

**Validation Report**  
October 2019

# Viet Nam: Central Region Rural Water Supply and Sanitation Sector Project

Reference Number: PVR-622  
Project Number: 40364-013  
Loan Number: 2609



*Raising development impact through evaluation*

## ABBREVIATIONS

ADB	– Asian Development Bank
EIRR	– economic internal rate of return
FIRR	– financial internal rate of return
m <sup>3</sup>	– cubic meter
MARD	– Ministry of Agriculture and Rural Development
NCERWASS	– National Center for Rural and Clean Water and Environmental Sanitation
O&M	– operation and maintenance
PCR	– project completion report
PPMU	– provincial project management unit
RRP	– report and recommendation of the President
RWSS	– rural water supply and sanitation

## NOTE

In this report, "\$" refers to United States dollars.

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**PROJECT BASIC DATA**

<b>Project Number</b>	40364-013	<b>PCR Circulation Date</b>	3 September 2018	
<b>Loan Number</b>	2609	<b>PCR Validation Date</b>	Oct 2019	
<b>Project Name</b>	<b>Central Region Rural Water Supply and Sanitation Sector Project</b>			
<b>Sector and Subsector</b>	Water and other urban infrastructure and services	Urban policy, institutional and capacity development – Urban sanitation – Urban water supply		
<b>Strategic Agenda</b>	Environmentally sustainable growth			
<b>Safeguard Categories</b>	Environment		B	
	Involuntary resettlement		B	
	Indigenous peoples		A	
<b>Country</b>	Viet Nam		<b>Approved</b> (\$ million)	<b>Actual</b> (\$ million)
<b>ADB Financing</b> (\$ million)	<b>ADF: 0.00</b>	<b>Total Project Costs</b>	50.00	41.50
	<b>OCR: 45.00</b>	<b>Loan</b>	45.00	37.55
		<b>Borrower</b>	2.63	3.94
		<b>Beneficiaries</b>	2.37	0.00
		<b>Others</b>		
<b>Cofinancier</b>		<b>Total Cofinancing</b>		
<b>Approval Date</b>	17 Dec 2009	<b>Effectiveness Date</b>	3 May 2010	2 Jun 2010
<b>Signing Date</b>	2 Feb 2010	<b>Closing Date</b>	30 Jun 2017	30 Jun 2017
<b>Project Officers</b>	P. van Klaveren D. Connett	<b>Location</b> ADB headquarters ADB headquarters	<b>From</b> Jan 2009 Jan 2018	<b>To</b> Dec 2017 Sep 2018
<b>IED Review Director Team Leader</b>	N. Subramaniam, IESP T. Ueda, Principal Evaluation Specialist, IESP*			

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

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## I. PROJECT DESCRIPTION

### A. Rationale

1. In the mid-2000s, about 46% of the rural population of Viet Nam had access to clean water, and water was often not continuously available throughout the year. About 83% of the rural population had latrines, but only 48% of these were classified hygienic. Knowledge of individual sanitation and hygiene was poor.<sup>1</sup> The government prepared a national rural water supply and sanitation (RWSS) strategy a few years back to provide clean water supply and hygienic latrines to the entire rural population by 2020. During this period, according to the report and recommendation of the President (RRP), good hygienic practices was low, investment in RWSS was limited, and programs were fragmented due to little coordination among ministries and departments. The legislative environment was also weak with respect to regulations and guidelines for managing the sector. The Ministry of Agriculture and Rural Development (MARD) implements the RWSS strategy through its provincial departments, and has delegated the RWSS project execution to the National Center for Rural and Clean Water and Environmental Sanitation (NCERWASS). Other ministries and agencies also aim to improve RWSS and school sanitation and hygiene.

2. The Central Region Rural Water Supply and Sanitation Sector Project was designed as a sector investment project since the RWSS strategy had provided a sound basis for project implementation. While the RRP did not discuss the reason for selecting the sector modality, it seemed it was dictated by the project's complexity due to numerous relatively small-scale activities. These activities would have been difficult to design in detail during the project preparation process. MARD through NCERWASS was considered to have proven capacity to implement RWSS projects and, though not stated in the RRP, to deal with the fragmented nature of beneficiary communes, which would have made detailed project design difficult or impossible.

