



## 1. Project Data

<b>Project ID</b> P095129	<b>Project Name</b> VN-Northern Delta Transport Dev	
<b>Country</b> Viet Nam	<b>Practice Area(Lead)</b> Transport	
<b>L/C/TF Number(s)</b> IDA-44740,IDA-60280	<b>Closing Date (Original)</b> 30-Jun-2014	<b>Total Project Cost (USD)</b> 186,826,412.01
<b>Bank Approval Date</b> 24-Jun-2008	<b>Closing Date (Actual)</b> 30-Jun-2023	
	<b>IBRD/IDA (USD)</b>	<b>Grants (USD)</b>
Original Commitment	170,000,000.00	0.00
Revised Commitment	203,792,035.83	0.00
Actual	186,826,412.01	0.00

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## 2. Project Objectives and Components

### a. Objectives

The Project's development objective (PDO) "to enhance the efficiency, environmental sustainability and safety of transport infrastructure and services, through the alleviation of physical and institutional bottlenecks, in two major waterway corridors in the Northern Delta Region." (Financing Agreement dated November 10, 2008).

The PDO was not revised throughout the implementation period, when nine Level 2 restructurings and an Additional Financing were approved.



For the ICR Review's purposes, the following objectives will be assessed:

Objective 1: To enhance the efficiency of transport infrastructure and services.

Objective 2: To enhance the environmental sustainability of transport infrastructure.

Objective 3: To enhance the safety of transport infrastructure.

These three objectives will be pursued selectively in two major waterway corridors of the Northern Delta Region of Vietnam. The alleviation of physical and institutional bottlenecks are intermediate steps to be taken to achieve the foregoing final development outcomes.

**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**

23-Jun-2017

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

No

**d. Components**

The Project has three main components.

**Component A:** Multimodal Transport Corridor Investments (US\$147.1 million at appraisal; US\$78.74 million additional financing to fund DNC canal civil works only; US\$131.1 million actual). This component consisted of improvements within two major waterway corridors in the Northern Delta Region to increase the efficiency of multimodal transport and supply chains and to enhance the environmental sustainability of the waterway system. It had four subcomponents (in addition to detailed engineering design and supervision):

Subcomponent A1. Improvements to National Waterway Corridors (US\$66.3 million at appraisal; US\$54.3 million actual) The investments under this subcomponent were in two corridors: (a) an east-west northern corridor of 280 km between Viet Tri and Quang Ninh; and (b) a north-southwestern corridor between Hanoi and the Ninh Co River estuary, including three river sections totaling 259 km. The upgrading of the corridors will entail dredging, bend corrections, bank protection, shoal regulation, air clearance improvement at one bridge crossing, and provision of aids to navigation.

Subcomponent A2. Improvements to Ninh Co River Estuary and an inter-connecting canal between the Day and Ninh Co Rivers with a navigation lock (US\$63.7 million at appraisal; US\$60.60 million actual) The investments included an access channel bypassing the mouth of the Ninh Co River estuary to accommodate 3,000 DWT vessels and a canal connecting the Ninh Co and Day Rivers. The work entailed



dredging the approach channel and connecting canal, and construction of breakwaters, a ship lock, bank protection and other river training works.

Subcomponent A3. Improvements to Provincial Ports (US\$7.0 million at appraisal; US\$5.8 million actual) This subcomponent comprised the construction of new facilities at Viet Tri and Ninh Phuc Ports; the piloting of new institutional and management arrangements; and support for physical improvements to increase capacity and demonstrate improved cargo handling methods that meet acceptable environmental standards. Potential investments included new wharfs, storage areas, warehouses, road access, and waste disposal facilities.

Subcomponent A4. Pilot Maintenance Contracts (US\$1.0 million at appraisal; no actual funding at closing) This subcomponent was to explore different arrangements for performing maintenance dredging and pilot a maintenance scheme in the Project's corridors. It was eventually excluded, as discussed below.

Subcomponent A5. Design and Supervision (US\$9.1 million at appraisal; US\$10.3 million actual) The cost of the detailed engineering design and supervision for Subcomponents A1-A3 was estimated at 8 percent of the total base cost of the civil works contracts, excluding contingencies and taxes.

**Component B:** Investments in Ferry Boat Stages (US\$4.6 million at appraisal; US\$4.7 million actual). This component included physical improvements for 15 to 30 pilot ferry boat stages in 14 provinces. Access to these ferries from the road was often dangerous and resulted in accidents and fatalities. In conjunction with the physical improvements, the Project was to support—under its institutional support component—the implementation and operationalization of a framework of standards for the design and operation of the different size ferry boat stages, which was developed under the other project Mekong Delta Transport Infrastructure Development Project (MDTIDP).

**Component C:** Institutional Support to Ministry of Transport (MOT), Vietnam Inland Waterway Administration (VIWA) and the provinces (US\$5.1 million at appraisal; US\$3.4 million actual at closing). This component consisted of three subcomponents:

Subcomponent C1. Institutional support to VIWA (US\$1.0 million at appraisal; US\$0.9 million actual) to provide support for VIWA and MOT to operationalize frameworks developed under MDTIDP for planning and management of ports and waterways, and help VIWA perform its tasks more effectively as manager of the inland waterway network. This was to be coordinated with, and complementary to, the institutional reform initiatives undertaken under MDTIDP. Initiatives to be addressed included improved management of ports, landing stages, and ferry boat crossings; support for performance-based contracts; and promotion of community participation.

Subcomponent C2. Training (US\$0.5 million at appraisal; US\$0.5 million actual). This subcomponent was to strengthen the capacity of central and provincial government transport officials involved in the waterway sector in northern Vietnam, based on the curricula developed under the technical assistance program of MDTIDP.

Subcomponent C3. Project Audit Services (US\$1.25 million at appraisal; US\$0.9 million actual) to finance two types of independent audits: (i) Integrated Project Implementation Audit Services (US\$0.80 million) in which independent consultants were to conduct semi-annual reviews and provide heightened technical, fiduciary, safeguards, and general project monitoring; and (ii) standard external project Financial Audit (US\$0.45 million).



Subcomponent C4. Preparation of Future Transport Projects (US\$2.36 million at appraisal; US\$1.0 million actual) to be used toward the identification and preparation of future Bank-financed transport projects in Vietnam. Potential candidates included an expressway project, a provincial roads project, or a second phase for NDTDP.

