

Validation Report
November 2022

Vanuatu: Cyclone Pam Road Reconstruction Project

Reference Number: PVR-899
Project Number: 49319-001
Loan Numbers: 3331, 3332, and 3552
Grant Numbers: 0459, 0460, 0461, and 0540



Raising development impact through evaluation

ABBREVIATIONS

ADB	– Asian Development Bank
BBB	– build back better
CEMP	– construction environmental management plan
DEAP	– disaster and emergency assistance policy
DMF	– design and monitoring framework
DSC	– design and supervision consultant
EAL	– emergency assistance loan
EIRR	– economic internal rate of return
GDP	– gross domestic product
GEF	– Global Environment Facility
km	– kilometer
MIPU	– Ministry of Infrastructure and Public Utilities
O&M	– operation and maintenance
PCR	– project completion report
PMU	– project management unit
PWD	– Public Works Department
R4D2	– Roads for Development Phase Two
SPS	– Safeguard Policy Statement 2009
TA	– technical assistance
TCP	– Tropical Cyclone Pam
VOC	– vehicle operating cost

NOTE

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

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PROJECT BASIC DATA

Project number	49319-001	PCR circulation date	29 Dec 2021	
Loan and grant numbers	Loans 3331, 3332, and 3552 Grants 0459, 0460, 0461, and 0540	PCR validation date	Nov 2022	
Project name	Cyclone Pam Road Reconstruction Project			
Sector and subsector	Transport	Road transport (nonurban)—Transport policies and institutional development		
Strategic agenda	Environmentally sustainable growth Inclusive economic growth Regional integration			
Safeguard categories	Environment		B	
	Involuntary resettlement		B	
	Indigenous peoples		C	
Country	Vanuatu		Approved (\$ million)	Actual (\$ million)
ADB financing (\$ million)		Total project costs	27.90	27.51
	OCR: L3331 – 1.00 L3332 – 2.81 L3552 – 4.10 ADF: G0459 – 7.00 G0460 – 2.81 G0540 – 4.10	Loan and grant	21.81	20.60
		Borrower Government of Vanuatu	3.41	4.38
		Beneficiaries	0.00	0.00
		Others	0.00	0.00
Cofinanciers		Total cofinancing GEF–Least Developed Countries Fund (G0461)	2.68	2.53
Approval date L3331, L332, G0459, G0460, G0461 L3552, G0540	25 Nov 2015	Effectiveness date L3331, L332, G0459, G0460, G0461	30 May 2016	3 Mar 2016
	9 Aug 2017	L3552, G0540	30 Nov 2017	27 Nov 2017
Signing date L3331, L332, G0459, G0460, G0461 L3552, G0540	1 Mar 2016	Closing date L3331, L332, G0459, G0460, G0461	30 Jun 2018	25 Nov 2019
	1 Sep 2017	L3552, G0540 Financial closing date	30 Jun 2019	25 Nov 2019 3 July 2020
Project officers	R. Adhar P. Idrawansa A. Ahonen P. Idrawansa D. Fay	Location PLCO PLCO VPCO PLCO VPCO	From 2016 Aug 2016 Nov 2017 Jan 2020 Apr 2020	To Jul 2016 Nov 2017 Jan 2020 Mar 2020 Present

IED review director	N. Subramaniam, IESP
Team leader	M. Legal, Senior Evaluation Officer, IESP*

ADB = Asian Development Bank, ADF = Asian Development Fund, GEF = Global Environment Facility, IED = Independent Evaluation Department, IESP = Sector and Project Division, OCR = ordinary capital resources, PCR = project completion report, PLCO = Pacific Liaison and Coordination Office, VPCO = Vanuatu Pacific Country Office.

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I. PROJECT DESCRIPTION

A. Rationale

1. Vanuatu is among the world's top 20 most vulnerable countries to natural disasters.¹ In March 2015, Vanuatu was hit by Tropical Cyclone Pam (TCP), an extremely destructive category 5 cyclone.² The major impact on the transport sector was on the Efate ring road where large water flowed and the accumulation of upstream debris caused extensive damage to bridges, approach roads, piers, abutments, riverbanks, and service connections. The damage assessment indicated that the social sector had the highest needs, followed by the transport sector. Furthermore, it was indicated that repair to the Efate ring road should be addressed urgently to minimize secondary economic impacts and to restore connectivity to tourism centers and essential services, such as hospitals, schools, markets, and main commercial centers in the capital, Port Vila.

