



## 1. Project Data

**Project ID**

P118647

**Project Name**

CN-Anhui Shaying River Channel Improv

**Country**

China

**Practice Area(Lead)**

Transport &amp; Digital Development

**L/C/TF Number(s)**

IBRD-80360

**Closing Date (Original)**

31-Dec-2016

**Total Project Cost (USD)**

100,000,000.00

**Bank Approval Date**

12-Apr-2011

**Closing Date (Actual)**

31-Dec-2017

**IBRD/IDA (USD)**
**Grants (USD)**

Original Commitment

100,000,000.00

0.00

Revised Commitment

100,000,000.00

0.00

Actual

100,000,000.00

0.00

**Prepared by**

Victoria Alexeeva

**Reviewed by**

Kavita Mathur

**ICR Review Coordinator**

Ramachandra Jammi

**Group**

IEGSD (Unit 4)

## 2. Project Objectives and Components

### a. Objectives

The project development objective (PDO) was “to contribute to the increased cargo throughput of the Shaying River in Anhui Province through infrastructure improvements and capacity building” (Loan Agreement, p.4; Project Appraisal Document, p. 4).

### b. Were the project objectives/key associated outcome targets revised during implementation?

Yes



**Did the Board approve the revised objectives/key associated outcome targets?**

Yes

**Date of Board Approval**

17-Apr-2015

**c. Will a split evaluation be undertaken?**

No

**d. Components**

**1. Navigation Infrastructure and Facilities** (appraisal cost US\$189.05 million; actual cost US\$159.19 million). Activities included: (a) River Channelization and Dredging: improvement of the about 205.6 km long river channel to the standard of Class IV by dredging and bank cusp-cutting. (b) River Bank Strengthening and Protection: extension and strengthening of the existing river bank protection, and carrying out of new bank protection works in the river sections with deep and narrow channel, for a total length of about 43.87 km. (c) Navigation Signals: installation of about 213 navigation signals at key sections and locations. (d) Service Facilities: provision of two service areas, six public anchorage areas, communication and monitoring system, and other navigation aid facilities.

**2. Reconstruction and Relocation of Existing Infrastructure and Facilities** (appraisal cost US\$71.04 million; actual cost US\$109.4 million). Activities included: (a) Reconstruction of four existing bridges to allow for sufficient clearance for navigation, including the Yumin Bridge and the Sha River Bridge in Jieshou City, and the Ying River Bridges #1 and #2 in Taihe County; as well as reinforcing and anti-collision works to the navigable opening under other existing bridges along the river channel. (b) Relocation or elevating of existing cross-river power cables and telephone lines.

**3. Erection of Waterway Transport Management Systems** (appraisal cost US\$6.75 million; actual cost US\$4.39 million). Activities included provision and installation of the plants and equipment which are needed for building two management systems: (i) Shaying River Waterway Transport Management and Emergency Service System; and (ii) Comprehensive Ship Lock Management System, to be developed by technical studies under Component 4.

**4. Technical Assistance Systems** (appraisal cost US\$1.74 million; actual cost US\$1.61 million). Activities included: (a) Carrying out of technical studies on (i) Shaying River Waterway Transport Management and Emergency Service System; and (ii) Comprehensive Ship Lock Management System. (b) Provision of training programs to build the institutional capacity of the inland water transport sector to enable sustainable inland water development in Anhui Province.

**Revised Components**

The level-2 restructuring was approved on April 17, 2015 and following sub-components were added: (i) the construction of a second lock on the Shaying River, adjacent to the existing Yingshang lock, and (ii) upgrading and expansion of the existing Yangqiao lock on the Quan River.



**e. Comments on Project Cost, Financing, Borrower Contribution, and Dates**

**Project Cost.** The total project cost at closure was US\$285.77 million, about 2% lower than the originally estimated cost of US\$291.14 million.

**Financing.** The project was financed through an IBRD loan of US\$100 million, which was fully disbursed.

**Borrower Contribution.** The Borrower contributed US\$185.77 million, as compared to its commitment of US\$191.14 million.

**Dates.** The original project closing date was extended once by one year from December 31, 2016 to December 31, 2017 to complete infrastructure investments added during project restructuring in 2015, i.e., construction/upgrading and expansion of two ship locks. These were financed through savings in IBRD funds and the Borrower financing (see Section 10-Procurement). The results framework was updated accordingly, including revising several outcome targets upwards. The PDO remained unchanged throughout project implementation.