### **Changes in Components During Implementation**

**Component A: Civil Works- Costs and Technical Specifications.** As a result of the delays in implementation, especially in the first few years, the unit costs of activities were subject to significant inflationary pressure and were higher. Also, civil works were impacted by changes in technical specifications at the detailed design stage. Besides other civil works, this was particularly true for the Day-Ninh Co interconnecting canal (DNC canal) where changes in the traffic levels since project appraisal had made it necessary to significantly expand the capacity and engineering design of the bridge crossing the canal. This resulted in a material increase and the cost of the canal complex.

Subcomponent A4. Pilot Maintenance Contracts. This sub-component was not carried out, as the GoV historical technical data required to structure the performance-based dredging contracts was insufficient.

**Component B:** There were no changes in Component B during implementation.

### **Component C:**

Subcomponent C4. Preparation of Future Transport Projects. This component was accomplished partially by undertaking only a feasibility study on the potential viability of the inland waterway Corridor 2 in Northern Vietnam. US\$1.0 million was utilized from the allocated \$2.36 million.

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

Project Cost. The total estimated project cost at was US\$200 million in May 2008. The revised project cost with Additional Financing was US\$278.74 million in April 2017. The total project disbursements were US\$186.83 million in June 2023 at project closing. Exchange rates fluctuated significantly over the years of implementation (ranging from VND 16,122 in 2008 to VND 23,578 per US\$).

Financing. The original IDA Credit amount of US\$170 million was approved on November 10, 2008. An Additional Financing (AF) Credit of US\$78.74 million was approved on June 23, 2017, thus making the total IDA financing US\$248.74 million. About US\$35.4 million was cancelled during the implementation, hence the revised IDA financing was US\$203.79 million (the difference is from the currency exchange rate variation due to hyper-inflation during the 15-year period). At closing in June 2023, US\$17 million remained undisbursed.

Borrower Contribution. The Borrower committed to contribute US\$30 million to finance resettlement, land acquisition, incremental operating costs, and taxes. The Borrower reported to the Bank that total counterpart funds of US\$41.5 million were disbursed for resettlements, PMU staff costs, and other items. (TTL interview on Feb 8, 2024) This amount is not reflected in the final cost table of the ICR (page 2), which showed no disbursement against the Borrower's contribution.



Dates. The project was approved on June 24, 2008 and was effective on February 7, 2009. The Mid-Term Review (MTR) took place on Nov 18, 2013. Additional Financing was approved on June 23, 2017. The original Closing Date of June 30, 2014 was extended by a total of nine years through several restructurings. The actual project Closing Date was June 30, 2023. Instead of six years as originally planned, the total implementation period was fifteen years.

The nine Restructurings, including the Additional Financing, are as follows:

- May 2, 2014: The first closing date extension of 18 months was approved, from June 30, 2014 to December 31, 2015, though a Level 2 restructuring approved. The extension was necessary after significant delays from the outset in the completion of detailed engineering designs and bidding documents for civil works, and in the procurement processes. (Report #RES14443).
- December 21, 2015: The second closing date extension of 5 months was approved, from December 31, 2015, to May 31, 2016, to complete ongoing civil works contracts, construction contracts, and supervision consulting services. (Report #RES20788).
- May 31, 2016: The third extension of seven months was approved, from May 31, 2016, to December 31, 2016, to allow sufficient time to prepare and obtain approval for the Additional Financing Credit and to complete all remaining activities financed by the Original Credit. (Report #RES22710).
- June 14, 2016: This restructuring was to remove the results framework (RF) from Financing Agreement at the request from the State Bank of Viet Nam, followed by revisions to the RF to make results more directly attributable to project interventions and more attainable. (Report #RES24217).
- March 24, 2017: The fourth closing date extension of six months was approved, from December 31, 2016 to June 26, 2017, to provide sufficient time for the approval and signing of the Additional Financing (AF) Credit. (Report #RES26258).
- March 24, 2017: This restructuring was for the first cancellation of US\$12 million at GoV's request. The funds from the original credit were cancelled to allow the AF Credit to finance entirely the construction of the DNC canal, instead of both original and AF Credits. (Report #RES27341).
- April 30, 2017: The second cancellation of US\$0.7 million was to allow for construction of the DNC canal to be financed by the AF Credit only as in the previous restructuring. (Report #RES27581).
- June 23, 2017: Additional Financing (AF) of US\$78.74 million was approved to finance the construction of the Day-Ninh Co interconnecting (DNC) canal an activity that was not implemented under the original credit due lack of funds. The extension of 30 months from December 31, 2019, to June 2022 was to allow construction of the DNC canal along with the ancillary activities (land acquisition, resettlement, procurement) under the AF. (Project paper – Report # RES38216).
- June 30, 2022: This restructuring was to extend the closing date of the AF credit for one year from June 30, 2022 to June 30, 2023, and to cancel US\$22.7 million. The sixth extension was to allow the completion of civil works, construction, and related consultancy services. The cancelled amount resulted from competitive tendering and exchange rate changes. (Report #RES49307).

**Split Rating:** In this project, there were changes in outcome indicators and targets during the Additional Financing mainly to make the results more attributable to the project interventions. PDO indicators were added and revised to better measure the project development objective and better reflect the project interventions. The indicators on waiting times were added to better measure the efficiency aspect of the PDO and intermediate indicators measuring the environmental sustainability aspect of the PDO were upgraded from intermediate to PDO level indicators. A number of baseline data and end target values were also updated to reflect the project timeline. The changes did not reflect a reduction in the scope of ambition.



Since the PDO indicators were revised to make them more attributable, and new ones were added, a split evaluation has not been conducted.

### 3. Relevance of Objectives

#### Rationale

Context at Appraisal. At the time of appraisal of the Northern Delta Transport Development Project (NDTDP), Vietnam had experienced impressive achievements in economic development. The Government of Vietnam (GoV), in its increasing awareness of the benefits of efficient multimodal transport and logistics services, requested the Bank for support in the financing and planning of multimodal transport systems in both the Red River and the Mekong Deltas. Despite previous transport investments in the Deltas, Vietnam's rapid economic growth over the previous decade had resulted in serious transport bottlenecks and investment demands that were beyond the reach of the government's own resources. The availability of two major transport modes in waterways and roads, and the numerous interfaces between them, made the Deltas ideal regions for enhancing multimodal transport efficiency.