### B. Expected Impacts, Outcomes, and Outputs

3. The project's intended impact was improved health and living conditions for the rural population in the project provinces. This was expected to result in a decrease of 25% in the occurrence of water-related diseases.

4. The project's targeted outcome was access to clean water and hygienic sanitation for about 350,000 rural people. About 90% of the population was expected to have adopted good personal hygiene practices.

5. Project outputs included (i) 24 piped potable water supply systems, each able to supply at least 60 liters per capita per day to one or more communities ranging in size from about 1,000 to 35,000 residents; (ii) access to hygienic latrines at home, school, at commune health centers, and public places for 65,000 households; (iii) improved community hygiene awareness to ensure that benefits were sustained after project completion; and (iv) strengthened sector planning and implementation capacity. Water tariffs were expected to cover operation, maintenance, and depreciation costs, and would be less than 3% of average household income.<sup>2</sup>

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<sup>1</sup> ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Socialist Republic of Viet Nam for the Central Region Rural Water Supply and Sanitation Sector Project*. Manila.

<sup>2</sup> ADB. 2018. *Completion Report: Central Region Rural Water Supply and Sanitation Sector Project in Viet Nam*. Manila.

## C. Provision of Inputs

6. ADB's Board approved the loan on 17 December 2009 and became effective in June 2010, a month later than planned. The project was completed in March 2017, compared to planned completion in December 2016. The loan closed as planned in June 2017.

7. Total project cost at appraisal was estimated at \$50 million, including the \$45 million ADB loan. The \$2.6 million government share would cover resettlement and land compensation, 5% of the cost of the water supply infrastructure, and 10% of public latrine and drainage cost. Beneficiaries would finance \$2.4 million in cash and in kind.

8. A number of financial issues were experienced during implementation:

- (i) The RWSS strategy assumed low investment costs for both water supply and sanitation of less than 40% of standard unit costs.<sup>3</sup> While issues of this nature would normally be picked up during the detailed design of one or two subprojects, there is no evidence in the project appraisal or in the project completion report (PCR) that such designs were undertaken.
- (ii) Actual connection cost of batch 1 subproject water supplies was 42% higher than budgeted cost, in part due to local inflation which was rapid over the design and early implementation period, reaching 19% in 2011.
- (iii) Designating the loan amount in special drawing rights (SDR) reduced the loan value from \$45 million to \$41.5 million when the SDR's exchange rate fell by 14%. At project closing \$37.5 million had been disbursed.

9. At completion, the project cost was \$41.5 million or 83% of the appraisal estimate. However, no estimate was made of beneficiary contribution. The government contributed \$3.9 million, of which \$0.6 million could be allocated to resettlement costs and the balance could be designated as in-kind administration costs. This would imply limited financial recording by the implementing agencies as well as limited financial inputs to capital works.

10. Comparing planned and actual expenditure suggested that water supply costs were substantially greater than planned—\$25.6 million compared to \$21.8 million—while support to household sanitation was only \$2 million against the budgeted \$7 million due mainly to low approval percentage for revolving fund loans.

11. Consulting services at appraisal were estimated at 1,497 person-months, of which 285 person-months were for international specialists. No information was provided on the actual use of consultants. Recruitment was planned to be on a quality- and cost-based selection method, with 20% allocated to cost, a potentially cost-effective method. Actual inputs cost \$6.2 million compared to \$7.8 million budgeted. Expenditure for two areas—improving hygiene practices and sector planning—resulted at 17% of total project cost, indicating relatively high cost for such initiatives. This can be attributed to the sector project approach, requiring detailed design of every subproject.

12. The project was classified category B for involuntary resettlement. Resettlement impacts were anticipated in all land acquisition and resettlement plans, and completion reports were prepared for all subprojects. It received category B for environment, with assessments for all

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<sup>3</sup> The PCR stated that the government's strategy assumed investment costs of \$34 per capita for water supply, despite common unit prices of \$80–\$100, and \$20 per household for sanitation investment, despite common unit prices of \$100–\$150. Footnote 2, para. 22.

subprojects were carried out, and contracts had safety, occupational health, and environmental measures. Both the environment and public health improved in the subproject areas. The project was classified A for indigenous peoples. Its ethnic minority development framework required subprojects with 50% of the population belonging to an ethnic minority to have ethnic minority development plans. Since all subprojects' ethnic minority groups were less than 50%, all activities were incorporated instead in the subproject implementation. All subprojects' indigenous peoples had access to project benefits and avoided adverse impacts. However, only the Le Thuy subproject in Thanh Hoa Province did not complete the superstructure of its latrine.<sup>4</sup> It would have benefited ADB for future design of similar projects if the PCR elaborated how to deal better with indigenous peoples issues in the country.

