Validation Report
February 2022

Viet Nam: Productive Rural Infrastructure Sector Project in the Central Highlands

Reference Number: PVR-829
Project Number: 40238-023
Loan Number: 3032

Independent Evaluation ADB

Raising development impact through evaluation

ABBREVIATIONS

ADB	–	Asian Development Bank
APMB	–	Agricultural Projects Management Board
CHP	–	Central Highlands Province
CPMU	–	central project management unit
DARD	–	Department of Agriculture and Rural Development
DMF	–	design and monitoring framework
EIRR	–	economic internal rate of return
GAP	–	gender action plan
IMC	–	irrigation management company
MARD	–	Ministry of Agriculture and Rural Development
ODA	–	official development assistance
O&M	–	operation and maintenance
PCR	–	project completion report
PPC	–	Provincial People's Committee
PPER	–	project performance evaluation report
PPMU	–	provincial project management unit
PRI	–	productive rural infrastructure
t/ha	–	tons per hectare
VOC	–	vehicle operating cost

NOTE

In this report, "$" refers to United States dollars and "VND" refers to Vietnamese Dong.

Director General	Emmanuel Jimenez, Independent Evaluation Department (IED)
Deputy Director General	Sona Shrestha (IED)
Director	Nathan Subramaniam, Sector and Project Division (IESP)
Team Leader	Shimako Takahashi, Evaluation Specialist (IESP)

The guidelines formally adopted by the Independent Evaluation Department (IED) on avoiding conflict of interest in its independent evaluations were observed in the preparation of this report. To the knowledge of IED management, there were no conflicts of interest of the persons preparing, reviewing, or approving this report. The final ratings are the ratings of IED and may or may not coincide with those originally proposed by the consultants engaged for this report.

In preparing any evaluation report, or by making any designation of or reference to a particular territory or geographic area in this document, IED does not intend to make any judgments as to the legal or other status of any territory or area.

PROJECT BASIC DATA

Project number	40238-023	**PCR circulation date**		28 Jul 2021
Loan number	3032	**PCR validation date**		Feb 2022
Project name	**Productive Rural Infrastructure Sector Project in the Central Highlands**			
Sector and subsector	Agriculture, natural resources and rural development Transport	Agricultural policy, institutional and capacity development Irrigation Road transport (non-urban)		
Strategic agenda	Environmentally sustainable growth Inclusive economic growth			
Safeguard categories	Environment		B	
	Involuntary resettlement		B	
	Indigenous peoples		B	
Country	Viet Nam		**Approved** ($ million)	**Actual** ($ million)
ADB financing ($ million)	**ADF:** 00.00	**Total project costs**	87.58	86.90
	OCR: 80.00	**Loan**	80.00	72.24
		Borrower	7.58	14.66
		Beneficiaries	0.00	0.00
		Others	0.00	0.00
Cofinancier	–	**Total cofinancing**	0.00	0.00
Approval date	25 Sep 2013	**Effectiveness date**	14 Jan 2014[a]	17 Jan 2014
Signing date	16 Oct 2013	**Loan closing date** **Financial closing date**	30 Jun 2019 –	30 Jun 2020 28 Apr 2021
Project officers		**Location**	**From**	**To**
	D. Salter	ADB eadquarters	Jan 2014	Apr 2015
	H. Le Phong	Viet Nam Resident Mission	Apr 2015	Feb 2019
	V. Ngoc Chau	Viet Nam Resident Mission	Feb 2019	Jun 2020
IED review				
Director	N. Subramaniam, IESP			
Team leader	S. Takahashi, IESP[b]			

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.

[a] Based on the PCR, planned effectiveness was 90 days after the date of loan agreement (PCR Basic Data, page i).

[b] Team members: G. Kilroy (quality reviewer), F. De Guzman (Senior Evaluation Officer), T. Hopkins and C. Mason (consultants).