### 3. Relevance of Objectives

#### Rationale

The total length of the inland waterway network in Anhui is over 6,500 km, of which around 1,100 km are high class waterways (Class IV and above). The Shaying channel is an important part of Category IV to V channel of inland river system in China and is the backbone of Anhui province. Despite Shaying River's potential for inland water transport, limited water depth on the river's upper reaches prevented safe year around access by vessels over 300 deadweight tonnage (dwt).

The project development objective is aligned with the *Anhui Provincial 13th Five-Year Plan on Waterway Transport* and *Fuyang Municipal 13th Five-Year Plan (2016-2020)*. The Province decided to pursue a more balanced transport strategy that gave more prominence to inland waterway transport (IWT), with a goal for Shaying river to reach 20 million tons of cargo in 2020, up from 15 million tons in 2015. The objective is also aligned with the National Inland Waterways and Ports Plan to 2020 (NIWPP2020) developed by the Government of China (GOC) that aims to develop a 'high-class' waterway network (Class IV to Class I).

The project development objective remained relevant to the latest WBG's Country Partnership Framework for China (FY13-16), in particular to the strategic theme on promoting more inclusive development, which includes improving transport connectivity for more balanced regional development.

#### Rating

High

### 4. Achievement of Objectives (Efficacy)



## **Objective 1**

### **Objective**

To contribute to the increased cargo throughput of the Shaying River in Anhui Province.

### **Rationale**

Despite changes in the outcome targets that were revised upwards, IEG does not apply a split rating for the assessment, as there is no material difference in the achievement of the PDO.

The project's theory of change was built on the premises that infrastructure improvements under the project that included river channelization and dredging works, river bank strengthening, bridge reconstruction, and waterway transport management systems supplemented by capacity building would lead to increase in cargo traffic volumes and the share of 500 dwt and above vessels.

### Outputs

#### *Infrastructure*

- 206 km of Shaying river channel was improved, as planned, to Class IV standard in line with technical specifications and norms, through dredging, bank-cutting and river bank strengthening and bank protection works, and navigation signal works.
- The second Yingshang lock was constructed and Yangqiao lock was upgraded and expanded.
- 4 existing bridges were reconstructed to allow 7 meters of height and 90 meters of width clearance, including Yumin Bridge and Shahe Bridge in Jieshou City, and Ying River Bridge #1 and #2 in Taihe County.
- Auxiliary facilities were constructed, including two service areas and six public anchorage areas.
- The communication and monitoring system, and necessary navigational aids were installed, as planned.

#### *Capacity Building*

- Two technical studies– Shaying River Waterway Transport Management and Emergency Service system, and Comprehensive Ship Lock Management System – were prepared as targeted and integrated with a common software and application platform in line with China's key standards for river management systems. These operating systems were specifically designed to: (i) integrate application of advanced Information Technology (IT) instruments into waterway safety management; (ii) establish an intelligent monitoring and salvage system on waterway pollution; and (iii) improve the operational capacity and passage efficiency of the ship locks through a comprehensive IT-based lock management system, which includes tolling, real-time monitoring, operational control, and asset and personnel management.
- 585 person-months of training was provided on various aspects of inland water transport, including domestic training of over 570 person-months, study tours of 7.6 person-months, as well as foreign training of 5.6 person-months. Training topics included project management, water safety and environmental management, and waterway engineering design optimization investigation groups. Specific technical training was organized on themes relevant to the project, for example port and shipping planning and waterway information management.



### Outcome

The outcome targets for aggregate volume of cargo passing through verifiable measurement points (at the identified locks) on the Shaying River were significantly exceeded:

- At Genglou Lock- 13 million tonnes/year up from 1 million tonnes/year, and above the original and revised targets of 3 million tonnes/year and 3.6 million tonnes/year respectively.
- At Fuyang Lock- 11.9 million tonnes/year, exceeding the original and revised targets of 1.37 million tonnes/year and 3 million tonnes/year respectively.
- At Yingshang Lock- 18.3 million tonnes/year, exceeding the original and revised targets of 3.07 million tonnes/year and 10 million tonnes/year respectively.

For the two new locks added during implementation, almost 60% of the target was met in the case of Yangqiao lock, and the 2nd Yingshang lock had become operational at project closure (ICR para 21). The targets were subsequently exceeded, as measured at the time of the ICR writing:

- At 2nd Yingshang Lock- 2.8 million tonnes/year, above the targeted 2.4 million tonnes/year.
- At Yangqiao Lock- 1.47 million tonnes/year, above the targeted 0.8 million tonnes/year.