Previous Bank Experience. The Bank has had extensive global and regional experience, including in Vietnam, in designing and implementing transport projects. More specifically, the Bank's expertise in various aspects of designing and planning efficient multimodal projects, including regulatory frameworks, were well suited to Vietnam's infrastructure development programs and attractive to GoV. The NDTDP built upon the achievements of the Mekong Delta Transport Infrastructure Development Project (MDTIDP), the first multimodal investment in Vietnam. While MDTIDP strengthened multimodal planning through demonstrative investments and capacity-building activities in Southern Vietnam, the NDTDP aimed to implement the same in Northern Vietnam and improve upon the institutional reforms under MDTIDP.

Consistency with the Bank's Strategies. The PDO of NDTDP remained highly relevant at the project closing. The project's objectives were fully aligned with the Country Partnership Framework for Vietnam for the period from 2018-2022, that among others, included: focus area 1, "Enable Inclusive Growth and Private Sector Participation" and focus area 3, "Enhance trade competitiveness, multi-modal transport connectivity, and logistics services." The main alternative to inland waterway transportation (IWT) in Vietnam (about 80 percent of volume) is trucking, which emits up to six times the emissions per ton-km than that of IWT. The NDTDP's emission reduction made the project environmentally sustainable but also contributed to the transition to a greener and low-carbon economy that aligns with the Bank's climate strategies, as in the Climate Change Action Plan (CCAP 2021-2025), and is consistent with the Bank's commitment to the transformative public and private investments in five key systems: (i) energy; (ii) agriculture, food, water and land; (iii) cities; (iv) transport; and (v) manufacturing. Pursuing IWT logistics was also a key strategy under the 2022 Vietnam Country Climate and Development Report (CCDR-2022).

Consistency with the Government priorities. The project also remained fully aligned with the GoV's development priorities set out in the socio-economic development strategy for 2021–2030, in which the government identified its investment focus on the key large-scale infrastructure projects of national importance, particularly in transport, energy, and digital infrastructure, to overcome development bottlenecks and enhance regional and global connectivity. In November 2021, the plan for Vietnam Inland Waterways Structure during 2021–2030, Vision to 2050 was launched and confirmed the importance of strategic development of IWT. The project's intervention remains relevant and contributes to the long-term



vision of the plan by increasing safety, reducing the cost, and enhancing the capacity of IWT in the northern delta region.

The PDO was appropriately pitched to Vietnam's development needs and gives the deserved priority to the critical transport sector, with adequate and comprehensive focus on addressing the sector's efficiency, safety, and environmental sustainability. The relevance of objectives is **high**.

## Rating

High

## 4. Achievement of Objectives (Efficacy)

### OBJECTIVE 1

#### Objective

To enhance the efficiency of transport infrastructure and services

#### Rationale

Theory of Change. The ICR developed a TOC based on the PAD, which did not include a theory of change (TOC), as it was not yet required at the time of project appraisal. The ICR's TOC presents a logical and plausible causal chain from inputs to outputs and from outputs to development outcomes, indicating the long-term outcome of sustainable economic growth and inclusive development of the Northern Delta Region. For Objective 1, the main inputs and outputs consist of physical infrastructure, equipment, facilities, training and technical assistance to (i) upgrade the two key waterway corridors from Quang Ninh to Viet Tri and from Hanoi to Lach Giang estuary, an access channel in Ninh Co estuary to connect the sea and inland waterway, and Vietnam's largest navigation lock to connect two rivers to reduce logistics time and costs; (ii) improve passenger ferry boat stages and construct new facilities at Viet Tri and Ninh Phuc cargo ports; and (iii) strengthen the capacity of government agencies in the planning and management of waterways. The final development outcomes consist of improvements in the efficiency, environmental sustainability, and safety of waterways transport, as measured by an array of intermediate and final outcome indicators.

The originally planned interventions were comprehensive, adequate in scale, and appropriately sequenced, as would be typical for waterways infrastructure investments of this type that have already had extensive global implementation experience. The reported results were fully attributable to the project-financed interventions, as there were no other public or donor-financed projects at that time. However, as explained later, particularly in the Efficiency section, there were serious cost overruns that required Additional Financing.

The operability of the ICR's TOC was predicated on three critical assumptions: (i) the PMU had sufficient fund allocation to implement the works; (ii) land acquisition was adequately funded and implemented on time; and (iii) Vietnam Inland Waterways Administration and the Provincial Departments of Transport and PMU will closely collaborate. The ICR, however, did not discuss the realism of these assumptions and any mitigating



actions, which would have been important and useful because the assumptions ran into operational difficulties.

### Outputs

From zero baselines, the following outputs/ intermediate indicators were fully achieved at project closing:

- 539 kilometers of waterways were improved to desired operating standards.(target fully met)
- All the physical works under the original credit were completed, however they were delayed.
- The DNC canal civil works were completed.
- The draft framework for the planning and management of inland waterways were delivered to MoT and VIWA. The ICR notes that government's decree No 08/2021/ND/CP on the management of inland waterway in Vietnam, issued in 2021, was developed based on this framework.

### Outcomes

- Reduced travel time from 43.2 hours to 30 hours achieved which is 36.2% reduction achieved against the target of 10% reduction, at Corridor 1 waterway between Viet Tri and Quang Ninh.
- Reduced travel time from 40.85 hours to 36 hours achieved, which is 16.3% reduction achieved against the target of 5% reduction, at Corridor 3 waterway between Hanoi and Day/Ninh Co River.
- Reduced waiting time for vessels at Ninh Co River Estuary (including Lach Giang bypass channel) from the baseline of 20 hours and end-target of 10 hours to the actual achieved 1 hour, which is 95% reduction achieved against the target of 50% reduction.
- Day-Ninh Co (DNC) canal and navigation lock were fully constructed and achieved 100% of the target.
- Reduced waiting time of vessels calling at the Viet Tri Port, from baseline of 24 hours and 19.2 hours target to the actual achieved 18 hours, which is a reduction of 25% compared to the 20% target.
- Reduced travel time from Quang Ninh to Ninh Phuc, from a baseline of 60 hours and the end-target 48 hours to the actual achieved 48 hours, hence the 20% reduction was fully achieved.
- The access channel and the DNC navigation lock facilitated the coastal vessels to directly connect from deep-sea ports to the island ports and the inland waterways.

The indicator targets under Objective 1 were all either fully achieved or exceeded. However, the indicator of 'timely' completion of works under the original credit was achieved much later than in 2014 as originally planned. With completion nine years behind schedule, the benefits were also significantly delayed. Overall, the project's efficacy in achieving Objective 1 is **substantial** based on the achieved outputs and outcomes.