I. PROJECT DESCRIPTION

A. Rationale

1. In Viet Nam's Central Highland Provinces (CHPs),[1] about 71% of the population lived in rural areas and depended on farming as the primary income source. In 2010, the average poverty rate of the provinces was 22.2%, almost twice the national poverty rate of 10.7%. Poverty rates in a few remote areas of the CHP were around 70%–80%. Ethnic minority people represented 21%–53% of the provincial population. Contributing factors included difficult terrain and poor roads, lack of commercial opportunities, poor access to social services, and scarce arable lands. Also, women from ethnic minorities had fewer economic opportunities. The situation was further compounded by the deterioration of productive rural infrastructure (PRI) due to obsolescence,

[1] Dak Lak, Dak Nong, Gia Lai, Kon Tum and Lam Dong provinces.

limited funding availability for new investments, and inadequate capacity to manage available assets. At project preparation period, less than 11% of arable lands in CHP had properly functioning irrigation facilities.

2. The Productive Rural Infrastructure Sector Project in the Central Highlands[2] (the project) aimed to rehabilitate and upgrade existing and deteriorated rural infrastructure, irrigation structures, and associated rural roads. It sought to create critical masses of PRI in identified areas with potentials to increase agricultural outputs, promote crop diversification, and increase production efficiency. Improvements were to focus on repairing and strengthening of small- and medium-sized reservoirs and adjacent irrigation schemes and upgrading rural roads. Moreover, the improved PRI was to enable communities to have improved access to markets, employment opportunities, and social services. The project also envisioned reducing rural production and marketing costs.

B. Expected Impacts, Outcomes, and Outputs

3. The expected project impact was increased rural incomes and sustained livelihoods in the CHPs. The envisaged project outcome was improved rural and agricultural productivity with improved access to and use of water, materials, knowledge, production inputs and markets.[3] The project had three expected outputs: (i) improved productive rural infrastructure; (ii) enhanced capacity to develop, manage, and use productive rural infrastructure, and (iii) efficient project management. Output indicators and targets for infrastructure and training[4] identified in the design and monitoring framework (DMF) including the completion dates for feasibility studies and construction works were modified after the midterm review.

C. Provision of Inputs

4. The project was approved in September 2013. The loan was signed in October 2013 and became effective in January 2014. The project was completed in June 2020, which was a year later than planned and closed financially in April 2021. The 11 subprojects were completed after a year of extension. The project completion report (PCR) indicated that implementation delays were mainly due to the time required to complete detailed engineering design and subproject investment reports for obtaining approvals to issue bidding documents.[5] Delays were also attributed to the limitations posed by the government on disbursements from official development assistance (ODA) loans that resulted in slow progress in the civil works (PCR, para. 16).

5. At appraisal, the total project costs were estimated at $87.58 million, of which 91% was to be financed by the Asian Development Bank (ADB) and the balance by the borrower. The total project cost was slightly lower at completion by 0.8%, with 83% contribution by ADB and the rest

[2] ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Loan for Socialist Republic of Viet Nam Productive Rural Infrastructure Sector Project in the Central Highlands.* Manila.

[3] The outcome statement was truncated to improved rural and agricultural productivity in the central highland provinces (PCR, para. 2).

[4] The following output indicators were adjusted at the midterm review. First, the target area of irrigation rehabilitated was reduced from 18,500 ha to 17,500 ha with an associated change in cropped area for rice coffee, pepper and cash crops. Second, project management training courses reduced from 50 to 20 with women trainees reduced from 35% to 20%. Third, training in development and management of PRI increased from 75 staff to 263 staff from MARD, IMCs, and CHP partners. Fourth, training in the optimal use of upgraded PRI decreased from 210 courses with 6,500 PRI users to 59 courses for 2,950 participants. Fifth, special studies, pilots and demonstration conducted on improved PRI reduced from four to three. Sixth, completion dates for feasibility studies and construction works were extended from the original estimates by two years and three years (PCR, Appendix 1).