#### **D. Implementation Arrangements**

13. Implementation arrangements were as envisaged at appraisal. A central project management unit was established within NCERWASS and served as the executing agency. The provincial Departments of Agriculture and Rural Development set up provincial project management units (PPMUs). Viet Nam women's union committees managed the sanitation revolving funds. At the commune level, water and sanitation committees were established and health and sanitation promoters were appointed to ensure community participation in project implementation and hygiene awareness activities. The health and sanitation promoters were considered to be a unique feature of the project,<sup>5</sup> and more than 50% of the 584 appointees were women

14. Most covenants were fully met. Few cases that were not met included a case in A Tieng in Quang Nam Province, which did not have tariff rates high enough for cost recovery at project closing.<sup>6</sup> The Independent Evaluation Department (IED) noted, however, that there is discrepancy between the covenant compliance assessment and some details in the financial and economic assessment does not confirm this, particularly on subprojects' standings on the coverage of their operation and maintenance (O&M) costs in 2017. There were subprojects with negative financial internal rates of return (FIRR), when capital costs were accounted for (negative cases were three out of six in batch 1 towns, and one out of eight in batch 2). Differing from the financial analysis, the covenant assessment indicated that fee collection sufficient to cover O&M was variable between subprojects and was classed partly complied. Although the water and sanitation commune committees functioned until project completion, some closed while others were integrated into the women's union committees.

## **II. EVALUATION OF PERFORMANCE AND RATINGS**

### **A. Relevance of Design and Formulation**

15. The PCR rated the project relevant and the validation has a similar view. It indicated that the project was aligned with Viet Nam's National Rural Water Supply and Sanitation Strategy 2010 and ADB's country strategy and program, 2007–2010. The program identified poor rural communities' lack of access to infrastructure as a key constraint to reducing poverty. Water supply was the major planned project investment, comprising 57% of project investment costs, excluding consulting.

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<sup>4</sup> Footnote 2, Appendix 10, para. 11.

<sup>5</sup> Footnote 2, para. 15.

<sup>6</sup> Footnote 2, Appendix 9, Schedule 5, para. 18.

By completion this increased to 84%, suggesting that other investment costs, such as latrine construction, workshops, and community support, were allocated less than the appraisal.

16. As noted above and subsequently under efficiency discussion, the cost estimate could have been done more carefully, as the actual construction cost of batch 1 subproject water supplies turned out to be 42% higher than budgeted cost. This was significantly beyond the usual risk hedge through the provision of physical and price contingency in the budget. The PCR justified that the revised targets were commensurate with the intended impact and resources allocated, which was discussed and rated as part of the effectiveness assessment.

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

17. The PCR rated the project less than effective and the validation holds a similar rating. A total of around 190,000 people in 48,000 households had been provided with piped water by 2017,<sup>7</sup> through 14 systems supplying 33 communes. The number relying on dug or drilled wells in project communes had fallen from around 71,000 to 31,000.<sup>8</sup> System capacity was estimated at around 256,000 people. All connections were reported to be metered, with supply at completion averaging between 36 and 110 liters per capita per day.<sup>9</sup> Average water tariff was a low 0.6% of household income on average and, thus, far below the 3% maximum indicated at appraisal. All 14 water plants were reported to be operating profitably, with ratios of operational cost to revenue ranging from 0.44 to 0.93.

18. While the performance of 10 out of 14 plants was reported to be satisfactory, it was noted that only 54% of the 350,000 targeted population at appraisal was supplied. Key reasons for this were underestimated subproject costs at appraisal (and presumably in the feasibility studies of the six core subprojects), combined with unexpectedly high rates of domestic and international inflation. The change in scope was agreed in the midterm review, but was never formally approved.