2. The government approved the Strengthening Ni-Vanuatu Resilience for National Recovery and Economic Strengthening Program in June 2015. A development partners' roundtable conference was subsequently held where completion of the humanitarian action plan was announced, and program implementation commenced.³ The social sector needs were funded by the Asian Development Bank (ADB) and other development partners.⁴ In November 2015, ADB approved the Cyclone Pam Road Reconstruction Project amounting to \$24.50 million (phase 1), with an additional financing of \$20.60 million approved in August 2017 (phase 2). The project aimed to reconstruct the Efate ring road to a climate-resilient and disaster-proofed standard. It was categorized as an emergency assistance loan (EAL) and grant project.⁵

B. Expected Impacts, Outcomes, and Outputs

¹ ADB. 2020. *Validation Report. Pacific Approach: Validation of the Country Partnership Strategy Final Review, 2016–2020*. Manila.

² The center of the cyclone passed east of Efate Island and the capital, Port Vila, and then continued southward, passing just west of Erromango and Tanna Islands. Heavy rainfall and destructive high storm surges caused severe flooding and widespread damage, particularly in Tafea and Shefa provinces where 11 fatalities were confirmed, and an estimated 65,000 people were displaced from their homes. Approximately 17,000 buildings were damaged or destroyed. TCP caused widespread crop destruction and compromised the livelihoods of at least 80% of Vanuatu's rural population. ADB. 2015. *Report and Recommendation of the President to the Board of Directors—Proposed Loans, Grants and Administration of Grant: Republic of Vanuatu: Cyclone Pam Road Reconstruction Project*. Manila.

³ ADB. 2015. *Report and Recommendation of the President to the Board of Directors—Proposed Loans, Grants and Administration of Grant—Republic of Vanuatu: Cyclone Pam Road Reconstruction Project*. Manila.

⁴ ADB approved the Vanuatu Cyclone Pam Disaster Response Project (G0428) in March 2015 (\$1 million) under health. It approved the Cyclone Pam School Reconstruction Project in November 2015 (\$5 million) under education.

⁵ Emergency assistance loans and grants projects are guided by the ADB's Disaster and Emergency Assistance Policy (DEAP) of 2004. Implementation under emergency procedures permitted greater flexibility and more favorable lending terms. Consistent with the intention that EALs focus on immediate short-term requirements, the DEAP limited the implementation period for projects addressing disasters triggered by natural hazards to 2 years. Extensions beyond 4 years required the approval of ADB's Vice President.

3. The expected impact of the project's phase 1 was accelerated economic and social recovery in Vanuatu's TCP-affected provinces. Its envisaged outcome was restored socioeconomic activities to at least pre-TCP levels. The target output was to have the transport infrastructure in damaged areas on Efate ring road reconstructed and climate- and disaster-proofed. The Global Environment Facility (GEF) grant was to fund a portion of the civil works to ensure that the building back after TCP was climate-resilient.⁶ Phase 2 had the same expected impact, outcome, and output statement, but with specific additional subprojects, including four additional damaged sites, and replacement of two bridges under the original project, instead of the original plan of repairing them.⁷

C. Provision of Inputs

4. The project's phase 1, comprising two loans and three grants, was approved in November 2015 and became effective in March 2016—2 months earlier than planned. Phase 2, comprising a loan and a grant, was approved in August 2017 and became effective in November 2017. The original completion date of phase 1 was June 2018 but it was extended twice, with the first extension to be until October 2019 (approved in May 2019) while the second extension was until November 2019 (approved in October 2019). For phase 2, the original completion date was June 2019, but this was extended until November 2019 (also approved in October 2019). The delays stemmed from (i) slow start in the initial civil works contract, (ii) need to redesign various drainage structures, (iii) land access issues at the Epule bridge site, (iv) delays in importing construction materials and equipment, (v) weather-related delays, and (vi) time needed to complete the remaining line marking works and landscaping at Klem's Hill.

5. At appraisal, the project cost was estimated at \$27.90 million, with ADB financing 78% of the project cost, the government funding 12%, and 10% coming from the GEF/Least Developed Countries Fund administered by ADB. Of the total ADB loans and grants, 77% were estimated to cover civil works, 20% for consultants, and the remainder to fund contingencies and financial charges during project implementation. The entire GEF was planned to cover civil works. The actual project cost was \$27.51 million, with ADB and GEF financing 84%, and the balance by the government. Of ADB loans and grants, 76% financed the civil works while 24% covered consultants' cost. The GEF funded both civil works (94%) and consultants (6%) costs.