[5] ADB. 2021. *Completion Report: Productive Rural Infrastructure Sector Project in the Central Highlands.* Manila.

by the borrower. Likewise, the total infrastructure costs were higher than the appraisal amount in view of the completion of 23 against the targeted 15 subprojects.[6] On capacity building, spending was significantly reduced from $2.01 million to $0.73 million, i.e., by more than half of the allocated amount. This drop resulted in reduced training activities under output 2 (para. 18). The PCR could have expounded on this reduction in the expenditure originally earmarked for capacity building since this subsequently affected the achievement of the targeted number of trainings (para. 22).

6. About 360 person-months of consulting services were planned, although the breakdown into international and domestic categories were not provided. At completion, the total actual consulting service provision was 416.6 person-months. The PCR noted that this deviation from appraisal was due to additional inputs of consulting services resulting from the loan extension.

7. The project was classified category B for environment, involuntary resettlement, and indigenous peoples. All necessary frameworks, documents, and monitoring processes were put in place to comply with the ADB Safeguards Policy Statement 2009.[7] Initial environmental examinations (IEEs) and an environmental assessment and review framework were approved for the first three sample subprojects. These provided a template for future subprojects' IEEs and the monitoring of environmental management plans. Subproject selection criteria included the need to ensure that only subprojects categorized B or C for environment were eligible for project financing. The environmental management plans were incorporated into bidding documents and trainings provided to ensure satisfactory implementation. No outstanding environmental issues remained when the subprojects were handed over to respective institutions.

8. Land acquisition for all subprojects totaled 862,508 square meters with 2,976 households affected. Planned land acquisition was estimated at 870,509 square meters.[8] All social safeguard documents were disclosed in Vietnamese language and all affected households received compensation, as specified in the respective resettlement plans. Compensation and resettlement activities for the 23 subprojects required the payment of VND 51.43 billion to affected households.

9. The project resettlement and ethnic minority development framework was prepared for all subprojects. Complaints (predominantly about pending land ownership verification and entitlements) were all resolved at the commune level. There were no unresolved issues at project completion.

10. The project was classified effective gender mainstreaming. A gender action plan (GAP) was developed during project preparation and was revised at the midterm review in 2017. Revisions were made to the gender targets as initial figures were considered unrealistic, such as those concerning gender balance among employees in the targeted government institutions (PCR, footnote 18 and Appendix 7, para.7).

D. Implementation Arrangements

11. The Ministry of Agriculture and Rural Development (MARD) was the executing agency, and the Provincial Peoples Committees (PPCs) of the individual provinces (footnote 1) were the

[6] The three representative subprojects were selected with extensive local stakeholder consultations on the criteria including (i) EIRR greater than 12% (ii) detailed O&M funding provisions (iii) no significant impacts on ethnic minorities and the environment. Subject to further local consultation at implementation, 20 subprojects were added in the delivery of 23 subprojects.

[7] ADB. 2009. *Safeguard Policy Statement*. Manila.

[8] Government of Viet Nam, Ministry of Agriculture and Rural Development. 2020. *Social Monitoring Report for Productive Rural Infrastructure Sector Project in the Central Highlands Provinces (Loan 3032)*. Ha Noi.

implementing agencies. MARD assigned the responsibility for the overall implementation management to the Agricultural Project Management Board (APMB). In the provinces, PPCs assigned this responsibility to the respective units of the Department of Agriculture and Rural Developments (DARD). A central project management unit (CPMU) was established within APMB. In the provinces, provincial project management units (PPMUs) were established under provincial DARD to coordinate implementation in the provinces. At commune level, the project coordinated closely with local authorities, with the local PPC acting as the main liaison point. Consultants were recruited to support the CPMU and PPMUs during implementation. The implementation arrangements were appropriate. These agencies had the experience of working for an ADB's sector project in the target provinces.[9]

12. All eligible subprojects were identified at appraisal while other eligible subprojects were subjected to prioritization and required detailed engineering designs and bidding processes. The PCR noted that cumbersome engineering design approval procedures delayed the awarding of contracts (PCR, para. 21).

