



# Completion Report

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Project Number: 36012-012  
Technical Assistance Number: 3974  
June 2020

## India: Preparing the Inland Waterway Sector Development Program

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## TECHNICAL ASSISTANCE COMPLETION REPORT

<b>TA Number, Country, and Name:</b> TA 3974-IND: Preparing the Inland Waterway Sector Development Program		<b>Amount Approved:</b> \$900,000	
		<b>Revised Amount:</b> Not applicable	
<b>Executing Agency:</b> Ministry of Shipping	<b>Source of Funding:</b> Japan Special Fund	<b>Amount Undisbursed:</b> \$206,470	<b>Amount Used:</b> \$693,534.20
<b>TA Approval Date:</b> 5 November 2002	<b>TA Signing Date:</b> 30 January 2003	<b>TA Completion Date</b>	
		<b>Original Date:</b> 31 August 2003	<b>Latest Revised Date:</b> 31 December 2006
		<b>Financial Closing Date:</b> 12 November 2008	<b>Number of Extensions:</b> 2
<b>TA Type:</b> Project preparatory TA		<b>TA Arrangement:</b> Not applicable	

### Description

The overall objective of the technical assistance (TA) was to support the Government of India in its policy to increase the efficiency of the transport system by using inland waterways as a viable transport mode in corridors that have a comparative advantage over other transport modes. The TA aimed to assist in formulation of a sector development strategy for the inland waterway subsector. Other specific components of the TA provided preparatory support to establish potential demand under different infrastructure and service scenarios, produce preliminary designs for infrastructure requirements—dredging, navigational, and terminal facilities—and identify operational requirements including potential fleet.<sup>1</sup>

### Expected Impact, Outcome, and Outputs

A design and monitoring framework or project framework was not required at the time since this TA was a project preparatory TA. The TA was implemented in two phases. The purpose of the first phase was to assess the technical, economic, and financial feasibility of inland water transport along three existing corridors and five potential national waterways. The objective of the second phase of the TA was to prepare a sector development strategy and inland waterway investment projects for Asian Development Bank (ADB) financing. This included formulation of: a strategic marketing plan; project masterplan and selection criteria; preliminary engineering design for infrastructure works; initial social assessment and environmental examination; preparation of resettlement framework; road map for legal and/or regulatory reform; identification of potential financing and operational mechanisms for maintenance; measures to improve the operational and financial performance of the Central Inland Water Transport Corporation; formulation of a private sector development plan; and a review of inland waterway operations between India and Bangladesh.

### Implementation Arrangements

A steering committee was formed, consisting of the Ministry of Shipping (MOS), the Department of Economic Affairs, Inland Waterways Authority of India (IWAI), and the Central Inland Water Transport Corporation. The steering committee met monthly and approved the inception, draft final, and final reports prepared by the consultant.

As planned, an international consulting firm was recruited in accordance with ADB's *Guidelines on the Use of Consultants*. At the time of recruitment, 30 person-months of international expertise and 20 person-months of national consulting services were estimated. Contract negotiations were held with the first-ranked firm from 30 June to 2 July 2003 at ADB headquarters, with government representatives from MOS and IWAI as observers.

ADB observed that MOS and IWAI set up suitable administrative arrangements for the project and provided well-equipped offices and facilities to support the consultant study team. IWAI acted as the implementing agency and provided a focal point for the study, along with closely monitoring the progress of the TA. Efforts were also made by ADB to coordinate with other development agencies. During the TA implementation, the mission provided regular briefings to partner organizations such as the World Bank and shared relevant findings.

<sup>1</sup> The preparation of this TA completion report has been delayed to date due to misunderstanding of requirements for a project preparatory technical assistance when it did not result in an ensuing investment project.

### Conduct of Activities

The TA was included in the country program for 2002 and an outline terms of reference was attached to the TA paper.<sup>2</sup> The terms of reference included some sector development activities but focused on project preparation activities.

Both ADB and IWAI were conscious that the TA budget was very tight and cost overrun was anticipated during implementation. There were many changes during implementation, with scope changes resulting in 10 variation orders. The anticipated timeline for delivery of the TA was over 8 months, commencing in September 2003, and concluding in May 2004. The original reporting deadlines were ambitious, with the consultant expected to produce the phase 1 report within 8 weeks of commencement, inception report within a month of beginning phase 2, and a draft final report within 5 months of commencing phase 2. Due to time constraints, the consultant proposed to limit the evaluation during phase 1 to the three existing waterways and two of the five proposed new waterways. The workplan was also amended so that engineering and environmental work commenced earlier. This proposal was accepted during contract negotiations, but subsequently revised at the request of MOS. The consultant's scope of works was increased to evaluate three of the five proposed new waterways, instead of the original two. This was in addition to evaluating the three existing waterways.

