, and the women, which constitute the eventual beneficiaries of the program. A comprehensive and more convincing evidence, thus, is required to establish the program's impacts on the local and state-level beneficiaries. So far, the magnitude of the accounted economic benefits is limited and far too small to fully ascertain the full benefits of the project's interventions. Lastly, the limited progress in coordinating across institutions does not assure the achievement of the full program benefits. This validation considers the development impact less than satisfactory.

#### **B. Performance of the Borrower and Executing Agency**

31. The PCR assessed the executing agencies' performance satisfactory. It noted that the Ministry of Jal Shakti, its agencies—the Central Water Commission and the Central Water and Power Research Station—and the state executing agency (SEA) provided considerable support to program implementation. The PCR acknowledged Karnataka PMU's strong support despite its limited capabilities. However, it noted that the performance of Maharashtra SEA was less than satisfactory because it did not satisfactorily resolve the PMDC issues in a timely manner. The program's implementation suffered delays as a result. The Maharashtra PMU was also not fully staffed. Also, a new Mirkarwada fisheries jetty was constructed in the Mirya Bay area without assessing its impact on the program and on coastal protection. The PMUs in both states obtained clearances for the original scope of work. However, they were unable to get the revised and/or revalidated environmental clearances for the respective subprojects from the relevant regulatory authorities despite regular follow-ups by ADB.<sup>14</sup> Also, both SEAs did not fully implement community participation and women's participation, as envisaged in the program design. Progress in supporting business enterprises in tourism and in other areas was limited. Program monitoring reports were irregular and delayed for the first few years. The executing agencies could not meet the technical requirements, such as the institutional development needed to facilitate the participation of communities, and the tourism and private sectors. Private sector participation was an important feature of the program design. This validation assesses the borrower's and executing agencies' performance less than satisfactory.

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<sup>14</sup> ADB continues to follow up with the SEAs to secure the needed clearances. ADB (South Asia Department). 2020. Interdepartmental Review of Project Completion Report Validation on Loan 2679 of India: Sustainable Coastal Protection and Management Investment Program—Tranche 1. 12 July (internal).

### C. Performance of the Asian Development Bank and Cofinanciers

32. The PCR rated the performance of ADB satisfactory. ADB took several measures to keep the program to stay on track, as approved. It designed an innovative and environmentally sustainable program through a project preparation technical assistance. The program sought to build capacity at the state level and to adapt and tailor technical solutions to each state's unique requirements. The program addressed the problem of shoreline erosion and restored beaches to support the development of communities, the tourism sector, and business enterprises. However, ADB was not able to take into account the full institutional requirements of the program design, although it was flexible in its approach. It consistently adjusted and modified the program during implementation due to the difficulties it experienced. The number of states and the tranches of the MFF were reduced to fit the program within the given time frame. ADB faced difficulties in making the government agencies and administration move harmoniously to be in step with the project's requirements. The SEAs' interactions with the communities, especially with women and the business enterprises at the ground level, could not be fully catalyzed despite the efforts. On the whole, this validation assesses ADB's performance satisfactory.

## IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

### A. Overall Assessment and Ratings

33. The PCR rated the program successful with ratings of relevant, effective, efficient, and likely sustainable. This validation assesses the program successful with assessments of (i) relevant—on account of its innovative nature, (ii) effective—as it achieved most of its outputs and outcome targets particularly in Karnataka, (iii) efficient—as per EIRR results, but (iv) less than likely sustainable—for the reasons indicated in the table below.

**Overall Ratings**

| Validation Criteria              | PCR                | IED Review                   | Reason for Disagreement and/or Comments  |
|----------------------------------|--------------------|------------------------------|--|
| Relevance                        | Relevant           | Relevant                     |  |
| Effectiveness                    | Effective          | Effective                    |  |
| Efficiency                       | Efficient          | Efficient                    |  |
| Sustainability                   | Likely sustainable | Less than likely sustainable | Technical and institutional capacity is weak in the maritime boards. Budget for O&M is not assured.        |
| <b>Overall Assessment</b>        | <b>Successful</b>  | <b>Successful</b>            |  |
| Preliminary assessment of impact | Satisfactory       | Less than satisfactory       | Assessment of development impact requires more comprehensive data and analysis to support stated benefits. |
| Borrower and executing agency    | Satisfactory       | Less than satisfactory       | SEAs lacked staff and capability, which impeded project performance.                                       |
| Performance of ADB               | Satisfactory       | Satisfactory                 |  |
| Quality of PCR                   |                    | <b>Satisfactory</b>          | Para. 40.  |

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = program completion report, SEAs = state executing agencies.