13. The loan agreement had 24 covenants.[10] All covenants were fully complied with. There was no covenant that was modified, suspended, or waived. Annual audits of financial statements were completed.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

14. The PCR rated the project relevant. It indicated that the project was aligned with the Government of Viet Nam's National Target Program for New Rural Development 2010–2020, [11] the National Water Resources Strategy 2006–2020,[12] and the activities in the socioeconomic development plans of the participating provinces. These plans and policies highlighted the need to prioritize upgrading the PRI to improve irrigation, which would lead to doubling paddy cropping, expanding the area of irrigated cash crops, and improving rural infrastructure. The project was consistent with ADB's Country Partnership Strategy for Viet Nam 2012–2015, [13] which emphasized inclusive growth, enhancing economic efficiency, and environmental sustainability with agriculture and natural resources as a priority sector. This validation holds a similar view regarding relevance at the strategic level. The project design's relevance would have been further enhanced had the project devoted greater attention to climate change issues, as mentioned in report and recommendation of the President, which formed a strategic pillar of ADB's latest Country Partnership Strategy.[14]

15. The project was properly designed and formulated as it covered both investment in rural roads and irrigation structures. It also included capacity enhancement activities of the local beneficiaries to manage and use the PRI under the project. These were critical in improving rural income and agricultural productivity.

---

[9] ADB. 2018. *Project Completion Report: Forests for Livelihood Improvement in the Central Highlands Sector Project in Viet Nam.* Manila.
[10] ADB. 2013. *Loan Agreement for Productive Rural Infrastructure Sector Project in the Central Highlands*. Manila.
[11] Government of Viet Nam. Prime Minister. 2010. *Decision No.800/QD-TTg dated 4 June 2010 Approving National Target Program for New Rural Development 2010-2020.* Ha Noi.
[12] Government of Viet Nam. Prime Minister. 2006. *Decision No.81/2006/QD-TTg dated 14 April 2006 Promongulating the National Water Resources Strategy towards the Year 2020.* Ha Noi.
[13] ADB. 2012. *Country Partnership Strategy: Viet Nam, 2012–2015*. Manila.
[14] ADB. 2016. *Country Partnership Strategy: Viet Nam, 2016–2020*. Manila.

16. Remote rural areas of the CHP suffered from low income and livelihood due to a lack of irrigation facilities, limited access to productive agricultural lands and roads, and low levels of education. The project prioritized subprojects with higher poverty rates than the CHP average. Project activities were undertaken in 23 subprojects across 5 CHPs. Also, the project covered women and ethnic minorities to improve their agricultural production capacity and provide greater employment opportunities.

17. The sector loan modality design was appropriate as the project was to support increasing farming incomes across different provinces in the CHP. The project was reasonably flexible, allowing the provincial governments to select and implement subprojects during implementation.

18. The DMF had minor revisions during the midterm review (para. 3),[15] which included modifying the target crop areas to better reflect the subprojects' selected and accompanying changes in crop mix. The revision included minor adjustments to the number of training activities and the participation of women to better reflect gender balances in counterpart institutions. The DMF could have been strengthened by delving into the capacity building element with more suitable indicators.[16] Project management targets were adjusted to reflect variations in output delivery dates of subprojects affected by implementation delays.

19. The project design was appropriate for achieving its intended outcomes as it involved the farmers to identify more subprojects during implementation. The project was well-aligned with the government's and ADB's thrust and strategies in the sector. Thus, this validation assesses the project relevant.

B. Effectiveness in Achieving Project Outcome and Outputs

20. The PCR rated the project effective. It indicated that the project achieved its outcome of improved rural and agricultural productivity in the provinces. The first outcome target of agricultural productivity was substantially achieved. Yields of rice improved from 4 tons per hectare (t/ha) to 6.76 t/ha against the target of 8 t/ha. Coffee yields doubled from 2.7 t/ha to 5.46 t/ha, exceeding the target of 3.5 t/ha. Pepper yields increased from 2.7 t/ha to 3.17 t/ha (target 3.8 t/ha). The second target (about 225,000 more people having access to project PRI) was exceeded, with 390,370 people benefiting from improved access, compared to the target of 267,627. This big increase in beneficiaries was attributed to the increase in the number of subprojects (from 15 to 23), although the PCR did not provide further explanation. This validation notes that the outcome was achieved.

