1. Project Data

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<th>Project ID</th>
<th>Project Name</th>
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<td>P155256</td>
<td>Pacific Resilience Program</td>
<td>Vanuatu</td>
<td>Urban, Resilience and Land</td>
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<th>Total Project Cost (USD)</th>
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<td>Actual</td>
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Prepared by
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2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO) as stated in the Financing Agreement dated September 4, 2015 (Schedule 1, page 4) and the Project Appraisal Document (PAD, page xxviii):

"To strengthen the financial protection of the Republic of Vanuatu".

This project was the first phase of the Pacific Resilience Program (PREP), a multi-phase "Series of Projects". The Phase 1 countries are the Republic of Vanuatu (ROV), Samoa, Tonga, the Republic of...
Marshall Islands, the Pacific Islands Forum Secretariat (PIFS), and the Secretariat of the Pacific Community. The PREP phase 1 included four components: (i) Strengthening early warning and preparedness; (ii) Risk reduction and resilient investments; (iii) Disaster risk financing; and (iv) Project management. The six projects included within the PREP phase 1 were formulated around these four components, although the participating countries were not required to include investments in each component.

b. Were the project objectives/key associated outcome targets revised during implementation?  
No

c. Will a split evaluation be undertaken?  
No

d. Components

The ROV participated in a single component of the PREM program.

Component 3. Disaster Risk Financing. The estimated cost at appraisal was US$1.6 million. This amount was disbursed.

This component aimed to support ROV's insurance premia for disaster risk financing, thereby enabling the country's continued participation in the regional catastrophe insurance scheme against tropical cyclones and earthquakes. This work would build on the previous Pacific Catastrophic Risk Insurance pilot, which provided technical assistance on public financial management of natural disasters to Pacific Island Countries (PICs), and parametric catastrophe risk insurance pool of the participating PICs.

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

Project Cost. The estimated cost at appraisal was US$1.6 million. The actual cost was as estimated.

Financing. The project was financed by an IDA Credit of US$1.50 million (including a national IDA allocation of US$0.5 million and a regional IDA allocation of US$1.0 million). This amount was disbursed. The ICR (page 29) notes that there were fluctuations between the Special Drawing Rights (SDRs) and the US$, and the difference of SDR 32,045 (approximately US$45,415) undisbursed funds were cancelled.

Recipient Contribution. The recipient contribution was estimated at US$0.15 million. According to the clarifications provided by the team, the recipient contribution was as planned.

Dates. The project was approved on June 19, 2015, became effective on September 25, 2015, and closed as scheduled on November 30, 2020.

Other changes. The main changes made through a Level 2 project restructuring on October 5, 2017, are as follows:
An adjustment in implementation, procurement and financial arrangement was made on October 5, 2017, so that funds and contracting for the insurance would operate through the newly created Pacific Catastrophe Risk Insurance Company rather than through the World Bank Treasury.

The financial management arrangements removed the reference to the existing arrangement, and clear responsibilities were specified for the ROV with regard to making the contractual payments and ensuring proper recording, reporting and audit of the transactions.

The procurement arrangements were changed, enabling the direct contracting of PCIRC on an exceptional basis.

The Financing Agreement was amended to include a covenant that required ROV to enter into an insurance contract with PCIRC or other catastrophe risk insurance provider to obtain insurance coverage of disaster and climate-related events.

3. Relevance of Objectives

Rationale

Country Context. The ROV is a small, remote Pacific Island country, located in the "Pacific Ring of Fire" and at the center of the Pacific "Cyclone belt". This location results in a relatively high frequency of volcanic eruptions, cyclones, earthquakes, storm surges, river flooding and landslides. For example, severe tropical cyclone Pam struck on 22 islands of the ROV on March 13, 2015. Damages and losses in the wake of this cyclone totaled US$449 million, which was equivalent to 64% of the Gross Domestic Product (GDP). According to the ranking of countries of Commonwealth Vulnerability Index, ROV is one of the world's most vulnerable countries, due to its exposure to geophysical and hydro-meteorological hazards and its limited capacity to prepare for and respond to risks. Catastrophe risk modelling indicated than on a long term average, ROV was expected to incur on average, US$48 million per year in losses due to earthquakes and tropical cyclones, and in the next 50 years ROV had a 50% chance of experiencing a loss over US$330 million and a 10% chance of loss over US$540 million. Therefore, the need for strengthening financial protection was important in the country context.