The outcome targets for the share of 500 dwt and above vessels among total vessels passing were also significantly exceeded:

- At Genglou Lock- the percentage of 500 dwt and above vessels among total vessels passing was 97% in 2017, up from 15% in 2009 (target 25%).
- At Fuyang Lock- 99% in 2017, as compared to the target of 34%. The lock was under construction in 2009.
- At Yingshang Lock- 99% in 2017, up from 20% in 2009 (in line with the revised target of 99% and exceeding the original target of 30%).
- At 2nd Yingshang Lock- 99.2% as of May 2018, in line with the target of 99%.
- At Yangqiao Lock- 75% as of May 2018, as targeted.

The ICR (para 24) also mentions other benefits related to investments, including travel time. In particular, in 2011, 600 tonne ships used to take 15 days from Fuyang to Jiangsu (800km, travelling at an average speed of 9 km/hour) at a cost of about RMB120/ton and wait for 3-7 days for the ship lock to open. In 2017 ships carrying 1100 tonnes of goods from Fuyang to Jiangsu take 7 days (at average speed of 12 km/h) at a cost of RMB60/ton, with no waiting time at the ship locks. The ICR (p.7) adds that the project contributed to the reduction of carbon emissions. The benefit of carbon emission reduction was estimated in the economic analysis but the ICR did not provide specific estimates for the project investments. Based on the information provided by the Borrower, IWT projects were included in the climate mitigation positive list and would receive 100% climate co-benefits; e.g. in 2017, about 1700 tons of cargo passed the Fuyang ship lock, which was equivalent to 850,000 20 tonne-trucks.



**Rating**  
Substantial

### **Rationale**

The achievement of the objective of contributing to the increased cargo throughput of the Shaying River in Anhui Province is assessed as substantial. The project targets for volume of cargo traffic and increase in the share of 500 dwt and above vessels were met or overachieved for the original locks, while the targets for the additional two locks were reached six months after project closure. The ICR notes that the estimation methodology could have been more rigorous but does not discuss attribution issues in the project's efficacy, as the reported outcomes were a combination of factors that included government investments (such as construction of the main three locks prior to project approval and other parallel investments), increase in economic activity and demand, and private sector operations.

**Overall Efficacy Rating**  
Substantial

## **5. Efficiency**

### *Economic analysis*

At appraisal, the economic internal rate of return (EIRR) of the project was estimated to be 14.6%, with a net present value (NPV) of RMB1.86 billion at a 8% discount rate (PAD, Annex 9). A cost-benefit analysis estimated the following benefits: a) transport cost saving of coal and construction materials, b) transport cost savings by barge size upgrading, and c) benefit of carbon emission reduction.

During project restructuring, an economic analysis was carried out for the proposed additional investments estimating the following benefits: (i) cost savings from reduced vessel waiting time; (ii) cost savings from shorter transit distances; (iii) cost savings for traffic diverted from road haulage; and (iv) reduction in vehicle emissions. The consolidated EIRR was 17.8%, while for the Yingshang ship lock and for the Yangqiao ship lock the EIRRs were 18.1% and 17.2% respectively (Project Restructuring Paper 2015, p.6).

At closure, the original methodology was adjusted to include two new ship locks that were added during implementation. The project's economic benefit analysis compared the "project scenario" and "non-project scenario" to show IWT increase and incremental cost savings compared with other transport modes such as highways and railways. The net present value (NPV) of the total net economic benefits of the project was estimated to be RMB2.11 billion and the EIRR of the project was 31.5% (at a 12% discount rate). The significantly higher EIRR at completion is primarily due to the aggregate cargo volume and the percentage of 500 dwt vessels exceeding their targets significantly at the three original ship locks (Genlou, Fuyang, and Yingshang). The ICR (p.35) argues that the difference between the estimated EIRR in PAD and ICR could be mainly explained by the delayed inflow of capital investment and inclusion of new investments. While capital investment was proposed to start from 2010 and be completed by 2013, it was actually delivered from 2013 to



2017, with 82 percent of the amount being disbursed in the last two years. Estimate showed that if the real capital investment was delivered within the originally proposed investment period of 2010-2013, the EIRR would be reduced to 19.4%.

#### *Administrative/ Operational Efficiency*

There were some delays in land acquisition by county land bureaus, and the declaration of misprocurement of two contracts (due to misinterpretation of the conflict of interest clause of the bidding document). This did not lead to cancellation of the IBRD funds, which were used for additional investments, along with counterpart financing. The project was extended by one year from the original closing date to complete the new activities.

