Report Number: ICRR0022400

1. Project Data

Project ID	Project Name
P112613	CRISP
Country	**Practice Area(Lead)**
Solomon Islands	Urban, Resilience and Land

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
TF-16425,TF-16614	31-May-2019	9,099,363.38
Bank Approval Date	**Closing Date (Actual)**	
06-Mar-2014	28-May-2020	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	9,100,000.00	9,100,000.00
Revised Commitment	9,099,363.38	9,099,363.38
Actual	9,099,363.38	9,099,363.38

Prepared by	Reviewed by	ICR Review Coordinator	Group
Kavita Mathur	Maria Vanessa Corlazzoli	Victoria Alexeeva	IEGSD (Unit 4)

2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO) and the Global Environmental Objective (GEO) was to "increase the capacity of selected rural communities to manage natural hazards and climate change risks" (Trust Fund Grant Agreement page 4 and PAD page 6). The project targeted communities in five provinces (Guadalcanal, Central, Malaita, Temotu, and Rennell and Bellona) (ICR para 36).

b. Were the project objectives/key associated outcome targets revised during implementation?
Yes

Did the Board approve the revised objectives/key associated outcome targets?
Yes

Date of Board Approval
14-May-2018

c. Will a split evaluation be undertaken?
Yes

d. Components
The project comprised of four components (the appraisal cost includes taxes and contingencies, PAD pages 7 and 8):

Component A: Integration of climate change adaptation and disaster risk reduction in government policies and operations (appraisal cost US$0.54 million, actual cost US$0.83 million). This component would support policy development, capacity building and institutional strengthening and integrate governance and operational processes for Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR). It would assist sector Ministries and the Provincial Governments to mainstream Disaster Risk Management (DRM) and CCA in sector planning and investments.

This component included two sub-components: (a) development of a national integrated climate change adaptation and a disaster risk management framework; and (b) strengthening capacity for mainstreaming climate change adaptation and disaster risk management in sector planning and investments.

Revised Component A. The name and description of Component A was revised slightly to “Integration of Risk Resilience for the Management of Disaster and Climate Risk into the Recipient’s Policy Frameworks and Practices”, with two sub-components: (i) development of a national cross-sector framework for disaster management and an integrated framework for resilient development; and (2) Strengthening the capacity of the Recipient and processes for mainstreaming risk resilience into selected sectoral work programs and social and livelihood practices. This was done in response to the challenges the Ministry of Environment, Climate Change, Disaster Management, and Meteorology (MECDM) encountered in integrating two complex agendas (CCA and DRM) and mainstreaming them into other ministries’ programs—particularly budgets—during the project’s lifetime. The MECDM decided on a more phased approach to mainstreaming, starting with selected programs in its own divisions and gradually expanding to ministries most impacted by climate-related disasters (such as health, tourism, agriculture and water). By doing so, MECDM expected that lessons learned from its internal mainstreaming, as well as the cabinet-level approval of the 2018 National Disaster Management Plan (NDMP), would provide the right policy incentives for other ministries to incorporate resilience measures.

Component B: Strengthening of climate and disaster risk information and early warning systems (appraisal cost US$1.33 million, actual cost US$1.26 million). This component would establish (a) an early warning network for volcanic/seismic hazards, and (b) a national risk information platform to improve risk management, that can be applied under the project to assess disaster and climate change effects for sectors and investment planning.

Revised Component B. The project increased the number of volcanic/seismic stations (IRI-3) from two to seven in accordance with recommendations of the December 2014 volcanic and seismic needs assessment.

Component C: Climate change adaptation and disaster risk reduction investments (appraisal cost US$6.33 million, actual cost US$5.45 million). This component would support both structural and non-structural disaster risk and adaptation investments at the community and provincial level. It would be implemented in collaboration with the Bank's Rural Development Program (RDP P089297) and the Provincial Governments of the target Provinces.

It included three sub-components: (a) risk analysis, design, advisory and supervision services of rural infrastructure investments and disaster/climate risk management plans; (b) development and implementation of community-led rural investment projects through the provision of community grants; and (c) development and implementation of provincial-led rural investment projects in Participating Provinces. Community and provincial investments would have a climate and disaster risk reduction purpose such as community shelters, improved water supply and storage systems, earthquake retrofit strengthening or cyclone strengthening of buildings, foundation raising for flood alleviation, and shoreline protection systems.

Component D: Project management and monitoring & evaluation (appraisal cost US$0.9 million, actual cost US$1.56 million). This component was expected to provide efficient and effective management support for the implementation of the project and to carry out project monitoring and evaluation.