Government and Regional strategy. The PDO was consistent with ROV's Disaster Risk Reduction and Disaster Management National Action Plan (2006-2016) at appraisal. The PDO is relevant to the ROV's Climate change and Disaster Risk Reduction Strategy for 2016-2030. This strategy underscored the need for developing financial protection strategies that could improve the institutional capacity and awareness on financial disaster risk management and strengthen ROV's capacity to respond to disasters.

Bank strategy. The PDO was consistent with the World Bank Engagement Note for Disaster and Climate Resilient Development Programming in the Pacific Islands (August 2014), and the Policy and Practice Note (PPN) "Acting Today for Tomorrow" (2012). The engagement note and the PPN highlighted the need for developing financial protection strategies that could improve the institutional capacity and awareness on financial disaster risk management in Pacific Islands. The PDO is well-aligned with the Bank's Regional Partnership Framework for the Nine Pacific countries for 2017-2023. The focus area three of the framework articulated the need for protecting incomes and livelihoods through strengthening resilience to natural disasters and climate change.
Prior Bank experience. The Bank financed the Pacific Catastrophe Risk Insurance Pilot Program (PCRAFI) program in 2013. The objective of this program was to ascertain the viability of market-based sovereign catastrophe risk transfer instruments to reduce the financial vulnerability to natural disasters of four pacific island countries, including the ROV. This was to be achieved by providing finance to the participating countries to purchase catastrophe risk coverage against tropical cyclones and earthquakes. This pilot funded insurance premia totaling US$0.85 million for the ROV over three years for coverage from January 2013 to October 2015. This project continued insurance coverage of ROV under the pilot program, rather than introducing a brand new initiative.

The objective might have been better framed to strengthen financial protection from hazards, which could have more clearly delimited the scope of the project. Therefore, the relevance of the PDO is assessed as substantial.

Rating
Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective
To strengthen the financial protection of the ROV.

Rationale
Theory of Change.

The project strategy was to improve financial disaster risk management of the ROV, through transferring risk from the ROV to international markets. The theory of change envisioned that financing part of the ROV's premia for disaster risk financing would enable ROV to continue participating in a regional catastrophe risk insurance program, and thereby transfer its risk from natural disasters to international markets. Under the insurance coverage, the ROV would receive payment within a month of the occurrence of the cyclone or earthquake. By participating in a regional insurance program, ROV had access to an insurance instrument that did not otherwise exist, and with lower insurance premia than a simulated price for individual insurance from the market. These outcomes were to aid in strengthening the financial protection of the ROV from disasters caused in part by human exposure and vulnerability.

Though it is difficult to be definitive within the scope of this validation, the available insurance instrument may not have been a strong fit to the ROV's risk profile. The instrument was developed to suit the Pacific Islands region as a whole. It concentrated on tropical cyclones and earthquakes, because these were the main disaster risks for the region, and also because they are more insurable risks, with a long history of data and advanced modelling that allowed for reasonable estimation of risks. The ROV had not requested coverage for volcanic eruptions at the time of appraisal, and the Government could not access funds from this instrument in the wake of the significant volcanic eruptions in Ambae in November 2017. With the availability of a
broader suite of instruments that included protection against a wider range of natural hazards to which the ROV is exposed (such as volcanic eruptions or health emergencies such as COVID - 19), the government elected to utilize a range of tools to support their post-disaster financial resilience and withdraw from the regional insurance pool at the close of this project.

**Outputs.**

The project paid for cyclone and earthquake risks as expected. The ROV’s insurance premium rate under the project was 50 percent cheaper on average compared to the simulated market price the ROV would have had to pay if it had sought insurance individually outside the program (The price was simulated as no market insurance existed and pricing would have depended on negotiations with an insurer).