Source: ADB (IED).

### B. Lessons

34. The PCR outlined four lessons. Two were broadly stated, such as (i) the need for improved management of consultants, and (ii) the need to ensure the deployment of adequate project supervision staff. The other two were more specific, such as (i) the need for a project implementer to take the initiative to propose improvement in the initial DMF design if this is found to be inadequate to allow more precise and/or structured project monitoring and evaluation, and (ii) the need to mainstream the shoreline management plans already prepared under the project by government agencies involved in coastal intervention activities.

35. PCR lessons reflected on the inadequate assessment at program appraisal of the implementing agencies' capabilities to undertake an innovative project. In view of these concerns, this validation adds the following project-level lessons: First, a project with numerous targets and indicators and wide geographical coverage would benefit from regular monitoring of the progress and status of covenants. For instance, a project performance rating can help identify the various risks and issues at an early stage of project implementation. It also supports the early provision of remedial actions to any delayed or noncompliance of any covenant (such as environmental safeguards and options for PPP involvement). Tracking the progress activity and output achievements, risk assessment, and identification of corrective measure, which is a function of a regularly updated DMF, are also vital in achieving expected outputs. This validation reiterates the importance of giving sufficient attention to the timely establishment of a project performance management system, and to include employing technically adept project staff to run the system, as early as the project design stage.

36. Second, it is essential to introduce and sustain institutional strengthening interventions in the initial tranche of the MFF, as it will positively impact on the future tranches of the program. This is in view of the risk identified in the RRP, which is the sustainability of the interventions. The relevant agencies should provide institutional changes for the sustainability of the interventions, including developing sustainable and well-resourced shoreline management institutions. This includes intensively training institution staff to adopt the new approaches in integrated and sustainable coastal protection management.

37. Third, consider innovative procurement strategies in view of the introduction and application of new technologies for coastal area protection and rehabilitation. It may be worthwhile to look into advance procurement, and to encourage joint ventures between local and international contractors to facilitate the assimilation of new technologies. Such technologies may be new to local contractors and could discourage them from participating in the project tenders. For international competitive bidding, the government may encourage joint ventures (subject to ADB Procurement Guidelines) between international and local contractors to jointly bid and work on more complex civil works contracts. This approach facilitates the introduction of international technology and knowledge transfer to local contractors. It could enhance their capabilities to take on similar complex works in the future. To minimize delays in the procurement of civil works, advance procurement may be considered by the executing agency as early as the project design stage, through tendering while holding in abeyance contract awards. It is noted that procurement delays, coupled with inadequate contractor capacity, led to key delays in this program. More stringent qualification standards may also be considered in the tendering process of the future tranches.

### **C. Recommendations for Follow-Up**

38. The findings of the PCR should be revisited with the help of more up-to-date data when the completion report for the whole MFF program is prepared.

## **V. OTHER CONSIDERATIONS AND FOLLOW-UP**

### **A. Monitoring and Reporting**

39. The PMU did not fully follow the monitoring and reporting system largely because the program staff deployed was not adequate, and consultants' engagement was delayed and prematurely canceled. As noted in the program's effectiveness analysis, the DMF needed improvement as the outcome target overlapped with the key output target, and there was a mix-up in the targets for the whole MFF program and for tranche 1. Using the DMF more frequently would have corrected these issues. There was no external monitoring done for safeguards on environmental impacts. The program management issues led to bunching and uneven submission of reports; in some cases, these were delayed for years. A simpler format of the reporting mechanism had to be utilized to clear the backlog of monitoring reports. These issues were more serious in Maharashtra. Financial reports were duly audited, and reports were submitted to ADB, even if late. There were no issues in any of the financial reports examined by the auditors.

### **B. Comments on Program Completion Report Quality**

40. The PCR was generally well prepared in accordance with the prescribed outline. It was written well and presented a clear and candid narration of the program implementation. It identified useful lessons learned from the program. It was constrained by a lack of empirical data in some sections. This validation assesses the quality of the PCR satisfactory.

### **C. Data Sources for Validation**

41. Data sources for this validation were the RRP, Framework Financing Agreement, PCR, project completion reports of each of the executing agencies, and internal project documents such as aide-memoire or mission reports.

### **D. Recommendation for Independent Evaluation Department Follow-Up**

42. No further evaluation of this program (tranche 1) is deemed useful at this point because the follow-on tranches of the program will still be implemented.