During initial discussions, the MOS informed ADB that several detailed project reports had already been prepared, which could be built upon during the TA. At the beginning of the TA, the scope of work for environmental aspects increased since the ensuing project was likely to be classified A by ADB, meaning that three environmental impact assessments (EIA) were required. This additional work required the inclusion of two additional national environmental consultants in the TA consultant's team. Contingency was used to accommodate the change in scope for the environmental aspects, leaving very little remaining contingency budget for the duration of the study.

During the study, the consultant recommended hydrological surveys at 17 locations, since the detailed project reports provided by MOS were insufficiently detailed in terms of hydrological data. This data requirement was not foreseen by the consultant or ADB and therefore no resources had been allocated. In view of the need to conserve budget, IWAI agreed to undertake this survey work from their own funds and the surveys were completed within three months. River flow and velocity data held by the Central Water Commission (CWC) was also required but this requirement was not identified until late in the study. It took 4–6 months for CWC to secure internal clearances to release the data to the consultants, which impacted the completion of the preliminary engineering analysis. Further technical studies were required using the survey data to establish the level of investment necessary to support 24-hour navigation all year and minimum depths of two meters.

During phase 1, the consultants summarized, reviewed, and supplemented previous studies undertaken by IWAI. Within 8 weeks, four working papers were issued throughout October and November 2003, culminating in the Phase 1 Draft Report issued on 21 November 2003. The phase 1 report provided recommendations on existing and proposed waterways that showed high potential. The consultant completed the phase 1 report in early February 2004 and commenced fieldwork for phase 2 of the project. During phase 2, three draft EIAs were submitted on 4 April 2004 and an initial social assessment was delivered in March 2004. The Phase 2 Draft Final Report was issued by the consultants on 31 August 2005. Two workshops were originally planned, with the aim of engaging the private sector as well as existing and potential users. Only one workshop was held in Kolkata in May 2004 to present the outcomes of phase 1 and results of traffic potential and vessel constraints to vessel operators and shippers. A second workshop was scheduled for Odisha but was postponed until decisions were made on the location of a new deep-water terminal.

The second workshop was not held, since after the tripartite meeting in November 2005 it was clear that there was no interest on the part of the government to proceed with a project loan. The TA's draft final report showed that the economic internal rate of return for National Waterway 1 (Ganges–Hooghly river system) was very low, between 0.39% and 4.2%. However, the economic internal rate of return for National Waterway 2 (Brahmaputra River system, requiring transit through Bangladesh) was much higher between 32.0% and 36.7%. Therefore, the most feasible project required international arrangements that were unsuitable under the political situation at the time. The project was included in ADB's regional integration pipeline and not in the India country pipeline. However, in view of the political situation and position of the Government of India regarding regional projects in waterways, the government decided not to proceed with this project.

IWAI lost interest in pursuing an investment project and this resulted in long delays in officially providing comments on the draft final report. The IWAI provided comments on this report in January 2006 and ADB gave further comments in March 2006. After the draft final report stage, IWAI reduced the consultant inputs toward the end of implementation. This reduction in consultant inputs resulted in a saving of 23% of the total TA budget.

The final report was subsequently submitted in October 2006 and found to be satisfactory. The consultant's final statement of eligible costs was approved by ADB in February 2007. The major reason for the lag in finalizing the phase

<sup>2</sup> ADB. 2000. *Country Assistance Plan: India, 2001–2003*. Manila.

2 report was delay by IWAI in submitting comments coupled with delays on the part of the consultants to finalize their reports taking into account IWAI's comments.

Three ADB review meetings were planned throughout implementation—one for the phase 1 report, second for the phase 2 Inception Report, and third for the draft final report. An ADB review mission was also planned for the fourth month of the TA program. During implementation, ADB fielded four missions—an inception mission in October 2003 and two review missions in March and October 2004. A final tripartite meeting was held in November 2005. No review missions were conducted after this tripartite meeting.