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

Project Cost: The total project cost at appraisal was US$9.1 million or US$10.2 million (if "in kind" Borrower Contribution of US$1.1 million is included). The actual total project cost was US$9.1 million. The ICR notes (page 50) that the government and community contributions were not formally tracked during implementation.

Financing: At appraisal, the project was financed through: (a) US$7.3 million grant from the Global Environmental Facility Least Developed Countries Fund (LDFC); and (b) US$1.8 million grant from Global Facility for Disaster Reduction and Recovery (GFDRR). The total grant was US$9.1 million. The grant was fully disbursed.

Borrower Contribution: At appraisal, the Borrower committed to US$1.1 million (in kind). As mentioned above, the government and community contributions were not formally tracked during implementation.

Dates: The project was approved on March 6, 2014, became effective on April 1, 2014 and closed on May 28, 2020 after a delay of one year (the original closing date was May 31, 2019) (see details below under restructuring).

Restructuring: The project underwent three Level 2 restructurings, on May 14, 2018, May 7, 2019, and November 26, 2019. The first restructuring (May 14, 2018) amended the results framework, components and procurement arrangements. The changes included lowering targets in PDO indicators, as well as changing six of the ten Intermediate Results Indicators and/or their targets (ICR, para 22).

The latter two restructurings extended the closing date.

- The first extension of the closing date from May 31, 2019 to November 28, 2019 was granted to allow sufficient time to complete the remaining activities that were necessary to achieve the PDO and that were delayed due to severe weather from January to March 2019 (Restructuring Paper para 14).

- The second extension for 6 months from November 28, 2019 to May 28, 2020 was given to complete the few remaining subprojects under Component C (which had been delayed due to bad weather and transportation issues), and to ensure that operation and maintenance arrangements were firmly in place for the community-led subprojects completed in September-October 2019 (Restructuring Paper Section 1).There were no changes to the scope of the activities or the financing from the LDCF.

Split rating: The PDO statement was not revised during the life cycle of the project. However, the end target for the PDO indicator “Number of beneficiaries in areas targeted under the program that benefit from CCA and/or DRR investments was reduced from 79,000 to 53,400 due to the locations of the community-led sub-projects which had lower population densities than anticipated at appraisal and therefore lower beneficiaries. According to the restructuring paper, at appraisal, the project was expected to reach beneficiaries in Honiara (the capital of Guadalcanal Province) as well as beneficiaries in remote provinces that were more vulnerable to climate and disaster risks. However, during implementation, the logistics of getting to these remote provinces and the challenges of transporting goods and providing oversight - required more time and was expensive. The project team clarified that the project ended up de-emphasizing Guadalcanal (as it was already extensively covered under the Second Rural Development Program and other post-2014 flood interventions) and focused more on highly vulnerable and isolated communities in the outer islands (Central, Malaita, Temotu, and Rennell and Bellona) that had been affected by a major drought in 2015-16 and by cyclones and storm surges in 2018 (ICR para 94). This resulted in a reduction of the overall number of beneficiaries by about a third and slightly decreased the number of community-led sub-projects (from 70 to 59). The project was still expected to benefit 70 communities, but some water investments in Malaita were combined across several adjacent villages to form provincial-level sub-projects (ICR para 26).

3. Relevance of Objectives

Rationale

Country and Sector Context. Solomon Islands is an archipelago with six major mountainous and 991 smaller islands, with a land area of 29,900 square kilometers spread over a vast sea area of 1.6 million square kilometers. It is located within the cyclone belt and the "Pacific Ring of Fire" - a region with high volcanic and seismic activity that surrounds the Pacific Ocean Basin. It ranks fourth in the World Risk Index 2019, having very high exposure, susceptibility and lack of adaptive capacity to natural disasters. It also ranks 19th in the 2018 Global Climate Risk Index and 10th in the world in terms of disaster risk from tropical cyclones, earthquakes and tsunamis.

Climate change was affecting water and food security, as well as many primary sectors on which the country’s economy depends. The rising sea level and storm surges, coupled with periods of extreme

rainfall, was exacerbating soil erosion and landslides, and causing frequent floods, impacting settlements and food gardens. In 2009, for example, heavy rain flooded western and eastern parts of Guadalcanal, affecting 52,000 people and incurring a cost of US$3 million. Saltwater intrusion into coastal areas also exacerbated water scarcity and caused food shortages, particularly in the outer islands and lake areas (ICR para 3).

In 2013, the government developed an integrated climate change adaptation (CCA) and disaster risk management (DRM) national framework, building on the 2010 National Disaster Risk Management Plan and the 2012-17 National Climate Change Policy to achieve climate-resilient development (ICR para 4). However, the government lacked sufficient capacity to support this agenda - it lacked experience in applying risk assessments to local planning and translating it into more resilient community investments.