The overall project's efficiency is assessed as substantial.

### **Efficiency Rating**

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	<b>Rate Available?</b>	<b>Point value (%)</b>	<b>*Coverage/Scope (%)</b>
Appraisal	✓	14.60	99.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	31.50	99.00 <input type="checkbox"/> Not Applicable

\* Refers to percent of total project cost for which ERR/FRR was calculated.

## **6. Outcome**

Relevance of objectives was high to the priorities of the Anhui provincial government in developing inland waterway transport and the World Bank's strategies. Through infrastructure improvements and capacity building, the project contributed substantially to the increased cargo throughput of the Shaying River in Anhui Province. Efficiency is rated substantial. The overall rating is satisfactory.

### **a. Outcome Rating**

Satisfactory

## **7. Risk to Development Outcome**





The ICR reports that appropriate institutional and financial arrangements have been made for operations and maintenance of the assets created by the project. The government functional department of Jieshou (the Commission of Housing and Urban-Rural Development) will be responsible for operating and maintaining the two rebuilt bridges in Jieshou. The government functional department in Taihe (the Commission of Housing and Urban-Rural Development) will be responsible for operating and maintaining the two rebuilt bridges in Taihe. The professional ship lock companies set up by APPSCIG (Anhui Yingshang Yinghe Ship Lock Co., Ltd., Anhui Yangqiao Ship Lock Co., Ltd.) will be responsible for operating and maintaining the newly built and rebuilt 2nd Yingshang ship lock and the Yangqiao ship lock. The Fuyang Port and Navigation Administration has taken charge of managing, using and maintaining the intelligent shipping system (each ship lock will take charge of the specific ship lock section). There is adequate qualified staff, and costs will be included in the budgets of local governments and APPSCIG respectively.

## **8. Assessment of Bank Performance**

### **a. Quality-at-Entry**

Project design was based on the lessons from the earlier six World Bank- funded IWT projects in China, international case studies, and similar ship locks in China. Anhui Province requested the World Bank to finance the project in 2009 following the project proposal of Fuyang City. During project preparation, the cities of Yingshang, Fuyang and Jieshou convened a forum to invite feedback from the main users of the river, including individual ship-owners, logistics companies, goods manufacturers, the ship-owners' association and local marine/ water management bureaus. The initial design of the project was commissioned by the Anhui Provincial Communications Survey and Design Institute (Design Institute).

The project was aligned with the national and local priorities for IWT development. Six main risks were identified: delays in procurement; inadequate capacity of implementing units; variations/changes to design and work quantities during construction; implementation of agreed measures for social and environmental safeguards; weak financial management capacity; and lack of timely availability of adequate counterpart funds. Mitigation measures incorporated in the project design and planned implementation support were generally appropriate. The issues that emerged during implementation were not related to the work quality at entry. M&E design as well as safeguards assessment were adequate overall.

### **Quality-at-Entry Rating**

Satisfactory

### **b. Quality of supervision**

The Bank carried out supervision missions bi-annually (total 12). The project had three Bank TTLs over the implementation period; most staff were Beijing based, including a TTL for a portion of the implementation period. As part of the coordination system established to address issues and speed up project implementation, the Bank adopted a hands-on approach and provided feedback to Anhui Project





Management Office (APMO) and the Project Implementation Units (PIUs) on a weekly basis. Supervision reports such as aide memoires and management letters identified the main issues and appropriate follow-up actions by the responsible parties.

The ICR (p.17) states that compliance with the World Bank fiduciary and safeguards aspects was supervised diligently through the participation of relevant experts in missions, desk reviews of key documents, and the provision of appropriate implementation support to the APMO, the PIUs, and relevant staff. On June 4, 2014, the Bank declared misprocurement (due to misunderstanding and misinterpretation of the conflict of interest clause of the bidding documents), but consented as a one-time exception (and without setting any precedent) not to cancel the corresponding loan funds of US\$15.6 million allocated to a waterway improvement contract and a bridge contract. This affected project implementation until the reasons were identified and the matter was satisfactorily resolved. These activities continued to be part of the project and financed with local funds. As for social safeguards, the Bank remained committed to addressing an outstanding issue related to the satisfactory resettlement of the 13 households in compliance with Bank policy (see more details in Section 10 on Safeguards).