6. At appraisal, total estimated consulting services in person-months was 164.75 of international and national consultants. For the design phase, 36.75 person-months of international and 38.00 of national consultants were to be required while for the construction phase, 42.00 person-months of international and 48.00 person-months of national consultants would be needed.⁸ The project completion report (PCR) did not provide the actual number of person-months of international and national consultants that were engaged under the project.

7. At appraisal, the project was category B for the environment and involuntary resettlement. An environmental assessment and review framework was prepared in compliance with ADB's Safeguard Policy Statement 2009 (SPS), which required screening and assessment (including the preparation of a construction environmental management plan (CEMP) for each civil works contract) and in line with Vanuatu's Environment Protection and Conservation Act 2010 (as amended), with additional elements compliant with ADB's SPS. A resettlement framework was

⁶ ADB. 2021. *Completion Report. Vanuatu: Cyclone Pam Road Reconstruction Project*. Manila.

⁷ ADB (Pacific Department). 2018. *Midterm Review Mission to Vanuatu: Cyclone Pam Road Reconstruction Project*. Back-to-office report. 25 February (internal).

⁸ ADB. 2015. *Project Administration Manual. Vanuatu: Cyclone Pam Road Reconstruction Project*. Manila.

also prepared to comply with ADB's SPS. The project would require temporary access to land outside the corridor during construction, including small areas of additional land for coastal protection works at three or four locations. Civil works' temporary land use or access during reconstruction was to be obtained through voluntary donation or land use agreements with landowners or affected people. The project was category C for indigenous peoples. The project was categorized with "some gender elements." Although a gender action plan was not required, the project had two output indicators on gender.

D. Implementation Arrangements

8. The Ministry of Finance and Economic Management was the executing agency, while Ministry of Infrastructure and Public Utilities (MIPU) was the implementing agency with its Public Works Department (PWD) assigned to manage the project. Implementation arrangements were carried out as planned. An infrastructure working group created within the MIPU was the responsible entity. A project management unit (PMU), comprising PWD staff and the design supervision consultant (DSC), was established in the MIPU for project design, administration, and implementation. The PMU was responsible for all implementation activities, including feasibility studies, detailed design, preparation of cost estimates, administration of procurement, contract management and supervision, safeguards implementation, among other things. The DSC acted as the lead consultant and a single adjudicator was appointed in 2017 as the Dispute Adjudication Board for the phase 1 contract and in 2018, as the dispute adjudicator for the phase 2 contract. The adjudicator settled various disputes and the resolution were not contested. This validation finds the implementation arrangements satisfactory as it involved agencies that have the experience and capabilities to plan, implement, and maintain transport infrastructure.

9. Of the 42 loan and grant covenants, 36 were complied with, three were being complied with during PCR preparation, two were not complied with, and one was no longer relevant. The three covenants that were being complied with were the submission of the 2020 audit; removal of debris from project facilities and related areas for any future nature disasters and on ensuring sustainability and proper operation and maintenance (O&M) of the project facilities; and putting together all project documents that will serve as bases for screening, selection, and processing of subprojects and making these available to ADB for at least 5 years. A covenant that was not relevant was the prescription in the ADB Disaster and Emergency Assistance Policy (DEAP) that limited the use of international bidding or direct contracting. International competitive bidding was used, given the 2-year period between the cyclone event and the release of civil works bid documents. In addition, contracts under the GEF required an international competitive bidding, which is contrary to the covenant. The two covenants that were not complied with involved the non-increase in the required budget allocation for O&M.

10. There was no attached technical assistance (TA). In 2016, ADB approved a small-scale capacity development TA to strengthen the project management capacity of the central Vanuatu Project Management Unit, which was placed in the Office of the Prime Minister; and the MIPU and PWD, through on-the-job training of their staff during the implementation of the TCP recovery projects, including this project, until 2018. This TA was rated successful.⁹

II. EVALUATION OF PERFORMANCE AND RATINGS

⁹ ADB. 2016. *Technical Assistance Report. Vanuatu: Supporting the Vanuatu Project Management Unit and the Ministry of Infrastructure and Public Utilities*. Manila; ADB. 2019. *Technical Assistance Completion Report. Vanuatu: Supporting the Vanuatu Project Management Unit and the Ministry of Infrastructure and Public Utilities*. Manila.