21. For output 1 (productive rural infrastructure improved), all targets were achieved or exceeded. The irrigated crop area was expanded from 14,913 hectares to 21,859 ha, serviced by 40 irrigation schemes and associated low-volume rural roads (revised target of 17,500 hectares and at least 15 irrigation structures). A total of 254 kilometers (km) of low volume rural roads were upgraded by the project to provide better access (target 130 km); 2,583 local unskilled labors (40% were female) were employed (target 30% women); and 1,525 unskilled ethnic minority laborers were employed in 14 subprojects (42% women). Operation and maintenance (O&M) plans were reported to have been prepared for all irrigation subprojects and implemented by

[15] ADB. 2017. *Productive Rural Infrastructure Sector Project in the Central Highland: Aide Memoire Mid Term Review.* Manila.

[16] The PCR reported that capacity building lacks appropriate indicators, e.g., relevant to behavior changes in knowledge and practices.

provincial irrigation management committees (IMCs). Project–supported rural roads were transferred to commune authorities and incorporated into local inventories and maintained by commune organizations.

22. For output 2, achievements of the five indicators varied. Two training indicators were achieved: (i) the development and management of PRI (MARD, DARD, IMCs) with 263 staff trained, and (ii) HIV/AIDs and road and dam safety awareness training reaching 5,858 individuals (no baseline). However, two training targets on project management and PRI users were not achieved: 10 project management training courses were organized (target: 20) and 37 PRI uses courses for water user groups were delivered (target: 59). The validation considers the cost reduction by 64% due to the disallowed use of ODA for capacity building in 2019 (PCR, footnote 9) a significant drop. This contributed to the underachievement of capacity enhancement activities (para. 5). However, the timing was not reasonable enough as the project was closed in 2020. The fifth indicator concerning the establishment of irrigation scheme condition inventories and O&M plans was not achieved (paras. 30–31). The PCR reported the condition inventories were not completed as the CPMU misinterpreted these as being included in subproject feasibility studies and, consequently, the training was concentrated on irrigation management and use, and O&M for the prescribed participants. Moreover, knowledge products on the documentation of sustainable exploitation and management of irrigation works and PIM were not implemented as envisaged, except for the water-saving technology pilot which was implemented in Lam Dong and Dak Lak provinces (PCR, para. 11).

23. Under output 3, the first indicator (establishment of a CPMU and five PPMUs) was fully achieved. The second indicator relating to the completion of feasibility studies was achieved with delay. The third indicator of delivering construction works in two phases was achieved with a one-year delay.

24. Safeguard performance was satisfactory (paras. 7–9). All stipulated environmental and social safeguards measures were properly implemented, documented, and disclosed in project reports. These indicated that the implementation of safeguards was adequately resourced and prioritized at national and provincial levels. At project completion, 18 actions and 12 targets in the GAP and DMF were assessed, 15 out of 18 of the actions were completed, and 10 out of 12 targets were achieved.

25. On the whole, the project's outcome showed improved agricultural productivity through enhanced access to and use of water under the project. As one of the outcome indicators, the number of direct beneficiaries with access to the improved PRI was significantly increased, exceeding the target. Although output 2 (enhanced capacity to use PRI) had some shortfalls, the outcome and output performance targets were substantially achieved. This validation assesses the project effective.

C. Efficiency of Resource Use

26. The PCR rated the project efficient. The economic internal rate of return (EIRR) was estimated at appraisal and reevaluated at completion. Estimated project economic benefits were based on (i) improved productivity and expanded production areas of cropping, and (ii) reduced transport costs from upgraded low volume rural roads, both associated with improved irrigation facilities. Benefits from irrigation were based on incremental productivity and changing land-use or cropping patterns for the main crops of rice (two crop seasons per year), maize (representing cash crops), cabbage (representing vegetables), and coffee, pepper, and fruit trees. For low-

volume rural roads, benefits were estimated from reduced vehicle operating costs (VOC) with improved surface conditions along the alignments (254 km).