19. Progress in sanitation development was less than planned. Out of a target of 65,000 households, 60 school and 60 public latrines, the project constructed a total of 52 new school and public latrines and 4,790 substructures of private latrines to poor and near poor households. A few households failed to construct the required superstructures, (since project financing only constructed the substructures, such as septic tanks) notably in the Le Thuy subproject in Thanh Hoa province. Sanitation revolving funds were set up in five of the six provinces (with the sixth, Quang Nam, choosing to use Social Policy Bank as the lending institution). The total number of houses in project communes with hygienic toilets was reported to have increased over the project period from 27,800 to 52,400 (91.5% of households), but it was not clear how many of the increased number apart from those for poor and near poor households were supported by the project either through direct support or through revolving funds. Given the low project expenditure on sanitation, it was likely that households fully or large paid for many constructed toilets. However, actual beneficiary investment was zero in the PCR, which made it difficult to confirm this.

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<sup>7</sup> The PCR reported the number of household connections at 45,000. However, the government's PCR reported 48,000.

<sup>8</sup> Footnote 2, Appendix 7, Table 7.1.

<sup>9</sup> The lower consumption data were from the batch 2 subprojects that had only completed 1 year of operation when assessed. Future increase in consumption is probably due to accessibility and the breakdown of tube wells. Footnote 2, Appendix 7, Table A7.3.

20. Output 3 on improved hygiene practices and output 4 on strengthened sector planning and implementation capacity were considered to have been largely achieved. The validation, however, notes that expenditure on each component was far below budget, though some relevant costs may be included in other cost categories such as project management support. Monitoring and evaluation data from commune health centers indicated a reduction in the incidence of women having waterborne diseases from 18.9% to 8.5%, representing a 45% reduction.

21. The project complied with the standards ADB set at approval and with the national laws and regulations. The environmental and social risks identified were appraised and managed accordingly. The initial environment examinations prepared in 2009 identified no impacts to water resources, ecological resources, or physical and cultural heritage. Displacement was mainly economic and not physical. Consideration and impacts to indigenous peoples were greatly considered during the initial environmental examination and in the development of an ethnic minority development plan.<sup>10</sup>

22. The PCR candidly admitted that there was a breach of ADB guideline for commencement of compensating five subprojects in the first batch prior to approval of the updated resettlement plans. The PCR detailed lessons learned from this experience. Closer collaboration and timely communication among stakeholders (including ADB) could have resolved land acquisition issues more efficiently to cover for lack of experience of PPMU staff in charge of resettlement.

23. The PCR cited that a comprehensive gender action plan was included in project design. Targets were set for the participation of women in all activities, including decision making and the nomination of gender focal persons in PPMUs. As of March 2017, 12 of the 15 planned actions were completed, two were partially completed, and one was not completed. All four targets were achieved. In total, 6,800 water connections and 4,800 toilet substructures were provided free to households where women were the only income providers. All subproject water and sanitation commune committees included more than 50% of women, thus, exceeding the appraisal target of 40%. It was noted that both water supply and sanitation improvement generally brought higher beneficial impact on women than men. In water supply, there was often a reduction in women's (and children's) workload due to the elimination of the need to collect water and provide clean water for drinking or cooking. In sanitation, women also benefited disproportionately from improved toilet facilities.

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

24. The PCR rated the project efficient and the validation is of the same view. During project design, economic analyses were undertaken for the six core subprojects, one in each project province. The economic internal rates of return (EIRRs) for the pilot subprojects ranged from 13.4% in Quang Nam to 23.0% in Nghe An, indicating that all six subprojects were economically viable. The economic analysis in the RRP was limited to two paragraphs with details in its Supplementary Appendix (spreadsheets supporting the economic analysis of the six core subprojects were not available).<sup>11</sup>

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<sup>10</sup> ADB (Independent Evaluation Department). 2019. Project Safeguard Assessment: Central Region Rural Water Supply and Sanitation Project in Viet Nam. 10 January (internal).