A. Relevance of Design and Formulation

11. The PCR rated the project highly relevant, noting that it was aligned with the National Recovery and Economic Strengthening Program¹⁰ and on the immediate needs of repairing, rebuilding, and upgrading the transport infrastructure to appropriate standards. These included features to mitigate the impact of future disasters through build-back-better (BBB).¹¹ The PCR noted that the design was consistent with ADB's priorities for Vanuatu as elaborated in the country operations business plan for 2016–2018, which acknowledged the need to provide support for cyclone recovery and reconstruction. Given the urgent need for support for rehabilitation, the project was designed under ADB emergency procedures. This allowed the project approval to be fast-tracked, such that the necessary geotechnical and hydrological information can be identified after the project approval. Necessary flexibility for any changes in scopes resulting from the detailed feasibility study and geotechnical and hydrological information also allowed the project to smoothly process additional financing request, in the form of the project's phase 2. The PCR noted that the project was transformational—indicating that it restored connectivity and livelihoods through the reconstruction of destroyed infrastructure.

12. This validation notes that the project design responded not only to the needs for repair and reconstruction of transport infrastructure but also to the opportunity of undertaking BBB, considering the impact of climate change. The project addressed the immediate need to restore transport infrastructure damaged by TCP along the Efate Circumferential Road to the capital, Port Vila, as identified in the Post-Disaster Needs Assessment.¹² This validation notes that the additional subprojects under phase 2 were appropriate and timely, following the detailed feasibility study and geotechnical and hydrological surveys undertaken during early implementation. However, the project results chain had shortcomings, such that the indicators for outcome were not correctly specified (para. 13). Furthermore, the outcome indicator on increased gross domestic product (GDP) growth was more of a project impact than an objective to be achieved at completion. The approval of phase 2 was a missed opportunity to correct the design and monitoring framework (DMF). Based on this validation's observations, the project is assessed relevant.¹³

¹⁰ Government of Vanuatu. 2015. Strengthening Ni-Vanuatu Resilience—National Recovery and Economic Strengthening Program Plan. 16 June (Draft Report). Port Vila.

¹¹ The BBB principles focus on upgrading infrastructure during reconstruction—and strengthening resilience to future disasters and climate change, particularly through more resilient roads and bridges.

¹² Government of Vanuatu—Prime Minister's Office. 2015. *Vanuatu Post-Disaster Needs Assessment, Tropical Cyclone Pam, March 2015*. Port Vila.

¹³ The Pacific Department (PARD) and the Independent Evaluation Department (IED) had differing views in assessing relevance. PARD maintained that the project was both innovative and transformational on several grounds, including the following: (i) the BBB approach that was novel (in Vanuatu) at that time and impacted PWD design practices thereafter; (ii) on demonstration value—the identification of a sinkhole in which to evacuate groundwater drainage flows in Tassiriki (near Korman stadium) and the related diversion of groundwater to that drainage path; (iii) the new technology that was used in the pavement design; (iv) the use of 0% grade drainage paths to drain the low-lying area beside Korman stadium was innovative and made a massive (transformative) difference in abating the prevalence of standing water (that cause waterborne diseases) and leading to positive health impacts among nearby residents; and (v) the design exercise (considering climate change impacts and increasing the hydraulic capacity of drainage structures) that changed the PWD design approach and that left an enduring capacity development legacy within PWD. Following ADB's Guidelines for the Evaluation of Public Sector Operations (specifically on para. 24 (vi) on emergency assistance loans), which states that “a highly relevant rating maybe given if there was an obvious need for the project in a disastrous situation and the government clearly requested it. An emergency project can be transformational if it restores destroyed infrastructures and livelihood.” IED reiterated that relevance does not only cover alignment and timeliness and design, but also the quality of its results chain. This view is consistent with other EAL projects, such that in a similar project in Vanuatu to support the reconstruction efforts resulting from cyclone Pam, both the PCR and the project validation report (PVR) recognized the shortcomings of the DMF. IED also noted that an EAL is not automatically conferred a “highly relevant” assessment. The ADB guideline (para. 24, [vi]) emphasized

B. Effectiveness in Achieving Project Outcomes and Outputs

13. The PCR rated the project effective based on the achievement of the expected outcome of restoring socioeconomic activities to at least pre-TCP levels. Although the 2018 GDP growth of 2.9% was lower than the 3.6% target, this was above the 2015 GDP growth of 1.6%. By 2020, the GDP growth rate was –8.5% and based on the overall assessment of GDP growth rates between 2018 to 2020, the 3.6% target was not achieved. This indicator is better assessed under development impact, such that various factors interplay to achieve this and solely attributing it to the project was inappropriate. Outcome indicators, such as reduced travel time to market and incidence of road accidents to at least pre-cyclone levels, are better measures of outcome improvements at project completion. The other outcome indicator of 130 kilometers (km) of road connected to facilitate trade and movement for road users was achieved. The PCR noted that a total of 392 km of road were connected, the project restored connectivity on the 116.2 km circumferential road, thereby restoring connectivity for all adjoining urban (175 km) and other declared roads (100.8 km) across the Efate road network.