27. The aggregated EIRR for the three representative subprojects was 19.7% at appraisal, and 20.7% at completion. The higher EIRR reflects more reliable water supply during dry season and increased cropped area under the project (PCR, Table A8.1). The sensitivity tests conducted at project completion based on crop benefits and reduced VOC indicated that the project was robust under all cases.

28. This validation notes that the explanation and data on the PCR assumptions in the estimation of project benefits were inadequate. The estimated growth in VOC incremental benefits considerably increased by about seven-fold from 2017 to 2018 (PCR, Appendix 3, Table A8.3). The PCR did not explain the substantial increase, especially the huge jump in VOC benefits for all types of vehicles between 2017 and 2018. VOC savings depended on the traffic levels. However, the breakdown of the traffic levels into generated and diverted traffic was not indicated. On this point, ADB's Southeast Regional Department provided supplementary explanation that the traffic volumes used in the analysis were the figures reported by the beneficiary provinces and that the domestic economic growth rate was a reasonable proxy for increased traffic volumes on an annual basis. Also, the PCR referred to increased production areas, but did not expound on how improved productivity could have contributed to the economic benefits. Moreover, the connection between yields and economic benefits at the farm level was not well explained (i.e., whether the economic benefits generated at the farm level were the result of area expansion brought about by the improved irrigation).

29. The project was extended by one year due to delays in the recruitment of consultants at start-up and delays in the procurement of civil works due to associated approvals. By project completion, all subprojects were completed. Despite a few data limitations, the project's EIRR was above the 12% benchmark. Hence, this validation assesses the project efficient.

D. Preliminary Assessment of Sustainability

30. The PCR rated the project less than likely sustainable. It conceded that the likelihood of sustainability is higher for irrigation subprojects since farmers receive direct benefits from reliable water supplies, and provincial IMCs are designated as responsible for managing O&M. The project also invested significant efforts in building participatory irrigation management for beneficiaries and IMCs. Historically, farmers have been responsible for the cost of pumping water from main canals to their individual plots in Viet Nam. This has worked since the benefit is tangible or close to the farmers' consciousness and integral to the production. However, with the introduction of pressurized piped delivery systems that have residual head to drive water application devices, cost is automatically transferred back to the government as there is no agreed mechanism for beneficiary farmers to finance pumping costs (PCR, para. 50).

31. The PCR reported that no formal institutional provisions had been made for this in the two subprojects. Therefore, the potential for less user buy-in with the necessary O&M may result in only essential maintenance and early degradation of the asset. Alternatively, if those who grow higher value crops begin to see increased benefits from these structures, the beneficiaries may become more willing to contribute to potentially higher costs. A clear mechanism for shared cost recovery needs to be developed and managed institutionally to realize the full potential of the asset.

32. In terms of the project's upgraded low-volume rural roads, the commune councils hold responsibility for their maintenance. Communes have limited budgets and in the past, relied on community groups for routine maintenance. While this is commendable, the lack of budget and reliance on voluntary work is not a strong basis to build a suitable O&M system with a future bringing increased vehicle traffic to and from irrigated areas, before climate change and its effects are factored in. The PCR had already reported that project-upgraded alignments were showing signs of inadequate maintenance along verges and/or shoulders as well as damaged surfaces caused by higher traffic volumes with heavier axle loads. While this increased traffic volume may point to the projects irrigation achievements, it does not present a picture of a resilient low volume road system. Without a realistic budgetary allocation and institutional road O&M, it is likely to remain inadequate for lower-level rural alignments and potentially compromise benefits realized from the irrigated hinterlands they serve. Based on the lack of a clear mechanism for shared cost recovery in the irrigation schemes and concerns over budgetary allocation for road O&M, this validation assesses the project less than likely sustainable.