Alignment with Borrower Strategy. At appraisal, the project objective was aligned with the 2011-2020 Solomon Islands National Development Strategy (NDS) objectives to “support the vulnerable” and “effectively respond to climate change and manage the environment and risks of natural disasters”. The PDO was also aligned with "Priority 10" under the Medium Term Development Plan (2016-2020), which focused on improving disaster and climate risk management, including: building capacity at all levels to ensure their routine integration into plans and policies; developing community risk management plans; and using assessments to identify (community) projects that directly address climate and disaster hazards. At closure, the PDO remained highly relevant to the long-term National Development Strategy (2016-2035), which had as one of its five objectives, “a resilient, and environmentally sustainable development, with effective disaster risk management, response and recovery”.

Alignment with Bank Strategy. The PDO was well-aligned with the Bank's Country Partnership Strategy (FY2013-2017) at appraisal which emphasized “greater resilience of rural communities to climate change, natural hazards, and catastrophic disasters” (Outcome 8 of the Strategy). The CPS (para 51) mentioned that the Bank would support capacity building and community driven investments to build climate and disaster resilience

The PDO remained aligned with the current Country Partnership Framework (CPF) for FY 2018-2023, but less explicitly than at appraisal. Specifically, the PDO remained aligned with the CPF’s objective 3.2 “Improve access to service delivery in underserved communities,” which emphasizes fragility reduction through more equitable delivery of social infrastructure and services to rural and peri urban communities. The CPF also emphasized tackling fragility by addressing climate change and disaster risks, but through a mainstreaming approach, i.e. by incorporating climate resilience into water supply and major transport infrastructure. Thus, although the current CPF does not refer explicitly to the PDO, the project’s short-term outcomes (strengthening government capacity in disaster and climate risk management and implementing DRR and CCA investments in vulnerable rural communities) remain aligned with, and relevant to, the CPF.

The project is also aligned with all three objectives of the 2018-22 GEF Programming Strategy on Adaptation to Climate Change - Objective 1 "Reduce Vulnerability and Increase Resilience through Innovation and Technology Transfer for Climate Change Adaptation"; Objective 2 "Mainstream Climate Change Adaptation and Resilience for Systemic Impact"; and Objective 3 "Foster Enabling Conditions for Effective and Integrated Climate Change Adaptation" (ICR para 33).

The project objective is aligned with the country context and the strategies of the government and the Bank. According to the World Bank, the Solomon Islands is classified as Fragility and Conflict-affected Situations (FCS), with high institutional and social fragility. The CPF emphasizes tackling fragility through a

mainstreaming approach, e.g., by consolidating the World Bank-supported community-based programs and incorporating climate resilience into water supply and major transport infrastructure (ICR para 31). Given the vulnerability to natural hazards and the impacts of climate change, which together result in large economic losses and loss of life, the relevance of the objective is pitched at a level that adequately addresses a potential solution to a development problem i.e. climate change was affecting water and food security, as well as many primary sectors on which the country's economy depends. The rising sea level and storm surges, coupled with periods of extreme rainfall, was exacerbating soil erosion and landslides, and causing frequent floods, impacting settlements and food gardens.

The relevance of objectives is high.

Rating
High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective
Increase the capacity of selected rural communities to manage natural hazards and climate change risks.

Rationale
Theory of Change (ToC). The project's theory of change established a valid causal chain between the project's activities, outputs and outcome. The ToC assumed that project activities such as (i) helping selected rural communities implement disaster risk reduction (DRR) and Climate Change Adaptation (CCA) investments through participatory Community-based Disaster Risk Management/Vulnerability and Adaptation (CBDRM/V&A) plans, (ii) strengthening of climate and disaster risk information and early warning systems, and (iii) strengthening government capacity in disaster and climate risk management - would result in outputs such as climate and disaster risk resilient infrastructure, development of risk assessment and community planning tools, volcanic/seismic early warning systems, national disaster risk management plans. These outputs would support short term outcomes such as (i) strengthening government capacity in disaster and climate risk management; and (ii) disaster risk reduction and climate change adaptation investments in selected communities. This would assist in the achievement of the PDO "increase the capacity of selected rural communities to manage natural hazards and climate change risks".

Outputs

- The project targeted communities in five provinces (Guadalcanal, Central, Malaita, Temotu, and Rennell and Bellona). The project assisted the communities in the development of the Community-based Disaster Risk Management (CBDRM) plans. In total 70 CBDRM plans were prepared, achieving both the revised target (59) and original target (70).