14. Under one output, the project had 19 output indicators. The PCR noted that out of these, 14 were achieved and in the five output indicators, actual quantity cannot be determined in the absence of as-built drawings.¹⁴ Additional information provided by the PCR team, however, indicated that the PCR team, together with the PWD, conducted on-site inspections and confirmed that these five output targets were completed. Although the project had no clear climate-change resilience indicators, this validation notes that based on the GEF terminal evaluation report, the project was able to reconstruct a climate-proofed transport infrastructure in damaged locations on the Efate ring road network.¹⁵

15. This validation assesses that the environmental and social safeguards were generally implemented in accordance with ADB safeguards and Vanuatu requirements. Classified as category B for environment, the project had limited, site-specific, and temporary adverse impacts on the environment, which were promptly mitigated and managed through the CEMP. A few minor environmental safeguard noncompliance were identified, including failure to maintain sediment fencing, issues with waste disposal and dust control, and not keeping the communities informed of activities or employment opportunities. These were managed in accordance with measures specified in the environmental permit, CEMP, construction contract, and ADB and government safeguards requirements. Noncompliance items were reported in the semiannual and quarterly monitoring reports. Land was required for the new road alignment of Epule bridge, which needed 1,400 square meters in two land leases. Under category B on resettlement, a due diligence report

the point that "...It is nevertheless important that the project's design is sound and helps achieve the objectives. Poor design will lower the relevance of the project." IED assessed the linkages and causal chain as part of its assessment (i.e., outputs would lead to outcome and outcome would lead to impact). In this case, outputs completed under the project could not be responsible for the "increased GDP growth" as there were other more important macroeconomic factors responsible for the increase in GDP, such as government expenditures, consumption, investment levels, and net exports. Although IED recognized the learning part, the PVR is an ex-post evaluation and could not possibly cover what could have been done at appraisal. A more in-depth evaluation, such as a project performance evaluation report, could cover these aspects.

¹⁴ Footnote 6. Appendix 1, p. 18

¹⁵ Footnote 6. Appendix 5 p. 37. The GEF terminal evaluation report noted that the project was designed to withstand more intense and frequent rainfall and rainfall and sea-level-generated flood events due to climate change. Upgraded pavements were installed with concrete pavements in areas prone to storm surge flooding, and in other areas, polymer modified binders and geogrids for bitumen and asphalt road pavement were used to increase wearing coarse strength and durability.

was prepared and finalized, which enumerated the various issues and events at the Epule land. A resettlement plan was prepared, and the transfer and compensation process concluded in May 2019. The new Lamin bridge required new road alignments that resulted in the removal of coconut trees, banana plants, and pandanus trees. The claims of the crop owners were processed through the Department of Agriculture with compensation made by PWD. The project was category C for indigenous peoples as no indigenous peoples were within the project area.

16. On gender equity, of the people who participated throughout design and implementation, 27.5% were women, compared to the target of 30%.¹⁶ The PCR noted that the shortfall was due to the inability of women facilitators to attend the resettlement and community consultation meetings, which resulted in less than the targeted participation rate. As one of the output indicators, the PCR noted that training included awareness raising on gender-inclusive transport considerations, and HIV/AIDs awareness, among other things.¹⁷

17. Since the outcome indicator on road connectivity was achieved, including reduced travel time and road accidents, as described in the PCR's economic analysis,¹⁸ this validation assesses the outcome to be substantially achieved. This validation also notes that infrastructure investments were delivered and incorporated climate-change resilience features in the design, as reflected in the GEF assessment. This validation assesses the project effective.

C. Efficiency of Resource Use

18. The PCR rated the project efficient as the project restored access to markets and social services and contributed to national economic recovery. The PCR recalculated the economic internal rate of return (EIRR) for phases 1 and 2. Recalculation results for phase 1 was 13.8% compared to the 15.6% at appraisal and 18.8% for phase 2 compared to 20.2% at appraisal.

19. The PCR used the same conversion factors at appraisal, such as standard conversion factor and shadow wage rate factor to convert financial costs to economic values. However, the PCR erred in excluding consulting services costs for both the original and additional financing as part of the project's investment cost. This was \$3.71 million under the original financing and \$0.48 million under the additional financing. Also, the conversion of financial to economic cost seemed erroneous as applying the conversion factors would not result in an almost 45% decline in economic investment cost.¹⁹ Transfer payments were excluded in the economic costs. For phase 2 economic analysis, values should have been expressed in US dollars rather than vatu for consistency with phase 1 format.