The consultants also provided IWAI and ADB with working papers, as well as monthly progress reports on achievements, problems, and recommendations. There were significant delays in closing the TA account since the consulting firm was not able to provide a certificate of turnover for equipment, for equipment delivered to the executing agency. The TA account was closed in November 2008.

#### Technical Assistance Assessment Ratings

Criterion	Assessment	Rating
Relevance`	The ambitious delivery timeline of the TA and deficiencies in design, which resulted in ten variation orders, are noted. Some deficiencies could have been foreseen at TA processing, while others could have been addressed more rapidly. While the TA was an integral part of India's development priorities and ADB's country strategy at the beginning of the TA, this changed and by the end of the TA the government had decided not to proceed with the investment project.	<i>Less than relevant</i>
Effectiveness	The assessment of the technical, economic, and financial feasibility of inland water transport was completed, however, there were shortcomings in meeting the envisaged TA objectives. The sector development strategy was not prepared, and one of the two planned workshops did not push through. Ultimately, the planned inland waterway investment project was dropped.	<i>Less than effective</i>
Efficiency	Delays in providing clearances for release of data to the consultants and comments to the final report were greater than two years, which reduced the TA's efficiency. However, there were no cost overruns since the consultant inputs were not fully utilized. This resulted in a saving in the TA budget, and a large proportion of the TA funds remained unutilized at financial closure.	<i>Less than efficient</i>
<b>Overall Assessment</b>	The project is rated <i>less than relevant</i> and <i>less than effective</i> . Delays in project implementation affected efficiency and negatively affected the overall TA rating.	<i>Less than successful</i>
<b>Sustainability</b>	The outputs of the TA were not used in subsequent ADB assistance. Although planned ADB assistance did not proceed, the World Bank is currently financing development of the Ganga inland waterway with a loan of \$375 million; a corridor which was examined as part of this TA.	<i>Less than likely sustainable</i>

#### Lessons Learned and Recommendations

Design and/or planning	This was ADB's first intervention in the inland waterway transport subsector. The envisaged activities were not realistic within the original specified timeframes. The design should have placed greater emphasis on a sector development strategy and delivered this as the first phase of the TA. Projects could then have been subsequently prepared for potential ADB financing as the second phase of the TA.
Implementation and/or delivery	A key change during implementation included the need for surveys; in developing the terms of reference all assumptions relating to availability of data, access to data, and the relevant custodian should have been confirmed with the executing and implementing agencies.
Management of staff and consultants	Environmental classification changed and this significantly impacted the timing of the TA implementation and consulting resources required. Recruitment of additional

	consultants to support delivery of EIA was undertaken quite late. This issue may have been caught earlier, allowing adequate resources to be recruited before consultant recruitment activities were significantly progressed.
Stakeholder participation	Stakeholders initially strongly supported the TA; for example, survey data was collected by a stakeholder in the working group. Without this survey data, the consultant's technical work would not have proceeded.
Nature of funding	A proposed investment project identified by the TA was included in ADB's regional integration pipeline and not in the India country pipeline. In view of the political situation at the time and the Government of India's position regarding regional projects in waterways, the government decided not to proceed with this project. The prevailing political situation should have been fully considered when including the regional waterway project in ADB's regional integration pipeline.

#### **Follow-up Actions**

<p>(i) TA validation may be conducted since the TA's financial closure was in 2008.</p> <p>(ii) Review ADB's participation in the subsector. Other institutions have recently entered the subsector, and Government of India has placed emphasis on inland waterways in recent years.</p>
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## TECHNICAL ASSISTANCE COST

**Table A.1: Technical Assistance Cost by Activity**  
(\$'000)

Item	Amount	
	Original	Actual
1. Consultants	764.00	662.09
2. Equipment (computers, printers, etc.)	10.00	1.69
3. Training, Seminars, and Workshops	20.00	25.99
4. Surveys	30.00	0.00
5. Miscellaneous Administration and Support Costs	5.00	0.00
6. Representative for Contract Negotiations	6.00	3.76
7. Contingencies	65.00	0.00
<b>Total</b>	<b>900.00</b>	<b>693.53</b>

Source: Asian Development Bank estimates.

**Table A.2: Technical Assistance Cost by Fund**  
(\$'000)

		Japan Special Fund
1.	Original	900.00
2.	Revised	-
3.	Actual	693.53
4.	Unused	206.47

Source: Asian Development Bank estimates.