- At the National Level, for Ministry of Environment, Climate Change, Disaster Management, and Meteorology (MECDM), the project helped clarify and separate National Disaster Management Office (NDMO) responsibilities for disaster management (preparedness, response and recovery) from those of the Climate Change Office (climate and disaster resilience). The project helped revise the National Disaster Management Plan (NDMP), which was approved by the Cabinet on February 16, 2018. The revised plan clarified the functions of the National Disaster Council (NDC) and Provincial Disaster Officers and established six sectoral coordinating committees.

- The development of an Integrated National Policy Framework to support mainstreaming resilience across sectors was not achieved because various ministries viewed this as encroaching on their mandates and increasing their responsibilities (ICR para 56). However, the project supported the preparation of a position paper for the framework, the elements of which were included in the new NDMP.

- The project helped strengthen MECDM's Risk Information Management Database by: (i) integrating CBDRM/V&A community and provincial-level assessments; (ii) streamlining post-disaster impact assessment data and mapping; and (iii) training seven MECDM staff. MECDM is currently using the database for emergency planning and response work.

- For the Ministry of Health and Medical Services (MHMS), the project carried out following activities: (i) developed a screening tool and guide for risk proofing investments; (ii) completed risk maps and a vulnerability index for health facilities in Guadalcanal and Central Provinces; (iii) developed radio awareness programs (focusing on risk and climate resilience in community water use and hygiene; and (iv) helped prepare an advisory health risk resilience brochure for 10 provinces, with support from provincial health promotion officers.

- Within the Ministry of Mines, Energy and Rural Electrification (MMERE) Geological Survey Division (which is responsible for seismic and volcanic monitoring), the project helped establish a new national geohazard monitoring network to provide real-time data on earthquakes, tsunamis and volcanos. The project installed and equipped new seismic stations in six provinces (Temotu, Central Malaita, Isabel, Makira, Rennell and Bellona) and upgraded the Honiara-Guadalcanal base station; helped establish a monitoring center in Honiara; and provided training on operation and maintenance.

Outcomes

The outcome target value for the first PDO indicator "Number of beneficiaries in areas targeted under the program that benefit from Climate Change Adaptation (CCA) and/or Disaster Risk Reduction (DRR) investments" was reduced from 79,000 to 53,400. This was not achieved (discussed below under "Objective 1 Revision 1").

The outcome target for the second PDO indicator "percentage of targeted communities assessed with CBDRM plan satisfactorily implemented based on a scoring system" was not measured due to methodological issues (see M&E design - section 9a). The PAD suggested two methodologies to measure this indicator. However, neither could be applied, the first due to an inherent design flaw, and the second because the project never developed a scoring system to measure community capacity gains. The ICR provides indirect evidence - in total, 63 of 65 communities (97 percent) implemented their top priority investments—those identified in their CBDRM/V&A plans as addressing "very high" vulnerability, and

"extreme risk" of natural hazards and climate change and demonstrated substantial capacity in doing so. The remaining two communities were only able to implement the second highest priority in their CBDRM/V&A plans due to cost constraints. (ICR para 47). The ICR reports (para 48) that the communities were actively engaged in sub-project planning, implementation and maintenance.

According to the beneficiary survey, **adaptive learning** had the highest rating, with 77 percent respondents agreeing or strongly agreeing, that they "had learned considerably from how (they) dealt with past disasters, (which) is crucial in successfully dealing with future events." In terms of **adaptive capacity** to handle future events, the respondents rated their coping, financial and transformational capacity poorly, primarily because they felt they needed substantial time to recover from disasters, and also because they had no savings and very little cash income.

The CBDRM/V&A process was incorporated into MECDM 2020 plan and the 2016-2035 National Disaster Medium Term Strategy as "supporting the development of community risk management plans in all high-risk communities".

The three ministries - MECDM, MHMS, and MMRE have allocated budget for activities identified by the project for CCA and DRM.

The project assisted in building the institutional capacity of the Ministry of Environment, Climate Change, Disaster Management, and Meteorology (MECDM) for disaster management; assisted in the development of a Risk Information Management Database; strengthen cross-sectoral and multi-level disaster coordination and development of the Community-based Disaster Risk Management (CBDRM) plans. However, the PDO target "Number of beneficiaries in areas targeted under the program that benefit from Climate Change Adaptation (CCA) and/or Disaster Risk Reduction (DRR) investments" was not achieved. Also, the PDO indicator "percentage of targeted communities assessed with CBDRM plan satisfactorily implemented based on a scoring system" was not measured. Therefore, the efficacy of this objective is rated **modest**.

Rating
Modest

OBJECTIVE 1 REVISION 1
Revised Objective
Increase the capacity of selected rural communities to manage natural hazards and climate change risks.