20. The PCR considered four direct benefits: savings in travel time, agricultural benefits, tourism benefits, and stimulus to the local economy from construction activities as direct benefits under phase 1. Direct benefits for phase 2 were savings in vehicle operating costs (VOC), savings in travel time, flood immunity or reduction in flood damages, and reduction in vehicle crash or accident cost. The PCR did not explain why different sets of benefits were used for each phase, despite having similar project components. For example, phase 1 did not consider savings in VOC, which is a standard benefit for road and bridge projects but considered indirect benefits of road and bridge construction through agricultural, tourism, and local economy stimulus, which

¹⁶ Footnote 6. Para. 30.

¹⁷ Footnote 6. Para. 35.

¹⁸ Although data is incomplete for the entire project, this validation considers the improvements reported in the PCR.

¹⁹ The conversion of financial to economic cost used the following conversion factors: standard conversion factor of 0.926 for non-traded components and a shadow wage rate factor of 0.750 for unskilled labor components.

this validation does not concur with since these are indirect benefits and could be measurements of project impact. This comprised about 40% of phase 1's project benefits. For phase 2, greenhouse gas emissions were considered as a negative benefit but were not included in phase 1. Flood immunity was considered as a benefit in phase 2 but not included in phase 1. The economic benefits should have focused on the standard road and bridge benefits, such as savings in VOC, reduced travel time, and lesser road accidents, in addition to reduced flood damage. There is a need for clearer parameters and assumptions used to calculate benefits from flood avoidance to ensure its robustness. The economic cost from increased greenhouse gas emissions should have been considered in both phases.

21. On process efficiency, the release of funds was timely and the implementation arrangement that supported the adequate project administration and supervision were appropriate. During implementation, detailed feasibility study and geotechnical and hydrological information were prepared on time that allowed the project to smoothly process additional financing request. Project outputs were completed within the budget and within a reasonable time frame.²⁰ Considering that this project was designed as an emergency assistance loan (EAL), and notwithstanding the methodological issues in calculating the EIRR, this validation assesses the project efficient, based on the timeliness of its supervision and its monitoring aspects, under conditions of urgency and flexibility.

D. Preliminary Assessment of Sustainability

22. The PCR rated the project likely sustainable. This is based on the likelihood that project outputs would be maintained throughout the assets' economic life. The PCR's assessment was based on the infrastructure that were predominantly concrete and steel structures, which require minimal maintenance over their economic life. Although the PCR noted that project outputs were well designed and constructed, this validation observes that these assets would require maintenance over their economic life. The PCR expressed low confidence that the government would periodically and routinely provide the required maintenance of the 16.2 km rehabilitated roads, which represented 7.4% of total project costs. It noted that despite being included in the loan covenant, the government's commitment to increase financing for routine and periodic maintenance costs has not been complied with. Annual maintenance allocations in 2020 of Vt463 million was less than the 2015 allocation of Vt493 million. The PCR recognized that PWD does not currently have the budget or technical capacity to plan, prioritize, and deliver routine maintenance of double bitumen surface treatment pavements. PWD is assisted by the Government of Australia under the 15-year Roads for Development Phase Two (R4D2) Program²¹ to plan, build, and maintain its road transport infrastructure. The program has been contributing about Vt200 million annually for Vanuatu's road maintenance expenditures.

23. This validation notes the lack of PCR assessment on the government's capacity to finance the O&M requirements of existing and project infrastructures. While the physical design can

²⁰ The delay of 17 months for phase 1 and 5 months for phase 2 are considered reasonable, considering the unique circumstances and challenges resulting from the disaster.

²¹ Building resilient infrastructure and an environment for economic opportunity is one of the strategic objectives of the Government of Australia's Vanuatu aid program. Australia's major infrastructure investment, the Roads for Development Program and its predecessor, the Vanuatu Transport Sector Support Program, have supported improved economic growth and service delivery in rural areas through increased access to a better-maintained, affordable, and integrated transport network. <https://www.dfat.gov.au/about-us/business-opportunities/Pages/updated-vanuatu-roads-for-development-program-phase-2>. The next phase of support, the R4D2, will continue to support the development of the road subsector in Vanuatu, plus selective innovative and catalytic economic infrastructure support. R4D2 will be a 5-year program, with funding of approximately AUD20 million through this contract.

sustain the project in the near-term, the project requires a strong budgetary support over the years to cover the O&M costs, which was not evident. In addition, the institutional capacity of the agency responsible for the O&M of the project remain weak. This validation assesses the project less than likely sustainable.