### Rating

Substantial

## OBJECTIVE 2

### Objective

To enhance the environmental sustainability of transport infrastructure





## Rationale

Theory of Change. As in the TOC for Objective 1, the ICR's TOC for Objective 2 presents a credible causal chain linking inputs to outputs and outcomes that can be attributed directly to the project's activities. The project-financed construction of environment- and pollution-controlled facilities at the Viet Tri and Ninh Phuc ports can be expected to lead to the achievement of the environmental sustainability objective. Most of the cargo transported and stored at Viet Tri and Ninh Phuc ports were bulk and bagged cargo such as cement, fertilizer apatite, coal, iron ore and limestone/ gypsum. The facilities at the ports lacked capacity and were in poor condition, covered with mud and sludge from coal, apatite, and iron ore heaps. They generated dust that caused airborne pollution in the dry season and water pollution in the rainy season when the dust washed into into the river. There was no drainage system to control the surface runoff from the storage areas. The transfer of cargo, and the loading/unloading of trucks into the storage areas also produced CO2 emissions. The investments were scaled and sequenced adequately. However, as discussed above, the critical assumptions proved unrealistic, but the ICR did not discuss the mitigating actions in the TOC section.

## Outputs

- One new storage yard was constructed at the port Viet Tri.
- Two wastewater treatment plants were constructed, one at each port in Viet Tri and Ninh Phuc.
- One sewage system was constructed at the port Viet Tri.
- Three covered warehouses were constructed at the prts, two in Viet Tri and one in Ninh Phuc.
- One new open yard was constructed at the Ninh Phuc port

## Outcomes

- Reduced Total Suspended Solids (TSS) in effluent, from coal storage area in Ninh Phuc Port from baseline 50mg/l and end-target of 45 mg/l to the actual achievement of 32 mg/l, i.e., a 36% reduction that exceeds the target of 10% reduction.
- Reduced Total Suspended Solids (TSS) in effluent, from coal storage area in Viet Tri Port, from baseline 50mg/l and end-target of 45 mg/l to the actual achievement of 37 mg/l, i.e., a reduction of 26% that exceeds the target of 10% reduction.
- Reduced in emissions of PM10 at Viet Tri Port, from the baseline 150 mg/m3 and the end-target of 135 mg/m3 to the actual achievement of 101 mg/m3, i.e., a reduction of 32% that exceeds the target of a 10% reduction.
- Reduced in emissions of PM10 at Ninh Phuc Port, from the baseline of 128mg/m3 and the end-target of 103 mg/m3 to the actual achievement of 96 mg/m3, i.e., a reduction of 25% that exceeds the target of 20% reduction.
- These achievements yielded significant improvement of the environmental conditions in the area and were in compliance with the Law on Environment.
- The environmental sustainability of the project is also enhanced by the adoption of an ecological engineering approach for the construction of the corridor embankments.

On the basis of having completed all of the activities and achieved the outcome indicators, with all targets having been exceeded, the project's efficacy in achieving Objective 2 is **High**.



## Rating

High

### **OBJECTIVE 3**

#### **Objective**

To enhance the safety of transport infrastructure

#### **Rationale**

Theory of Change. The causal chain linking inputs and outputs to the intermediate and final outcomes of Objective 3 is logical and plausible. The results are attributable to the project as no other complementary projects were taking place. The planned activities are also adequate in scale and timed appropriately. The project's input and output activities include the improvement of ferry boat stages, the implementation of standards for the operations, the safety design for different sizes of ferry boat stages, and the preparation and delivery to MoT and VIWA of a draft framework for the planning and sustainable management of ferry boat stages. These interventions were expected to address the numerous rudimentary and unsafe passenger ferry landing stages for river crossings, which was among the major contributors to waterway related accidents. The interventions would also address the serious issue of weak institutional capacity in inland waterway planning and management, including a lack of comprehensive and up-to-date regulatory framework. The foregoing discussion on the inadequate realism of the TOC's critical assumptions also apply for Objective 3.

#### **Outputs**

- Improved 31 ferry boat stages in 14 provinces, exceeding the target of 28 ferry boat stages.
- Upgraded the navigation aid system along corridors 1 and 3.
- Issued the decree on ferry boat stages management.
- Delivered the draft framework for the planning and management of inland waterways and ports, and ferry boat stages to MoT and VIWA.

#### **Outcomes**

- Reduced traffic accidents and fatalities associated with the river crossings at ferry boat stages, from the baseline of 7 accidents/fatalities and the end target of 6 to the actual achievement of having no accident by the time of project closing. Thus, the increased safety of inland water transport operations exceeded the set targets though the target seemed low given the baseline.
- Strengthening of the management capacity of inland waterways staff of MoT and VIWA through training based on the framework for the planning and sustainable management of ferry boat stages delivered to MoT and VIWA. The ICR notes that the ferry boat stages benefited more than 35,000 people per year, 60 percent of which are women though there was no target set for the same.
- The provision of safer and more accessible ferry boat stages improved the access to market, health, education, and recreation facilities for local rural communities, in particular women, across 14 provinces in the region.
- The improved design of the ferry boat stages that was developed and piloted under the project, which was to be aligned with international standards, is now standardized and institutionalized nationwide upon the issuance of decree No 08/2021/ND/CP on the management of inland waterway in Viet Nam in 2021.



Based on the positive results for all the outcome indicators, which have met or exceeded the targets, the project's efficacy in achieving Objective 3 is **High**.

**Rating**  
High

## **OVERALL EFFICACY**

### **Rationale**

The project's efficacy in achieving the three objectives is Substantial. The efficiency of transport infrastructure was enhanced and sustained by improved management and institutional capacity. The safety of the entire corridor had also been improved. The upgrading of the corridors and corrections of the sharp bends significantly reduced the number of accidents and the vessel stranded incidents. The capacity-building and training to improve the management of ferry boat stages was delivered to the provincial agencies responsible for management and maintenance of the ferry boat stages, in compliance with the Law on the Environment.

### **Overall Efficacy Rating**

Substantial

## **5. Efficiency**

### **Economic Analysis**

Appraisal. At appraisal of the original project, a comprehensive economic analysis of the project's costs and benefits analysis was carried out. The most likely sector development scenarios were identified and assessed in consultation with VIWA. The largest benefits were the reduction in cargo transport costs and time savings resulting from the incremental investments in the waterways and ports infrastructure. An Integrated Cost Model was used to quantify the benefits (PAD, Annex 9, p. 93). Benefits were estimated as the cost savings from efficient fleet operations and port operating characteristics. Project costs included investment costs and maintenance activities in Corridor 1, Ninh Co River estuary, parts of Corridor 3 and the ports.