**Outcomes.**

ROV received financial protection from cyclones and earthquakes during the project projection. As no covered (insurance) event (such as due to tropical cyclone or earthquakes) occurred during implementation, the ROV did not receive a payout during the project period. However, the ROV did receive a payout under the pilot project within seven days in the wake of tropical cyclone Pam in 2015. The other participating country Tonga received payout within 10 days of the tropical cyclone in 2014, and within seven days in the wake of cyclone Gita in 2018: this suggests that the financial protection was genuine, and the insurance would have paid out had a covered event occurred.

However, the government's decision to discontinue purchase of catastrophe insurance means that this financial protection will not be sustained. The government chose to seek financial protection from other IDA funds through other instruments, including through two Contingent Emergency Response Component (CERC) in Investment Project Financing projects, and through a Development Policy Financing Operation with a Catastrophe-Deferred Drawdown Option (CAT-DDO) that would provide immediate liquidity to address shocks related to natural disasters and/or health-related events, that became available to IDA countries on July 1, 2017. This decision was not unreasonable given that the government felt that the catastrophe insurance instrument was not a good fit to their risk profile.

According to the clarifications provided by the team, the project dialogue helped the government to refine its approach to financial protection and consideration of instruments to manage residual risk, thereby strengthened its capacity to respond to and recover from disasters. The ICR also notes that project facilitated knowledge exchange within the region. However, the ICR provides no evidence to back this assertion.

**Rating**

Substantial

**OVERALL EFFICACY**

Rationale
The project outcomes were achieved in a narrow sense within the project lifetime, but the cancellation of the insurance contract means that the project has limited impact. This constitutes a moderate shortcoming.

Overall Efficacy Rating
Substantial

5. Efficiency

Economic efficiency.

A traditional economic analysis (which concentrates on expected values and implicitly assumes risk neutrality) does not well capture well the efficiency of a project on insurance, financial protection, and risk transfer.

The PAD (page 16) for the PREP project did not include an economic analysis for this project. This analysis covered only components one and two of the Pacific Resilience Program. Component three, which this project financed, was not included. Due to the lack of an ex ante economic analysis the ICR (page 14) did not conduct an ex post analysis - but an ex ante analysis of insurance would not have been meaningful (else it would incorrectly conclude that any insurance contract that did pay out was a poor return).

In 2018, the expected return from disaster risk insurance from the regional pool over a five-year coverage period was estimated. The analysis showed that the Economic Internal Rate of Return (EIRR) ranged from 133% if only one severe disaster occurred during this period (16% probability based on catastrophe risk models), to 226% or more if at least one extreme disaster occurred (given a 10% probability). In the case that no disaster was to take place (a 59% probability) there was to be no payout. The ex post Economic Internal Rate of Return (EIRR) was estimated at 23%. An average Net Present Value (NPV) of US$0.1 million (ranging from US$ negative 2.3 million if no disaster occurred, to US$9.4 million if one extreme disaster took place) was calculated using a discount rate of 10%, indicating that this project was at least marginally worthwhile on strict expected value terms, which does not capture the benefits from risk transfer.

Administrative and Operational efficiency.

The project did not encounter any implementation delays, with the single annual transactions carried out by the Ministry of Finance and Economic Development (MFED).

Efficiency Rating
Substantial

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

Relevance of the PDO was substantial, given its alignment with the Bank's most recent Regional Partnership Framework for the Nine Pacific countries, including ROV for 2017-2023. Efficacy was substantial, but with moderate shortcomings as the financial protection provided by the insurance contract may not have been a strong fit to ROV's disaster risk profile, and as the protection was not continued following the government's cessation of the insurance contract. Efficiency was assessed as substantial. Taking these ratings into account, the overall outcome is assessed as moderately satisfactory.

a. Outcome Rating
   Moderately Satisfactory

7. Risk to Development Outcome

The financial protection under this project will not be sustained, as the government chose not to continue with the regional insurance mechanism. However, the governments remains committed to other forms of disaster risk management, as demonstrated by the fact that the Bank is currently financing two Contingent Emergency Response Component Investment Project Financing Operations and one Development Policy Financing Operation with a Catastrophe-Drawdown Option (CAT-DDO) that would provide immediate liquidity in the event of a natural disaster or health related events. In addition, the ROV continues to be Council Member of the Pacific Catastrophe Risk Insurance Company (PCRIC). This position allows the ROV to advocate for development of post-disaster financing instruments that are a better fit for the ROU.