III. OTHER PERFORMANCE ASSESSMENTS

A. Preliminary Assessment of Development Impact

24. The PCR rated the project's development impact satisfactory. This was based on the project's delivery of its intended impact of accelerated economic and social recovery in Vanuatu's TCP-affected provinces. The PCR noted that businesses in the tourism sector had reopened and access to education, social, and economic services had been restored. These restored and enhanced the people's employment opportunities, household incomes, well-being, and living standards. However, the PCR did not present any supporting data. This validation notes that from a significant drop in international tourist arrivals in 2015, this number was generally restored to pre-TCP level during 2016–2018, before it significantly dropped in 2020 due to the coronavirus disease (COVID-19) pandemic.²² The results of the vehicle count surveys in November 2020 indicated that traffic volumes for travel around Efate Island had been restored to pre-TCP level (even pre-pandemic). This validation concludes that normal traffic has been restored and assesses the project development impact satisfactory.

B. Performance of the Borrower and Executing Agency

25. The PCR rated the performance of the borrower, executing, and implementing agencies satisfactory. MIPU with PWD as implementing agencies participated in all project-related discussions and meetings, including establishing and ensuring the proper functioning of the infrastructure working group. MIPU and PWD possessed sufficient experience in implementing infrastructure projects and provided counterpart staff and funding, as required. The low turnover of project staff ensured the retention of project experience and institutional knowledge in the government. The PWD addressed land access and land use issues although these took some time due to local cultural requirements. Although PWD's inability to locate as-built drawings of a few projects showed a few deficiencies in its record management including document control, overall, this validation assesses the performance of the borrower, executing agency, and implementing agencies satisfactory.

C. Performance of the Asian Development Bank and Cofinanciers

26. The PCR rated ADB's performance satisfactory. The project was processed and administered by ADB's Pacific Liaison and Coordination Office (PLCO) and supported by the Vanuatu Pacific Country Office (VPCO). ADB provided support and guidance to expedite consultant recruitment; mobilized regular review missions on implementation issues; and provided inputs to improve project implementation, monitoring, and reporting. ADB provided timely approvals during design preparation, safeguard due diligence documentation review, procurement of civil works, processing of withdrawal applications, and project extensions. The closeout of physical works, including the completion of works outstanding, collection of as-built drawings, and verification of remedial works completion was compromised by ADB's decision to

²² The World Bank. International Tourism, Number of Arrivals—Vanuatu. <https://data.worldbank.org/indicator/ST.INT.ARVL?locations=VU> (accessed 17 May 2022).

close the project not later than the 47-month of implementation.²³ The PCR rated GEF performance satisfactory although it did not provide more information on its rating other than GEF being engaged closely through the preparation of the annual project reports. A GEF terminal evaluation report was appended to the PCR, which provides information on the climate change resilience features of the project.²⁴ Based on these, this validation assesses the performance of ADB and GEF satisfactory.

D. Others

27. The DSC prepared the government's project completion report, which rated the project highly relevant, effective, efficient, highly sustainable, and the project impact satisfactory. No assessments were made on the borrower and executing agency, and on ADB and cofinanciers' performances. ADB prepared the GEF terminal evaluation report for both the Cyclone Pam Road Reconstruction Project and the Port Vila Urban Development Project. The GEF evaluation report rated the project highly relevant, effective, and the project impact satisfactory. No assessments were made on ADB's and borrower and executing agency's performances.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

28. The PCR rated the project successful with ratings of highly relevant, effective, efficient, and likely sustainable. This validation assesses the project relevant given its alignment with both the government's and ADB's country plan and strategies, its timely emergency support, but had shortcomings in developing a robust results chain. It was rated effective having achieved its outcomes and rated efficient mainly due to its timely and appropriate supervision and monitoring, given the emergency nature of the project. The project is less than likely sustainable since the government did not have sufficient financial and technical resources to maintain the existing road or bridge network. Overall, the project is assessed successful.

Overall Ratings

Validation criteria	PCR	IED review	Reason for disagreement and/or comments
Relevance	Highly relevant	Relevant	This is due to missing outcome indicators and the attribution issue at the outcome level.
Effectiveness	Effective	Effective	
Efficiency	Efficient	Efficient	
Sustainability	Likely sustainable	Less than likely sustainable	The government's financial, staff, and technical resources were not sufficient to maintain the project infrastructure.
Overall assessment	Successful	Successful	
Preliminary assessment of impact	Satisfactory	Satisfactory	

²³ An EAL's maximum implementation period is limited to 4 years from the approval of the loan, except for EALs supporting post-conflict emergencies, which this project is not the case.