The key assumptions of the *ex ante* economic analysis were as follows: (a) future IWT cargo flows would follow developments in the industrial, mining and construction sectors; (b) the 2020 transport demand figures were based on the production of cement, steel and MWh of energy from coal; (c) the port infrastructure improvements would double the cargo handling capacity in tons per hour and reduce the waiting time; and (d) for civil works, no import duties would be levied on any of the inputs but an average of 5 percent VAT would be applied. Economic prices were used in undertaking the analysis.

Regarding the demand profiles, the data on present transport demand and future cargo demand projections in the project area came from the Vietnam Transport Strategy Study carried out by the Transport Development



Strategy Institute. The study counted extensive inland waterway traffic as a major input to the strategy. Projected volumetric demand for IWT cargo up to 2020 for various commodities (coal, cement, steel construction material) were forecasted to have considerable growth (PAD, Annex 9, Table A9.3). The analysis showed robust and reliable correlations with an average annual growth in the demand for IWT transport of 8 percent until 2040. (PAD, Annex 9, Table A9.4)

The economic analysis showed an EIRR of 38% and a NPV of US\$460 million at a 12% discount rate. (PAD, Annex 9, Table A9.12). Sensitivity analyses showed that with 20% higher construction costs and lower traffic growth, the minimum EIRR was 27% and the minimum NPV was US\$182 million.

Additional Financing. At the 2017 Additional Financing, an economic analysis was conducted to determine the economic viability of constructing and operating the DNC canal with updated costs and benefits. The assumed construction period was from 2017 to 2019, including one year for procurement activities and two years for construction, with operations to begin in 2020 and last over a 25-year lifetime until 2040. The economic returns were compared to a without-project, “business-as-usual” baseline using a discount rate of 6%.

On the foregoing basis, the EIRR in 2016 was 13.8 percent, which could be considered low given the use of a lower discount rate of 6% compared to the 12% used at appraisal. The NPV of US\$153 million was also significantly lower than the NPV calculated at appraisal.

The sensitivity analyses showed that the project remained economically viable even if costs were assumed to be 40 percent higher and simultaneously benefits were assumed to be 40 percent lower than under base-case assumptions (AF Paper, Table A3.7, p32). However, these results used a 6% discount rate and are therefore not directly comparable with the appraisal results, which used a 12% discount rate.

Closing. The ICR (Annex 4, p. 47) indicates that the *ex post* cost-benefit analysis applied the same methodology used at appraisal. However, as cited above, the appraisal discount rate was 12% while that of the Additional Financing was 6%. The ICR does not specify the discount rate that it used.

The ICR also indicates that the economic evaluation of the project was conducted using an integrated transport cost model that calculated the benefits to waterway transport users and operators from improvements to the depth, width, bend radius, and bridge clearance of waterway sections. However, there was no data or information as to how the transport costs and savings benefits were quantified for each cargo flow compared to the analysis done at the project’s appraisal. A methodology to calculate emission savings per GHG pollutant, reduction in accidents, and the in-transit inventory was without any data or reference figures of doing it. A verification and comparative discussion on the assumptions and findings of the economic analyses of the original financing, additional financing, and closing stages was also not provided.

The main benefits include (i) the improvements within the two main inland waterway corridors in the Northern Delta to accommodate larger vessels and gain economies of scale; (ii) improvements to the Ninh Co River estuary to allow river-sea vessels into the waterway system from the open sea; (iii) capacity enhancements such as berths to provincial ports for efficiency increases; and (iv) DNC navigation lock to connect 2 rivers and reduce transport navigation time by 20 percent.

In terms of benefits, the ICR indicates that the project area’s actual cargo flows grew strongly by 125%, from 40 million tons in 2005 to 90 million tons in 2020. It is also mentioned that the inland waterways transportation of goods in the project areas increased sharply by 270 percent from 21.6 million tons-km in 2010 to 57.6 million tons-km in 2021. However, there were no sources or references provided. There was also no comparison of the



growth projections between the 2008 appraisal and the 2023 completion, which seemed important given the significant time gap.

The *ex post* EIRR for the original financing (full project) is reported as 25.1% compared to the *ex ante* EIRR of 38%. The *ex post* EIRR of the Additional Financing (of the DNC canal alone) is 26.8% against the *ex ante* EIRR of 13.8%. The discount rate used is not specified, while mentioning “at a higher discount rate.” The *ex-ante* EIRR of the full project was 13% higher than the *ex-post* EIRR. The explanation given in the ICR (p. 20), is that “The original EIRR of 38 percent could have been unusually high and not feasible...”. It also mentioned that “the original finance met with unexpected cost inflation/overruns and the benefits of the DNC navigation lock were not reaped as it was not built by the end of the original financing in 2014 as planned”. The lost benefits were not quantified, however.

The traffic flow stream over the years (2014 to 2023) to substantiate the above reasoning has not been provided. The high traffic growth figures in the *ex post* economic analysis needs more evidence and explanation. In reply to IEG’s query, the TTLs advised that the growth numbers are provided by the Vietnam Government’s Transport Institute (TTL email of Feb 20, 2024). A comparison of *ex ante* and *ex post* costs and projected traffic would have been useful to provide, so as to enable the comparison of the losses due to cost increases and time overruns. versus the incremental gains from traffic volume growth in the project area, which seems to have been higher than projected.

In response to IEG’s questions related to the foregoing economic analysis, the TTLs replied (email of February 20, 2024), in general terms without accompanying data, that: (a) they cannot trace the demand model software that contained the original traffic volumes; (b) the Transport Institute data showed that the actual growth increased by 125% (2020); (c) the total benefits over the 30-year period were calculated to be 10% lower *ex post*, due to the delayed benefits accruing to the AF; (d) based on various publicly reported inland waterways projects from World Bank, ADB, EU, JICA, the EIRR of IWT projects is in the range between 10 and 20+% and therefore the NDTDP still had satisfactory EIRR when compared to other IWT projects”.

In summary, the economic analysis suggests methodological weaknesses, and lack of compatibility, notably from the different discount rates used for the original and additional financing and no mention of a discount rate in Annex 4 of the ICR. Overall, the work done for the economic analysis is substantial but with significant issues raised regarding methodological validity, comparability across the three major milestones of original appraisal, Additional Financing and closing, and overall clarity of presentation.