<sup>11</sup> The basis for the economic value of water stated in the RRP's Supplementary Appendix: "...among the existing sources of water, tube wells account for 15%; shallow wells, 64%; river, 15%; rain water 2%; and water from vendor, 2%. The costs include time spent in collecting water and cash expenditure for treating water before use. Household [cost] for water ranged from D8,047 per m<sup>3</sup> to D11,311 per m<sup>3</sup> [or an average of \$0.53/m<sup>3</sup>]. The economic cost per household for non-incremental water depends on the time spent in water collection, cost of water storage, boiling

25. This validation questions the value of time, since water was mainly collected by women and children, and also the wage rate, which was equivalent to \$0.10/day must have been mistyped. The time taken can also be questioned, given that almost 80% of households take water from tube wells and shallow wells, which would likely be at or close to the house. This is particularly relevant to PCR's calculations of the economic value of water, particularly given that most water is normally collected by women and children, for whom the economic value of time is usually less than for men.

26. The PCR used much the same approach but increased the estimated economic bulk water price to between D24,800/m<sup>3</sup> in Thanh Hoa Province's Hau Loc system and D42,300/m<sup>3</sup> in Quang Nam Province's Tay Giang system. Average cost to households was around D30,000/m<sup>3</sup> (or about \$1.32/m<sup>3</sup> at the PCR's exchange rate of D22,755/\$1). This validation considers that these costs have been overestimated and are on average 150% above the appraisal estimate expressed in US dollars. Other studies in Viet Nam have placed the economic value of water at less than \$0.50, though increasing over time.

27. On the whole, it is considered that the economic cost of water was overestimated in the PCR—that is, the average economic value of piped water should be around D15,000/m<sup>3</sup> at most or half the PCR's estimate level. This is higher than the level used in a number of feasibility studies in northern and central Viet Nam in 2017, which estimated an economic value of water of D8,500 in 2020 rising to almost D14,000 in 2030. The Dien Chau system in Nghe An was examined and the worksheet recalculated to test the impact of such a change in the economic cost of water. The PCR estimated EIRR at 21.3%, slightly below the average level of 23.1%. Recalculating Dien Chau's EIRR at an estimated water cost of half PCR's level of D27,300/m<sup>3</sup> (\$1.20/m<sup>3</sup>) reduced EIRR to 13.3%. This was still a reasonable level for water supply projects, particularly following ADB's decision to reduce the economic opportunity cost<sup>12</sup> of capital to either 9% or 6% for general or social sector projects.<sup>13</sup>

28. Reduction in working days lost due to water-related health problems is the other major benefit attributed to network distribution of potable water. In Nghe An case, the added health benefit amounted to around \$6.80 per person or about \$26 per household, also a high but not exceptional level. Other systems generally had much lower health benefits with Hau Loc in Thanh Hoa only recording \$0.24 per person. It is noted that this scheme had one of the lowest EIRRs of all the subprojects at 16.3%. Halving the economic cost of water reduced EIRR to 12%, an acceptable level. In general, health benefits appear reasonable.

29. On the whole, it is concluded that despite the likely overestimation of the cost of existing water supplies, project's EIRR results indicate that the project remains economically viable. In addition, the loan closed at the original closing date, without any extension required. Consequently, this validation rates the project efficient.

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and filtering. Time spent in water collection is based on the results of the socio-economic survey and varies from 3 to 6 hours per household per day. The value of time is estimated as 80% of the average wage rate of D1,712 per day." Footnote 1, Appendix J, para. 17.

<sup>12</sup> Another point in question for PCR's economic analysis was the use of a shadow exchange rate factor (SERF) of 1.31 to convert foreign costs to local, thus reducing economic cost and increasing EIRR. A more realistic estimate of SERF used in other economic assessments during that period was 1.05, thus, increasing economic cost and marginally reducing EIRR. It is noted that at appraisal, SERF was 1.01. It also applied a shadow wage rate factor of 0.8, compared to 0.7 at completion, the latter also marginally increasing EIRR. The PCR did not explain why it used these factors.

<sup>13</sup> ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

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

30. The PCR rated the project likely sustainable. Commune water supplies are reported to mainly be trading profitably, while sanitation revolving funds managed by the Viet Nam Women's Union branches have increased their clientele since project completion. The key to long-term sustainability is the ability of the water supply companies to generate revenues sufficient to cover depreciation and O&M; otherwise, new investment will be required at the end of the assets' life, which would need provincial budgets or another project to cover. Operators have demonstrated during initial operation period that they have the technical capacity to operate and maintain the project facilities. Sustainability is also driven by a decentralized management approach; community involvement; strong information, education, and communication campaigns; and affordability. Women empowerment through health and sanitation promoters, water and sanitation commune committee participation, and the women's union management will help sustain local capacity development.