²⁴ The GEF terminal evaluation report assessed two projects implemented in Vanuatu and one was this project.

Validation criteria	PCR	IED review	Reason for disagreement and/or comments
Borrower and executing agency	Satisfactory	Satisfactory	
Performance of ADB	Satisfactory	Satisfactory	
Quality of PCR		Less than satisfactory	Para. 33.

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

B. Lessons

29. The PCR identified five lessons. First, the use of ministry PMUs could enhance government ownership, generate capacity improvements in administration, and facilitate the alignment of donor projects with government priorities. Second, the limited MIPU and PWD capacity, complemented with DSC could effectively in accelerate recovery. Third, disciplined planning of the community liaison committee engagements during project could improve the quality of designs and secure public support. Fourth, the time management mechanism of the Fédération Internationale Des Ingénieurs-Conseils (FIDIC) works contract is only effective if the executing agency enforces the delay damages provisions. Fifth, a 2-year implementation for DEAP is inadequate since a project needs detailed design and should only be for the transition phase of rehabilitation with longer-term reconstruction using the project loan modality.

30. This validation offers two lessons. At the project level, projects designed as EAL require stronger project performance monitoring system (PPMS) to closely monitor progress and achievements. Since EAL is usually designed fast, there is greater chance that project scope, design, and targets are fluid and call for a very robust monitoring system to ensure that baselines and targets are developed and monitored during implementation and at completion. These include a strong support to measure project benefits that are crucial for EIRR calculations. At the results framework level, the flexibility of EAL allows the DMF to be enhanced during implementation. This was not fully maximized in this project. Other than adding project outputs under the additional financing, outcome indicators remained to have attribution issues. Outcome indicators for improved transport infrastructures could have helped provide data to calculate EIRR at completion (para. 13). Quality review, including interdepartmental review at appraisal, can provide guidance in this regard.

C. Recommendations for Follow-Up

31. The PCR recommended that an emergency response consultant framework be established for immediate appointment after a disaster and to focus on institutionalizing maintenance planning and prioritization to support the project's financial sustainability. It also requested that ADB includes an independent engineering resources covenant to verify contract completion before releasing retention monies, and follow up with the Ministry of Finance and Economic Management, PWD, and the contractor, through the resident mission, in verifying that the road marking and road signs were completed on the second lagoon to Rentapau road section. This validation recommends that PLCO and VPCO monitor the O&M of the project infrastructures to determine their operational condition, whether sufficient funds have been allocated for their maintenance requirements, and to determine the status of subprojects where as-built plans were not available during PCR preparation.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Reporting

32. ADB conducted seven missions, as follows: inception, review, midterm review, and a review and additional financing fact-finding mission. ADB review missions conducted safeguards inspections and status updates and results were documented in the safeguards monitoring report. The Quarterly Progress Reports and annual project implementation reports were submitted to ADB and GEF. The government submitted the audited project financial statement requirements to ADB, although a few were delayed. ADB considered all audit reports acceptable.

B. Comments on Project Completion Report Quality

33. This validation assesses the PCR quality less than satisfactory. It adequately described implementation, but there were major shortcomings in the evidence to support the project's highly relevant rating and in the economic and financial reevaluation. It did not recognize the shortcomings of the outcome indicators. The identified benefits for phases 1 and 2 could be similar and could have focused on standard transport project benefits. The inclusion of agricultural, tourism, and stimulus benefits, which augmented the estimated total economic benefits, should not be considered direct benefits. Actual investment costs were not fully integrated in the analysis. The government had financial, staffing, and technical issues in its O&M of the national road and/or bridge network for the project infrastructure, yet the PCR still considered the project likely sustainable.

C. Data Sources for Validation

34. Data sources for this validation included the PCR, report and recommendation of the President, back-to-office reports, the government's and ADB strategies and policies, National Recovery and Economic Strengthening Program, Vanuatu Post-Disaster Needs Assessment Tropical Cyclone Pam, and ADB guidelines.

D. Recommendation for Independent Evaluation Department Follow-Up

35. The PCR, considering that project outputs were completed in 2019, recommended the preparation of the project performance evaluation report (PPER) in 2023. This validation does not recommend a PPER as various projects (i.e., health, education) were also implemented during the project period, mainly to restore development outcomes, at the minimum, to pre-cyclone level. Results from these projects can be reassessed as part of a wider evaluation (i.e., at country-, sector-, or region-wide level).