### **Operational and Administrative Efficiency**

The ICR appears to base its efficiency rating exclusively on the EIRR and NPV figures, which is inappropriate, since the achievement of outcomes and economic development is much broader and more complex than relying just a derived figure that depends on so many assumptions. The ICR, however, discusses only the EIRRs and NPVs, and (apart from scattered references throughout the ICR) provides no analysis of the project’s operational and administrative efficiency.

From the outset, project implementation encountered delays, which continued throughout the project for a mix of reasons, including unrealistic implementation schedule, the failure to schedule sufficient time for start-up activities, and delays in the detailed design, procurement, etc. For example, increases in traffic levels at the DNC canal bridge since after the appraisal made it necessary to significantly expand the capacity and design of the bridge. (ICR, p. 20). These necessitated extensions of the project closing date by about nine years to



complete the activities and the project components, for a total implementation period of 15 years. About seven years out of total nine years of delay may be divided as follows:

- About 2.5 years were lost at the outset because the detailed engineering designs and bidding documents for Phase-I activities, finalized by mid-2011, instead of by Feb 2009.
- Close to two years of delay occurred in the Phase-2 activities for the production of design and bidding documents (AF, Annex 2, p. 24).
- Another 2.5 years were lost towards the last phase of the project implementation due to the delay in the GoV budget approval process and the COVID 19 outbreak in 2020-21.
- Other delays were due to the weak inter-agency coordination, the slow land acquisition & resettlement processes, and in the slow availability of the government’s counterpart financing.

The project’s lack of readiness, the need for changes and closing date extensions that more than doubled the implementation time period to 15 years, the cost overruns, the cumbersome approval processes, and the weak inter-agency coordination clear indicate that this definition does not apply. Coupled with the questions raised above regarding the methodological validity and comparability of the economic analyses for the project, the project’s efficiency in achieving the PDO is rated as **modest**.

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	X	38	Overall Project
ICR Estimate	X	25.1	Overall Project
Additional Financing	X	13.8	For DNC canal only
ICR Estimate-	X	26.8	For DNC Canal Only

**Efficiency Rating**

Modest

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:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	38.00	100.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	25.10	100.00 <input type="checkbox"/> Not Applicable

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



## 6. Outcome

The relevance of objectives is rated **high**. The project's efficacy in achieving the objectives is rated substantial. The project's efficiency is rated **modest**. The overall outcome is rated as **Moderately Satisfactory**.

### a. Outcome Rating

Moderately Satisfactory

## 7. Risk to Development Outcome

The following risks could potentially impact the development outcome:

**Technical Risk.** The sustainability of outcomes could be at risk if sufficiently trained professionals do not consistently and efficiently conduct the operation and maintenance of the waterways and the ports system. This risk has been mitigated so far through the training of qualified staff prior to start of the operations of the new infrastructure. Training and capacity-building aspects were also implemented under all three components in the management of inland waterway maintenance, river ports, landing stage and ferry boat crossings, and other facilities. The operational responsibilities for the new waterway facilities constructed within corridors 1 and 3 and improvements at the two ports were turned over to the local authorities, i.e., Viet Nam Maritime Administration and Viet Nam Inland Waterway Administration under the Ministry of Transport (MoT).

**Financial Risk.** The failure to ensure sustainable funding for the infrastructure operations in the MoT's annual budget remains a substantial risk factor. The lack of timely and sufficient counterpart funding contributed to the lengthy delays during the project implementation, specifically delaying the land acquisition and resettlement works. The GoV would need to provide the required funding for sustained maintenance and operation to avoid or minimize serious risks to the sustainability of the project's outcomes.

**Governance Risk.** The country- and sector-level political and governance risks, including the risk of fraud and corruption, as well as fiduciary risks, as assessed, are Substantial. The World Bank Integrity Vice Presidency (INT) investigation substantiated various forms of fraud and misconduct by several local firms during the procurement of separate contracts under the project. Mitigation measures for governance risks were implemented under the project by the Bank. These are expected to continue and be enhanced in the future by the MoT through (i) increased procurement oversight and contract management and (ii) deeper due diligence vis-à-vis technical and financial proposals from bidders and other procurement processes.

## 8. Assessment of Bank Performance

### a. Quality-at-Entry

The project's design introduced many challenging and pro-climate features to improve inland water transport in Vietnam. The project was well aligned with the government strategy. The design



preparations, however, were incomplete and demonstrated shortcomings in reflecting the site conditions accurately, despite the PAD statement that the experience and knowledge gained from the previous waterways projects were reflected in the project design. Moreover, some of the indicators in the results framework were not accurate measures of the project's development outcomes and had to be changed. These weaknesses contributed to the lengthy delay of 2.5 years in implementation start-up, out of a total delay of nine years in completing the project. The delays worsened as the detailed engineering design for phase-II required changes in technical specifications that took two additional years to finalize compared to the original schedule. Building on this delayed design preparation, the procurement of the Phase 2 works involved an additional six to eight months of delay per package (AF-Annex 2).

The PAD's statement that the project met IDA's readiness filters (PAD, p. 103) is questionable based on implementation evidence. The PAD also referred to the Bank's prior financing of several operations in national roads, waterways, ports, and rural roads in Vietnam ("Lessons Learned and Reflected in the Project Design", PAD, p. 10). The reality on the ground, however, shows that the risks and pitfalls in project preparation were not adequately assessed. The time and processing requirements of the GoV's inter-agency coordination and approval, especially for any new changes, were not fully evaluated and estimated in the plans (ICR, p. 30). Overall, the project was not ready for implementation, resulting in the need to change the bridge and the DNC canal technical designs at the Additional Financing stage (AF-Annex-2).

Overall, Bank performance at design is rated as Moderately Satisfactory.

### **Quality-at-Entry Rating** Moderately Satisfactory

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

The Bank's team carried out 28 implementation supervision missions. The aforementioned changes in technical specifications in the detailed design (especially for the DNC canal) occurred during implementation, which resulted in increases in the quantities and the costs of works as compared to those originally defined at appraisal based on preliminary designs. This necessitated significant Additional Financing. Moreover, the project had six closing date extensions totaling nine years, resulting in a total implementation period of 15 years, from approval on June 24, 2008 to the closing date of June 30, 2023. The Bank team was proactive in restructurings and moving forward with supporting the extension of closing dates to address the design shortcomings and challenges during implementation.

The project faced several challenges during the fifteen years of implementation and Bank team supervision. Two major examples are the construction of the highly complex Lach Giang estuary bypass access channel, and the largest navigation lock at DNC canal in the open ocean and exposed to the typhoons and other natural calamities. The remedial action plans that PMU-W prepared at the restructurings were not effective to control the implementation delays that persisted and resulted in irregular disbursements, cost overruns, and further delays.