### **Quality of Supervision Rating**

Satisfactory

### **Overall Bank Performance Rating**

Satisfactory

## **9. M&E Design, Implementation, & Utilization**

### **a. M&E Design**

The results framework was simple with two key outcome indicators on "traffic volume" and "increase in capacity vessel size" to measure the increased cargo throughput following infrastructure investments and capacity building. The identified outcomes were measurable and time-bound but not fully attributable to the project interventions. The outcomes were to be measured through three verifiable measurement points on the Shaying River, i.e., at Genglou, Yingshang, and Fuyang locks, which were Class IV ship locks built through own government funds at the time of project preparation (the first two locks were put into operation in 2009, and the Fuyang Lock in 2011, at project approval). The baselines used were for 2009. The ICR notes that the estimation methodology could have been more rigorous but does not discuss the attribution issues as the increase in cargo throughput is a function of several factors (including construction of main three locks prior to project approval, increase in economic activities and demand, private sector operations, as well as other infrastructure investments). The project's intermediate outcome indicators were considered appropriate. As two new ship locks were added during implementation, the results framework was modified to reflect the related outcomes.



## **b. M&E Implementation**

The ICR (p. 13) reports that progress reports and supervision missions deemed the M&E progress to be satisfactory throughout project implementation. Records were collected, and data was analyzed in a sound manner. The data and analyses were presented in regular progress reports, during bi-annual supervision missions' aide memoire/ISRs and monthly reports to the Bank.

## **c. M&E Utilization**

The M&E reports were used to identify key issues resulting in implementation delays, e.g., construction delays due to non-availability of temporary landfills, making improvements in coordination in 2014, as well as the restructuring.

### **M&E Quality Rating**

Substantial

## **10. Other Issues**

### **a. Safeguards**

The project was placed in Category A under the Bank's environmental and social safeguard policies, due to environmental concerns over water quality deterioration caused by dredging and silt disposal, as well as other impacts caused by construction activities, waste management, and safety. Three safeguard policies were triggered: Environmental Assessment (OP/BP 4.01); Natural Habitats (OP/BP 4.04), and Involuntary Resettlement (OP/BP 4.12).

**O.P.4.01. Environmental Assessment.** A full Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP), acceptable to the Bank, were prepared and disclosed. EMP implementation performance was rated satisfactory throughout project implementation (ICR, p.14). EIAs and EMPs were prepared, reviewed and disclosed for newly added Yangqiao and Second Yingshang ship locks, in line with OP 4.01 requirements. EMP training (including health and safety aspects, e.g., HIV awareness raising) was provided to contractors, supervision engineers and local officers at the beginning of the project and was continued during construction. EMP implementation was supervised through regular field visits and review of reports. Anhui Project Management Office set up and maintained a sound environmental management system, assigned dedicated environmental management staff, and engaged an experienced independent environmental monitoring consultant to monitor and supervise EMP implementation.

**OP 4.04 Natural Habitats.** The Natural Habitats policy applied to the project because of (a) the policy requirements on minimizing impacts to, and promoting rehabilitation of, natural habitats; and (b) project's linkages with the Anhui Taihe Shaying River National Wetland Park (PAD, p.47). The ICR (p.14) reports that this policy was addressed satisfactorily during the EMP implementation. Dredging and silt disposal impacts were minimized through proper dredging and disposal practices, as well as the selection, management and post-rehabilitation of disposal sites. Construction activities were carried out outside the



conservation zone of the Anhui Taihe Shaying River National Wetland Park; and mitigation measures were duly implemented to avoid and minimize impacts on the wetland park.

**OP 4.12 Involuntary Resettlement.** Direct social impacts were from activities in Project Components 1 and 2. As described in the PAD (p.51), the main resettlement impacts were to involve: 1,658mu (111 hectares or ha) permanent land acquisition; 9,874mu (658 ha) temporary land acquisition; and 364 households relocation involving 1,489 persons. 34 disposal sites for dredged sediment would have temporary land use affecting 2,891 households (10,316 persons). A social impact assessment was conducted and a Resettlement Action Plan (RAP) was prepared to address the land acquisition and involuntary resettlement needs of the Project, based on the findings of the assessment and information gathered through public consultations.

The ICR reports (p.12-13) that there were delays in land acquisition by county land bureaus during implementation, due to (i) weak coordination between county land bureaus (which have responsibility for land acquisition) and APPSCIG, and (ii) delays in reaching agreement on the unit price for land compensation. These issues were resolved following extensive discussions between the Bank and Borrower in 2014.