III. OTHER PERFORMANCE ASSESSMENTS

A. Preliminary Assessment of Development Impact

33. The PCR rated the development impact of the project satisfactory. The project contributed to the following significant development impacts in the project provinces: (i) a reduction in poverty rates to 6.81% (2018) among direct subproject beneficiaries; (ii) the rehabilitation and extension of major irrigation schemes, including headworks and canals; (iii) average household income increase of 53.5% in the subproject areas to VND 20.2 million; and (iv) improved access to markets, input suppliers, and other public services through the rehabilitation of about 254 km of project upgraded roads. Data on incremental labor demand were not yet provided but labor demand was estimated to increase on a trajectory of three days/household/year. The project's development impact was enhanced by its commitment to promoting gender equity and facilitating ethnic minorities' active participation in project implementation. This validation assesses the project's development impact satisfactory.

B. Performance of the Borrower and Executing Agency

34. The PCR rated the performance of the borrower and executing agencies satisfactory. The borrower complied with all loan covenants and safeguards and fiduciary requirements. MARD assumed full ownership and responsibility for the project during implementation as did the PPCs at the provincial level and, with a year of extension, it delivered the project in full and within budget. The capacity of provincial authorities grew as the project progressed although it took some time to fully grasp project procedures. Delays in procurement and the release of counterpart funding occurred due to the lengthy internal approval procedures at both provincial and national levels. MARD mobilized adequate financial resources for the operations of the APMB. It provided ongoing support to PPMUs in fiduciary, safeguard, and procurement requirements. MARD also adequately resourced technical areas as necessary; and demonstrated flexibility when counterpart allocations were delayed by reallocating funds from other MARD-implemented projects to maintain momentum. This validation has some reservations on the implementing agency's role in ensuring that adequate budget for the O&M is forthcoming and, thus project's sustainability of low volume roads asset maintenance is vested in the commune authorities.

35. Also, the PPC has a role to play in developing a more robust institutional setup (similar status of IMCs for irrigation management) for the O&M of low-volume roads at the commune level. While the performance of the borrower was satisfactory, there remains much scope to pay greater

attention to the O&M of project assets. This validation assesses the performance of the borrower and executing agency as satisfactory.

C. Performance of the Asian Development Bank and Cofinanciers

36. The PCR rated the performance of ADB satisfactory. ADB supported CPMU and PPMU staff with appropriate training on project management, financial management, and procurement, including the use of Viet Nam's e-government procurement system to carry out their duties. The delegated project administration to the Viet Nam Resident Mission in April 2015 resulted in more efficient document processing and capacity building support for the CPMU and PPMUs. ADB undertook 16 review missions with a total of 569 person-days. It was active and responsive accommodating changes in government procurement arrangements and helping the CPMU and PPMUs navigate disbursement ceilings and complex ODA budgeting procedures. As above, this validation has some reservations on ADB's wider role in ensuring the sustainability of the project's low-volume roads and infrastructure assets in general. This validation assesses the performance of ADB as satisfactory.

D. Others

37. No safeguard issues were highlighted in project documentation.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

38. The PCR rated the project successful. This validation assesses the project relevant in view of its coherence with the government's and ADB's strategies and the appropriate design responding to clearly defined local needs. It is effective in view of the achievements of the outcome and output targets. The project is efficient despite a few shortcomings on the data used in the EIRR recalculation. It is less than likely sustainable due to reservations presented regarding the adequacy of funds and institutional set up for the O&M of low-volume rural roads. Overall, this validation assesses the project successful.

Overall Ratings

Validation criteria	PCR	IED review	Reason for disagreement and/or comments
Relevance	Relevant	Relevant	
Effectiveness	Effective	Effective	
Efficiency	Efficient	Efficient	
Sustainability	Less than likely sustainable	Less than likely sustainable	
Overall Assessment	**Successful**	**Successful**	
Preliminary assessment of impact	Satisfactory	Satisfactory	
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Quality of PCR		Satisfactory	Para. 46

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

B. Lessons

39. The PCR identified four lessons: (i) substandard design and cost norms result in shorter asset lifespans; (ii) IMCs provide a better institutional arrangement for O&M and the O&M of project-supported roads, although vested in the commune, would benefit from a similar arrangement to avoid early degradation of road assets; (iii) ongoing subproject supervision is essential to maintaining high quality project assets; and (iv) e-procurement system streamlines end-to-end business process of procurement contract packages.