Internal factors outside the Bank's control contributed to these lengthy delays. These include GoV's complex approval processes before each stage of detailed design, bid evaluation, and so forth, which





involved various state agencies. The Bank team proactively worked with GoV by conducting frequent meetings besides regular supervision missions. (TTL response dated Feb 8, 2024).

Disbursements were irregular, including no disbursements during 2016 to 2019 (ICR, page 3). As clarified by the TTLs in their response, GoV experienced fiscal constraints and was not able to allocate counterpart funds for the resettlement activities for the DNC canal construction. This occurred from 2017 to 2019, after the AF was approved. There were limited works during this period.

External factors such as two typhoons, the COVID pandemic, and three landslides (between 2017 and 2021) occurred in the later part of the project implementation, past the original closing date of June 30, 2014. Most of the delays and changes, however, occurred from project start-up and continued until the original closing date. (ICR, pp. 24-25).

Overall, Bank performance at supervision is rated as Satisfactory.

The overall Bank performance is rated as Moderately Satisfactory given it is assessed as Moderately Satisfactory at preparation and Satisfactory at supervision.

### **Quality of Supervision Rating**

Satisfactory

### **Overall Bank Performance Rating**

Moderately Satisfactory

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

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

The PAD did not include a Theory of Change (ToC) because it was not required at the time of project appraisal. The ICR developed a ToC diagram based on the PAD's account of input activities, outputs, intermediate outcomes, PDO-level outcomes, and long-term outcomes and impacts.

The PDO was not changed throughout the nine restructurings and the Additional Financing but changes were incorporated to the results framework to clarify and update important aspects of the project. Some PDO indicators were added, e.g., an indicator on waiting time. Some environmental sustainability indicators were moved up from intermediate level to PDO outcome-level indicators. Correspondingly, baseline and end-target values were also revised for some indicators. (ICR, page 13)

Shortcomings at the appraisal stage necessitated the adjustment of PDO outcome indicators such as: (a) travel time/distance of 4x400- DWT barges during the rainy season was dropped because only a portion of corridors improved under the project was utilized, hence changes in travel time and distance on this route were not fully attributable to the project's interventions; (b) transport tariffs of 4x400 DWT barges that carriers charge shippers for the delivery of transportation services were only partially determined by infrastructure improvements and therefore changes in tariff levels were not solely attributable to the project activities; (c) the definition of the original indicator—travel time of 4x400 DWT vessels from Hanoi to Da



Nang during the dry season—was flawed, in that 4x400 DWT vessels could travel only up to Lach Giang and not all the way to Da Nang. Therefore, the changes in average vessel waiting times were attributable to the project only up to Lach Giang.

As described in Section 2 above under Restructuring, following the Additional Financing for the construction of the DNC canal, a PDO-level indicator and an intermediate indicator were added to the Results Framework, for monitoring construction operations and performance impacts. (Page 11, Additional Credit-April 2017).

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

As stated in the ICR (p. 25), the Aligned Monitoring Tool (AMT) was used for data collection and analysis to monitor regularly the implementation of the project. Monitoring of the performance. The Bank team along with the implementing agencies closely monitored the M&E system for the whole project. (TTL's email of Feb 8, 2024). Shortcomings in the results framework and PDO indicators were identified and revised after the 2016 restructuring (ICR, p. 15), as discussed above.

The PMU-W maintained and prepared detailed implementation progress reports in conjunction with the Bank's semi-annual implementation support missions. After the approval of the Additional Financing in 2017, at the Bank's request, detailed monthly progress reports on the construction of Day-Ninh Co canal were produced to monitor construction progress of each individual contract package every two weeks (TTL's email- Feb 8, 2024).

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

According to the ICR (paras. 70, 71), the M&E data (e.g., for travel time, waiting time, accidents, fatalities at pilot ferry boat stages, transport tariffs along the waterways, institutional reforms) were collected and maintained by the PMU-W and the respective agencies. The data thus collected was available for assessing progress under each of the indicators for efficiency, safety and environmental sustainability. However, there were gaps noted in the data collection and providing accurate reference as required. For example, from the ICR (Table 3, p. 15), it is not clear how the data was collected, whether through surveys at what duration and by which respective agency. Information on the data collection durations, frequencies, etc., is not provided for various indicators in the ICR.

According to the TTLs, the data were shared with the Bank during the Bank's semi-annual missions and were comprehensively reflected in the Bank's aide-memoires and the Implementation Status and Supervision Reports (ISRs), which were shared regularly with the government counterparts. This facilitated project management and enabled timely decision making. However, considering that the project was completed in 15 years instead of in 6 years as planned, it appears that the M&E data was not so effective in avoiding or minimizing the lengthy delays and the issues with the inter-agency compliance of with the remedial action plans prepared at most of the nine restructurings.

While recognizing some weaknesses especially at design, such as inadequate formulation of some PDO-level indicators at the appraisal stage which were subsequently addressed, the quality of M&E overall is rated substantial.



## M&E Quality Rating

Substantial

## 10. Other Issues

### a. Safeguards

#### **Environmental Safeguards**

The project was classified as an environmental assessment category A, as per the guideline in the Environmental Assessment OP 4.01. The policy on Physical Cultural Resources (OP 4.11) was also triggered, though no physical cultural resource were identified. The policy on Projects on International Waterways (OP 7.50) was also triggered and riparian countries were notified. The policy on Natural Habitats (OP 4.04) was triggered under the AF due to the project potential impact on natural habitats.

As reported in the ICR (p. 26), all the project safeguards instruments were prepared in accordance with applicable national regulations and the World Bank's safeguards policies and were publicly disclosed in accordance with the policy requirements. During implementation, specific requirements of the Environmental and Social Management Plans (ESMPs) were included in the bidding documents to ensure the effective execution of the mitigation measures during construction. The ICR did not indicate any independent review of safeguards implementation. Environmental management, as well as occupational health and safety management, were consistent with international best practice, as confirmed during the visits of Bank Environmental Specialists (AF, p. 16). According to the ICR (p. 26), no serious environmental non-compliance occurred during the project implementation.

#### **Social Safeguards**

The project involved significant land acquisition impacts, thus triggering the Involuntary Resettlement safeguard policy (OP/BP 4.12). According to the ICR (p. 27), there were 1,736 project-affected persons and 40 relocated households. A Resettlement Policy Framework (RPF) and Resettlement Plans (RPs) for both the original credit and Additional Financing were developed. Also, at the outset, an Ethnic Minority Policy Framework was prepared. However, no ethnic minority people were identified to be living in the project area during the implementation.