The ICR (p.15) reports that, at project closure, all resettlement was complete except for one outstanding issue at Sanba village in Yingshang county (where 23 rural households had been resettled). In January 2018, after project closure, the Bank was informed that a large area in Sanba village, including the Sanba resettlement site, was identified by the county government for economic development and the 23 households would be moved to another site. Subsequently, 10 of these 23 rural households opted for cash compensation and left; the remaining 13 households opted to relocate to Xiayuan Resident Compound, a new site assigned by Yingshang county government, where construction was expected to be completed only by June 2019. The 13 households received a 18- month transition fee, which was sufficient to rent houses in nearby towns. The ICR (p.15) reports that the Anhui PMO agreed to continue monitoring their resettlement as part of the Bank-supported Anhui Rural Road Resilience Program (approved in September 2018, P158733), which includes Fuyang municipality, where Yingshang county is located. According to the ICR, the Bank social specialists will conduct monitoring missions early 2019 and in June to confirm the satisfactory resettlement of these 13 households, in line with the Bank requirements.

## **b. Fiduciary Compliance**

**Financial management.** As reported by the ICR (p.16), the project complied with Bank policies and the legal agreement to submit the interim financial reports (IFRs) to reflect the overall project implementation status on a semi-annual basis. The IFRs were prepared in accordance with the accounting guidelines issued by the Ministry of Finance and were consistently applied. The annual project audit reports were issued with unqualified (clean) opinion by Anhui Provincial Audit Office and were submitted to the Bank on time. During the first-year audit, the auditors identified issues with the bank account for counterpart funds; these were properly addressed by the PIU.



**Procurement.** The ICR (p.16) reports that the Project complied with the Bank Procurement Guidelines except for the award of two contracts. In June 2014, a one-time misprocurement was declared by the Bank, without cancellation of the Loan funds allocated to bridge construction contract QL-01 and river channel dredging contract HD-01. During a procurement review, the Bank found that bidders recommended for the award of these two contracts were affiliated to one or more other bidders who had submitted bids for the same contract, and should therefore have been disqualified during bid evaluation for conflict of interest (COI). After a careful review of the circumstances and documents, the Bank concluded that this violation might have been due to a genuine misunderstanding and misinterpretation of the COI clause in the bidding documents. The Bank declared misprocurement in June 2014, but consented as a one-time exception (and without setting any precedent) not to cancel corresponding Loan funds of US\$15.6 million allocated to these two contracts. Other procurement-related issues included price adjustments, works variations, and claims. The bills of quantities were not prepared well; there were too many variations after contract award (the ICR notes that this was an issue in other projects in China as well). As a result, the Bank provided further training to the design institute on preparing bills of quantities and strengthened the technical review of bidding documents.

#### c. Unintended impacts (Positive or Negative)

---

#### d. Other

---

### 11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	---
Bank Performance	Satisfactory	Satisfactory	---
Quality of M&E	Substantial	Substantial	---
Quality of ICR		Substantial	---

### 12. Lessons

The following two lessons are adapted from several general lessons/findings in the ICR:

- **An inland water transport (IWT) project is likely to be successful when planned in coordination with road/rail modes, national/local level policies and upstream/downstream development.** This IWT project benefited from policy and planning support and investments towards waterway transport as well as support to competitiveness of water-based transport over rail or roadways by the Government. The pre-conditions were set to provide adequate demand for the increase in IWT capacity, at the national level to support



underdeveloped provinces with connectivity and increase in economic trade and at the provincial level to increase the navigation capacity of specific river channels, which lead to further transfer of goods to other modes of transport.

- **A demand analysis is critically important for inland water transport projects.** This project benefited from upfront consultation and confirmation of project activities by users of the Shaying river channel i.e. shipping companies, associations of logistic companies, manufacturers. During the project period, there was a significant increase in the number of water transport enterprises, port operators, and shipbuilding enterprises.

### 13. Assessment Recommended?

No

### 14. Comments on Quality of ICR

The ICR is outcome-oriented, concise and consistent, both internally and with the guidelines. It provides a good account and sufficient detail in describing issues in procurement and safeguards. Additional strength of the report includes the quality of the efficiency analysis described in Annex 4, albeit it would be helpful to indicate the specific emission reduction estimates for the project. The ICR would have benefited from a more balanced discussion of attribution and the linkages between project interventions and the increase in cargo throughput that is a function of several factors (including construction of the main three ship locks Class IV prior to project approval, increase in economic activities and demand). Lessons identified in the ICR are in the nature of findings and general statements.

#### a. Quality of ICR Rating

Substantial