40. This validation supports the lessons identified in the PCR and adds two project level-lessons and one sector-level lesson. First, timely preparation of subproject documentation and bid documents for contract implementation helps expedite the implementation of project activities, specifically the finalization and approval of subproject technical designs. This heavily relies on the adequate capacity of the executing and implementing agencies. It needs the establishment of the requisite project readiness prior to implementation and the engagement of well-qualified consultants (e.g., detailed engineering design and supervision consultants) who have expert knowledge of national design standards and project-specific technical aspects. Equally important is the experience of consultants and contractors in implementing previous ADB projects to reduce the risks of start-up and implementation delays. Under the project, one of the reasons for delays in implementation was due to the quality of consultants recruited by PPMUs (PCR para. 26).

41. Second, the provision of ring-fenced resources and training for the capacity building of beneficiary farmers and local agencies are critical in helping institutionalize project O&M. The institutional capacity to manage resources efficiently and systematically plan for O&M costs early on helps ensure support in meeting annual and periodic replacement costs and other project-related financial requirements. The sustainability of infrastructure projects is often weakened by inadequate institutional capacities and weak operational and financial management. These affect the agencies' ability to help sustain the needed financial support for O&M.

42. Third, while the increased availability and effective management of water are key success factors in sector projects similar to this, it cannot be anticipated that this project alone will drive the achievement of outcomes. Other provisions that support the achievement of the full agronomic potential of targeted crops (e.g., the availability and use of suitable seed, the adoption of superior crop nutrition and crop management practices) are critical factors to realize the full benefit of investments and further enhance the relevance, effectiveness and efficiency of sector projects.

C. Recommendations for Follow-Up

43. The PCR made a few recommendations: preparing a comprehensive monitoring and evaluation system and a training plan to support implementing such system; paying greater attention to incorporating changes into design standards in response to emerging risk factors such as climate change; establishing mechanisms (and a means to monitor post project) to collect farmer contributions for irrigation O&M especially when pumped irrigation schemes are used; and strengthening loan covenants concerning the allocation of adequate O&M provisions and conducting a project performance evaluation report not earlier than 2023.

44. This validation adds two further recommendations. First, a system of post project monitoring and reporting of asset sustainability and accompanying O&M budgets should be in place for the bank and government, considering the O&M issues raised in the completion report regarding potential inadequacy of budget and institutional arrangements for roads. Second, wider consultations on O&M processes and budget commitments with all stakeholders at appraisal

would potentially raise pertinent issues sooner and provide the management and stakeholders with insights on how to achieve higher levels of sustainability in rural infrastructure.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Reporting

45. Results monitoring and reporting included quarterly progress reports, semiannual safeguards reports and annual financial audit reports. Baseline surveys were conducted in August 2017 for phase 1 and 2 subprojects and in May 2018 for phase 3 subprojects. The end-line survey was completed in December 2018.

B. Comments on Project Completion Report Quality

46. The quality of the PCR was satisfactory. It was well written, clear, and provided candid feedback on shortcomings on project sustainability. Project performance and achievements were defined against targets. It provided useful insights on issues encountered during mission completion. However, lessons were somewhat conflated with issues and could have been written more explicitly. The PCR ratings were appropriate, and recommendations were valid and evidence-based.

C. Data Sources for Validation

47. Data sources used in this validation included the report and recommendation of the President, ADB and government PCRs, the project midterm review report, back-to-office reports and aide-memoires, ADB Country Strategy reports and government planning documents and pertinent web resources and maps.

D. Recommendation for Independent Evaluation Department Follow-Up

48. The PCR suggested that a project performance evaluation report (PPER) be prepared in 2023. This validation considers it a reasonable timing for a PPER. The validation recommends the PPER focus on the data on crop yields and VOC and include a broad evaluation of irrigation subsector, O&M, and climate change issues.