The project complied with social safeguard policies. The independent monitoring assessments reflected that the relocated households at the resettlement sites were generally satisfied. A Grievance Redress Mechanism was established at the outset and functioned adequately during implementation. Households that participated in the Livelihood Restoration Program (LRP) positively improved their knowledge, skills and income. The Contractors followed the safeguard requirements to prevent any social risks caused by their workers to communities in the project area. A water pipeline section was damaged during the implementation of the DNC canal and raised a dispute via the Bank's Grievance Redress System but finally was resolved. An interim water pipeline was built to maintain water supply during the construction.



**b. Fiduciary Compliance**

The financial management (FM) risk at appraisal was identified as Substantial but became Moderate after mitigation measures were applied. The ICR (p. 77) mentioned that the key financial management covenants were complied with. The interim financial reports and unqualified audited financial statements were submitted on time with acceptable quality. According to the ICR (p. 28), FM was rated “Satisfactory.” Budget allocations, after initial delays in the first and second year of the project, were improved over time and were later made on time in sufficient amounts.

The ICR is not explicit on the fulfilment of some of the financial management aspects mentioned in the PAD (p. 19, 20), such as if the financial management manuals developed under Mekong Delta Transport Infrastructure Development Project (for Project Management Unit-Waterways) and the third Rural Transport Project (for Provincial Project Management Units) were adopted for the project. It is not clear if the following were undertaken: (i) greater disclosure including publication of contract award information as supported by the government decrees, and (ii) the rationalized thresholds for use of the less competitive methods.

**Procurement Compliance**

Procurement was carried out in accordance with the World Bank's procurement guidelines. Delays in procurement processing at the initial stage of project implementation occurred despite a prior agreement between the Borrower and IDA on the procurement methods (International Competitive bidding-ICB or national competitive bidding-NCB), on the consultants' selection methods, estimated costs, time frame, and prior review requirements for each contract financed by IDA in the first 18 months of the Project and were incorporated in the procurement plan (PAD p. 83) prior to the signing of the Credit by the GoV (PAD, p. 22). However, there were still delays in the approval of contracts due to the Government's internal processing. A total of 55 contracts under the original credit and 18 contracts under the Additional Financing were signed and implemented. The bidding processes were largely in compliance with the applicable version of the Bank's Procurement and Consultant Guidelines. The Governance, Transparency, and Anti-corruption Plan (GTAP) was adopted from the start of the project and maintained by the respective agencies. (ICR, p. 21) The World Bank's Integrity Vice Presidency (INT) Investigation, in two separate cases (June 2015 and February 2016) substantiated fraudulent and corrupt misconduct by four firms that were awarded different contract financed under the project (Restructuring Paper Report No- RES38216-para 16). The AF document (April 14, 2017) under Risk (p.19) stated that the INT conducted investigation as noted above. According to the ICR, at the end of the project, the residual project procurement risk after mitigation were reduced to a Moderate level, and the overall procurement performance was assessed as Moderately Satisfactory.

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

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**d. Other**

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**11. Ratings**



Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Moderately Satisfactory	Efficiency is rated Modest due to operational and administrative inefficiencies that resulted in a lengthy implementation period of 15 years.
Bank Performance	Satisfactory	Moderately Satisfactory	Shortcomings in quality at entry due to limited implementation readiness and M&E weaknesses at appraisal
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

## 12. Lessons

The ICR provided several lessons, of which three are presented here with some paraphrasing:

**Avoiding or minimizing delays requires the crucial collaboration among the project implementing agencies and managing entities.** The implementing agencies (PMU-W and the managing entities) and those responsible for approving investments and later taking over their operation and management (VIWA and provincial authorities) needed to collaborate from implementation start-up in order to enhance implementation success and the sustainability of the project outcomes. However, most of the delays at an early stage of NDTDP implementation were due to the lack of coordination and clear division of responsibilities between the PMU and VIWA, which led to the lengthened internal approval process. Eventually, the strong commitment and guidance from the Ministry of Transport played a key role in establishing such strong collaboration by assigning clear roles and responsibilities to each agency and by providing results-based management, frequent supervision, and guidance. This would help to promote the smooth transition to operating and managing the investments.

**Early budgeting and planning would help to ensure the timely and sufficient allocation of project funds, particularly counterpart funds for resettlement compensation.** Resettlement compensation for affected people is required for any infrastructure project in Vietnam, and in line with Government guidance on the use of ODA funding, the counterpart funds should be used to cover this cost. The delayed allocation of counterpart funds for land acquisition and resettlement compensation is one of the key issues that contributed to delays in construction works in many projects of the same nature. The budgeting and fund allocation in Vietnam, on the other hand, follows a certain process that can be cumbersome. Therefore, the early development and submission of the budget and implementation plan can help the implementation agencies be more proactive and effective in this process.

**Project success requires close monitoring and timely adjustments during project implementation.** The project had many components that faced long GoV approvals, GoV procurement processes, lack of counterpart funds for resettlement, landslides, and a pandemic. Success factors include close monitoring support, which was conducted every week and involved a



meeting every fortnight, especially in the later stages, in addition to the usual missions. This helped resolve the issues and ensure successful completion of this project. There is a need for the Bank to follow up very closely, coordinate with many agencies, collaborate and resolve issues with GoV leadership when needed, etc. For the landslides, the COVID-19 pandemic, and double-digit inflation, the Bank had to be very responsive to make changes as requested by the client.

### 13. Assessment Recommended?

No

### 14. Comments on Quality of ICR

The ICR is well written in a consolidated and logical manner. It covered all possible topics in sufficient detail. The Theory of Change is well presented and linked the activities to output to intermediate outcome to the PDO outcome, the mitigating actions in the event that the critical assumptions do not materialize should have been discussed. The ICR provided clear details under the Project Restructuring Details (Annex 5). There was a strong focus on providing quantitative evidence in the Efficacy section. Lessons learned were relevant and based on implementation experience.

Two weaknesses include the lack of a comprehensive discussion in one place (e.g., in the Efficiency section) of the reasons for the lengthy implementation delays. The provision of more sources and references for the indicator data collected (e.g., the observation frequency, duration, and timing) would have been useful. The economic analysis would have also benefited from greater clarity.

Overall, the ICR provided adequate accountability and lesson-learning from the project's implementation experience.

#### a. Quality of ICR Rating

Substantial