8. Assessment of Bank Performance

a. Quality-at-Entry
   The project design took into account the lessons from the Caribbean Catastrophic Risk Insurance Facility (CCRIF), the world's first multi-country risk pool and insurance program. Lessons incorporated at design included: (i) recognizing that the catastrophe risk insurance cannot cover all disaster losses, this project combined catastrophe risk insurance with other financial solutions, as part of a wide package for financial protection; (ii) this project offered an integrated financial protection strategy beyond parametric insurance; (iii) To ensure clear project oversight and/or coordination and to avoid fragmentation, the Ministry of Finance and Economic Development (MFED) was in charge of project implementation;
and (iv) Given the weak implementation capacity in ROV, the Pacific Islands Forum Secretariat (PIFS) was to provide technical and fiduciary support (PAD, page 82).

The multi-country engagement under a regional program allowed for the simultaneous preparation of projects for each participating country. This facilitated efficient dialogue across the region and allowed for the relatively swift concurrent processing of all projects under the umbrella program without significant project delays (ICR, paragraph 42). The first disbursement occurred less than three weeks after project effectiveness. This indicated that the critical measures were already in place before the project was approved. The arrangements made at appraisal for safeguards and fiduciary compliance were appropriate (discussed in section 10).

There were minor shortcomings in monitoring and evaluation (discussed in section 9).

**Quality-at-Entry Rating**
Satisfactory

**b. Quality of supervision**
The ICR (paragraph 61) notes that the activities required minimal supervision as the project financed only one activity, involving the direct selection of an eligible insurer and annual payment of insurance premia. The project implementation support was efficient with total staff costs (approximately US$13,600) over the project implementation period, commensurate to the simplicity of project design and activities. The supervision team comprised relevant technical experts in disaster risk management and financial protection and a small team of fiduciary and safeguards specialists. The ICR (paragraph 61) notes that the turnover of three Task Team Leaders (TTLs) did not impact implementation negatively, and there was high proactivity to follow up and resolve implementation issues. This was demonstrated through the 2017 project restructuring, which was processed and approved within a month of receiving the request letter from the government.

**Quality of Supervision Rating**
Satisfactory

**Overall Bank Performance Rating**
Satisfactory

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

**a. M&E Design**
The project's objective was clearly specified, and the theory of change was adequate. The ICR (paragraph 52) noted that a conventional M&E approach (input-output-outcome) was not entirely appropriate for disaster resilience projects such as this one, because "results" cannot be seen in the absence of a catastrophe event. The selected indicators measured whether the participating Pacific Island countries
have received payment within a month of the occurrence of the insured event and if the premiums are lower than coverage bought individually in the market.

However, the project's M&E did not include a qualitative assessment and indicators on several other aspects such as: (i) measuring the government's gradual increase in annual contribution; and (ii) measuring capacity strengthening.

b. M&E Implementation
The Ministry of Finance and Economic Management (MOFEM) and the Pacific Catastrophe Risk Insurance Company (PCRIC) monitored the insurance payments of the participating countries and the insurance premia.

c. M&E Utilization
According to the ICR (page 19), the project monitored whether insurance payouts were made to participating countries under the regional catastrophe risk insurance scheme following significant disaster events. The amount and time to payout were used to help assess the performance of the regional risk pool and to inform continual refinement of insurance products and coverage.