31. A total of 52 school and public toilets were constructed with separate compartments for male and female use. Just over half specified maintenance budgets, though particularly in schools, issues such as low-quality workmanship, poor quality fittings, and damage or theft by students were common. Budgets for maintenance and repairs were considered inadequate, and in several cases, handwashing facilities could no longer be used. While school and public toilets are valuable, ADB-supported projects should ensure that adequate O&M systems are implemented.

32. The FIRRs at completion ranged from  $-3.4\%$  to  $+3.5\%$  per subproject. Three subprojects of the first batch had negative FIRRs mainly due to lower tariff, lower billed volumes, and lower number of connected households. For the second batch, only one of seven in Nghe An–Yen Thanh had a negative FIRR. This brings the project rating to likely sustainable. Four out of 13 subprojects' water supply operations needed government subsidy to keep them running.<sup>14</sup>

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

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

33. The PCR rated the development impact satisfactory. The water supply component achieved substantive impact, with adequate supplies of potable water delivered to commune households and businesses. The project aimed to reduce waterborne disease incidence by 25% by 2020. The incidence declined by 47% at the end of the project, though IED was not able to verify the detail of the data. The PCR reported that use of soap for handwashing has increased from about 40% of the population to 70%. However, this is lower than the design and monitoring framework's original outcome target of 90% of the population adopting proper personal hygiene practices.

34. The sanitation component had limited impact due to the relatively small number of latrines constructed. The low-level of project expenditure on components 3 and 4 related to workshop and training, and on providing community funds for information, education, and communication would also suggest that impact has been less than anticipated. On the whole, this validation assesses the project's development impact less than satisfactory. It had some positive development impacts on water supply, but other components did not fare very well against the original targets.

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<sup>14</sup> Footnote 2, Appendix 8.

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

35. The PCR rated the performance of the borrower and executing agency satisfactory. This validation assesses the performance of the borrower as satisfactory. However, as common in Viet Nam, start-up delays were experienced, causing problems later in the project period, particularly when the government imposed project disbursement limits.<sup>15</sup> Executing agency performance is also assessed satisfactory, since the project was completed on time despite initial delays.

## **C. Performance of the Asian Development Bank**

36. The PCR rated ADB's performance less than satisfactory and the validation has a similar view. The reason for downrating was the inadequate analysis of the core subproject feasibility studies that the appraisal failed to identify, leading ultimately to a near halving of project outputs. While the performance of the consultants was classified unsatisfactory during implementation,<sup>16</sup> this on its own is insufficient in the view of validation to downrate ADB performance. The various review missions conducted should have assisted the implementing agency and PPMUs to complete the project outputs with an adequate standard and on time. A total of 10 review missions were completed, regularly spaced over the implementation period, several of which were substantial, with up to 36 person-days. However, visit or consultation duration of 1 to 2 days per province were short, especially for those subprojects that faced implementation delays and challenges including safeguard concerns. These factors combined, the validation rates ADB performance less than satisfactory.

## **D. Others**

37. Delays were experienced at the start-up stage, which ADB projects in the water and sanitation sector have previously experienced and was known at the time of preparation. For example, the project implementation assistance consultant was not mobilized until 13 months after loan effectiveness, a common problem in ADB's Vietnamese projects at that time. It is, therefore, commendable that the project was completed on time.

38. ADB review missions reported variable project performance ratings with actual or potential problems alternating with "on track" assessments. From January to September 2014, a review mission reported the project as on track. However, the project consultants' midterm review report questioned the progress of construction of seven piped water supply systems.<sup>17</sup> Of these, four were stopped due to "non-compliance with the loan agreement and the project's resettlement framework," and the remainder experienced difficulties due to "insufficient labor and equipment" and storm-related issues. The difference between the ADB progress report and the consultants' midterm review raises questions about the accuracy of reporting.

39. The implementing agency prepared a detailed completion report that was more accurate and provided much useful material for the PCR and also for validation.

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<sup>15</sup> Footnote 2, para. 26.

<sup>16</sup> Footnote 2, para. 33.

<sup>17</sup> National Center for Rural Water Supply and Environmental Sanitation. 2014. *Midterm Review Report: Central Region Rural Water Supply and Sanitation Sector Project in Vietnam*. Ha Noi.

#### IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

##### A. Overall Assessment and Ratings

40. The validation is of the same view with the PCR in rating the project successful, on the basis that it was relevant, less than effective, efficient, and likely sustainable. The table summarizes these ratings.

**Table: Overall Ratings**

Validation Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Relevant	Relevant	
Effectiveness	Less than effective	Less than effective	
Efficiency	Efficient	Efficient	
Sustainability	Likely sustainable	Likely sustainable	
<b>Overall assessment</b>	<b>Successful</b>	<b>Successful</b>	
Preliminary assessment of impact	Satisfactory	Less than satisfactory	The project had some positive development impacts on water supply, but other components did not fare very well against the original targets.
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Less than satisfactory	Less than satisfactory	
Quality of PCR		Satisfactory	Para. 47.

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report.  
Source: ADB, IED.

##### B. Lessons

41. **Project-level lessons.** These include (i) the need for adequate feasibility assessment during project design; (ii) the need for experienced design consultants, construction supervisors, and competent contractors; (iii) the need for preparation of an O&M plan for each water supply system, including annual budget and ensuring that tariffs are sufficient to cover both O&M and depreciation; (iv) collecting and testing water samples and disseminating test results promoted sustainability, where practiced; and (v) systems for promoting the sustainability of public and school latrines are required to ensure sustainability.

42. **Sector-level lessons.** WSS projects are often intended to include a range of outputs, in this case including water supply, domestic and school sanitation, and training and capacity building. While all outputs were needed, other outputs such as sanitation systems often did not perform and also those relating to water supply systems. More attention is consequently needed in design, and in many cases, the selection of a more specialized set of objectives and

components. Households with piped water connection will often seek to develop septic tank systems, and support for on-site sanitation development (including choice of technology) needs to follow closely behind water supply improvement.

43. **Results framework and methodology-level lessons.** As discussed in earlier sections, the economic value of existing water supplies is the critical factor in determining project economic performance. The PCR's analysis unclear as well as the estimated value of water was inadequately defined. At the least, analysis needs to be undertaken using realistic time savings resulting from reticulated water for women and children, and the basis of valuing time should be outlined.

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

44. The PCR made a number of recommendations. These include:

- (i) The need for ongoing monitoring and support of the Quang Nam water operations. However, the PCR could have elaborated more clearly on this, as there are patchy information in Appendix 10 on lower tariff and underachievement of superstructure for latrines.
- (ii) The introduction and enforcement of local regulatory frameworks for water and sanitation were not project outputs, but could be considered in future similar projects.
- (iii) For urban projects implemented by provincial governments in Viet Nam, project duration should be 7–8 years. However, the validation would suggest that since provided desirable pre-project activities were completed before loan effectiveness (e.g., consultant appointment, detailed core subproject design), a shorter period of 4-5 years would be adequate.
- (iv) In line with item (iii) above, advance recruitment of the project implementation assistance consultant should commence immediately after the government approves the feasibility study report to reduce start-up delays.

45. In general, additional assistance is recommended. A follow-up project has been requested by NCERWASS as well as each province. Both demand and development needs remain strong. Viet Nam will become ineligible to receive ADB concessional lending in January 2019, but even with new lending terms, MARD anticipates that the subprojects will remain economically and financially viable, with capacity development support in the financial projection and policy dialogue in tariff setting.

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

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

46. ADB has already undertaken the design of follow-on rural water supply projects in Ha Tinh province, though they did not proceed due to fiscal limitations. If in future, central region water supply projects are considered for funding, it is suggested that the subprojects under the project should be reviewed and key lessons carried forward to the design of the new project.

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

47. The PCR's quality is rated satisfactory. It is detailed and comprehensive, providing a useful overview of project experience. It accepts the weakness of project design, where the core subproject feasibility studies were found to be inadequate during implementation. Its main

weakness is its weak financial and economic analysis. As mentioned, economic analysis appears to have been optimistic in terms of the economic value of treated water.

**C. Data Sources for Validation**

48. Data sources for this validation were the PCR, the RRP, the midterm review of the project implementation consultants, and IED's project safeguard assessment. The supplementary appendixes of the RRP were reviewed and in particular the appendixes on the financial and economic analyses.

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

49. Follow-up by IED is not recommended.