M&E Quality Rating
Substantial

10. Other Issues
a. Safeguards
The first phase of the PREP was classified as a Category B (partial assessment) project under the World Bank safeguard policies. Seven safeguard policies were triggered at appraisal: Environment Assessment (OP/BP 4.01); Natural Habitats (OP/BP 4.04); Forest (OP/BP 4.36); Pest Management (OP/BP 4.09); Physical Cultural Resources (OP/BP 4.11); Indigenous Peoples (OP 4.10); and Involuntary Resettlement (OP/BP 4.12). An Environmental and Social Management Framework (ESMF) was prepared and publicly-disclosed for Samoa, Tonga, Fiji. However, no safeguard policies were triggered for ROV, as the project supported only insurance, and no potential negative effects were expected. Hence no program level ESMF was prepared for the ROV. The ICR (paragraph 55) notes that the project's social and environmental impacts were positive, as it helped to manage residual risk and strengthen the government's capacity to respond to and recover from disasters.

b. Fiduciary Compliance
Financial management. The ICR (paragraph 58) notes that the financial management for the project was rated as satisfactory throughout implementation until November 2018, when the rating was downgraded due to an outstanding audit. At the time of project closing, all audits from 2017 to closing date remained outstanding and the financial management was rated as moderately unsatisfactory. The Ministry of Finance and Economic Management (MFEM) were advised that they could combine the outstanding audits to one audit covering 2017-2020, since there was one transaction in 2017 for the payment of insurance premia, which was the last project payment. However, at the time of the preparation of the ICR, the audit had not been submitted. The ICR also notes that in May 2021 MFEM was notified that failure to submit the outstanding audit would result in the project being closed in non-compliance with the terms of the Financing Agreement. The MFEM were also notified in writing that while the audit remains outstanding, the Bank will not proceed with new operations, additional financing, or project extensions for any projects for which the MFEM is the implementing agency. According to the information provided by the team, the final audit was not submitted to date.

Procurement management. The ICR (paragraph 59) notes that for majority of the project's duration, procurement risk was rated low and procurement performance was rated as satisfactory. During September 2015 (effectiveness) and until October 2017, no procurement was done by MFEM which was in line with the project implementation arrangements. On November 2017, MFEM procured the insurance services from PCRIC via Direct Contracting, in line with the arrangements outlined with the Level 2 restructuring of October 2017.

c. Unintended impacts (Positive or Negative)
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d. Other
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11. Ratings

<table>
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<th>IEG</th>
<th>Reason for Disagreements/Comment</th>
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<tr>
<td>Outcome</td>
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<td>Moderately Satisfactory</td>
<td>Efficacy was substantial but with moderate shortcomings leading to the overall moderately satisfactory rating, given substantial relevance and efficiency.</td>
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<td>Quality of ICR</td>
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12. Lessons
The ICR drew several lessons based on the project experience, including:

1. **Use of IDA resources can help countries test and access new insurance instruments.** In this project, the Republic of Vanuatu (ROV) was able to obtain insurance for disasters associated with tropical cyclones and earthquakes at a lower premium, due to the countries participating in an insurance pool, rather than obtaining insurance individually. In addition, the ROV was able to share its experience with and learn from other countries in a similar situation resulting in re-evaluating the suitability of available catastrophe insurance products.

2. **It is important to monitor and evaluate the extent to which a country improves its understanding of post-disaster risk financing products to better measure efficacy.** Projects supporting regional catastrophe risk insurance schemes could be not measured against their to payout for insured events; however they could measure the success of capacity-building activities or an increase in percentage of counterpart funding of the insurance premia.

3. **Over time, there is need for Pacific Island Countries to develop their own, institutionalized financial protection measures that do not rely from donors.** Further engagement by the Bank is required in this area, and the Bank should continue to explore options for parametric insurance for governments which include reduced premia, and/or provide coverage for a broad range of disaster events.

IEG finds that:

**A traditional economic analysis is not very effective for assessing the efficiency of instruments that offer financial protection.** The Bank could investigate alternative metrics for demonstrating project efficiency.

13. **Assessment Recommended?**

   No

14. **Comments on Quality of ICR**

   The project provided an adequate overview of project preparation and implementation. Also the ICR is internally consistent and concise and provided useful lessons. The theory of change provided in the ICR is adequate. The ICR is concise and the main body of the text adheres to the recommended length.

   The ICR would have benefitted from making clear judgements about whether there was a design failure in terms of supporting an instrument that was not a good fit to ROV’s risk context or not.

   **a. Quality of ICR Rating**
   
   Substantial