Revised Rationale
The PDO was unchanged but the 2018 restructuring reduced the project scope and the outcome targets.

Outputs

- All outputs discussed above are applicable here too.
- 65 sub-projects were completed under community-led DRM/CCA investments, exceeding the revised target 59. The original target was 70. The sub-projects were designed with resilient standards that considered disaster and climate risks. More than 80 percent of sub-projects involved water,

particularly rainwater harvesting, the top priority identified by communities in Malaita, Rennell, and Central Provinces which suffered from water shortages during the dry season. Resilient buildings/evacuation centers, footbridges and shoreline protection works were also financed. The project also built an elevated dormitory and classroom (ICR para 38).

- 5 sub-projects were completed under community-led DRM/CCA investments, exceeding the revised target 4. The original target was 4.

Outcomes

The outcome target value for PDO 1 indicator "Number of beneficiaries in areas targeted under the program that benefit from Climate Change Adaptation (CCA) and/or Disaster Risk Reduction (DRR) investments" was reduced from 79,000 to 53,400; the baseline was 1,000. The actual value was 68,878, exceeding the revised target. A total of 49 percent of beneficiaries were women. Beneficiaries were spread over five provinces (Guadalcanal, Central, Malaita, Temotu, and Rennell and Bellona), with nearly a quarter located in the last two remote provinces (ICR para 36).

During Tropical Cyclone Harold in April 2020, shoreline protection works at Tulagi demonstrated their impact by protecting the coastal road and foreshore trees (ICR para 40).

According to the beneficiary survey conducted at the end of 2019, the beneficiaries cited following benefits from water subprojects: (i) access to clean water during floods (compared to previous reliance on muddy or salty spring/well water); (ii) improved personal safety during storms, as they no longer had to venture far to collect water; (iii) significant time savings (on average 83 minutes/person/day) from no longer having to fetch water far from homes; (iv) improved health and hygiene from cleaner drinking and cooking water and more water for bathing and sanitation. Footbridges provided safe access to school children and community members during high tides, storm surges or floods (ICR paras 41 and 42).

The project also produced community and economic development benefits. Approximately 55 percent of respondents used time savings from water collection to supplement their income through increased fishing, gardening, food and artifact sales. This resulted in incremental household income ranging from Solomon Island Dollars (SI$) 780/year for vegetable sales to SI$5,200/year for fishing—equivalent to 1 to 8 percent of average household income in target provinces.

Revised Rating
Substantial

OVERALL EFFICACY
Rationale
The efficacy rating before restructuring was modest because of underachievement in the number of beneficiaries relative to the original Outcome 1 target. The project assisted in building the institutional capacity of the Ministry of Environment, Climate Change, Disaster Management, and Meteorology (MECDM)

for disaster management; assisted in the development of a Risk Information Management Database; however it failed to reach the original PDO target "Number of beneficiaries in areas targeted under the program that benefit from Climate Change Adaptation (CCA) and/or Disaster Risk Reduction (DRR) investments". Also, the PDO indicator “percentage of targeted communities assessed with CBDRM plan satisfactorily implemented based on a scoring system" was not measured.

Overall Efficacy Rating
Modest

Primary Reason
Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale
The efficacy after restructuring is rated substantial as the revised outcome target was exceeded. The project assisted in strengthening government and community capacity in disaster and climate risk management, development of risk assessment and community planning tools, volcanic/seismic early warning systems, national disaster risk management plans, and completion of community-led DRM/CCA investments.

Overall Efficacy Revision 1 Rating

Substantial

5. Efficiency

Economic Efficiency

At appraisal, an economic analysis was not carried out due to the difficulties of quantifying the damage associated with future effects of climate change (PAD para 46). The PAD (para 44) noted that the cost to Solomon Islands of damage due to natural hazard events (e.g., cyclone winds, earthquake, and floods) is significant. For the provinces most exposed to the natural disasters (such as Temotu, Makira and Guadalcanal), the cost of cyclones was estimated to be 1 - 2 % of the value of assets each year by the Pacific Catastrophe Risk Financing Initiative (which is the most comprehensive analysis of natural hazard risks in the Pacific States).

The PAD further mentioned that Solomon Islands experience the full spectrum of natural hazards and the impact of natural hazards on communities in terms of deaths and displaced populations is well documented. However, the direct costs of recovery and the indirect economic impacts are not well quantified. For example, the Santa Cruz earthquake and resulting tsunami in February 2013 caused significant damage to 26 villages in Temotu Province, adversely affecting about 1,170 households and 4,950 people. There were 10 deaths, 31% of houses were destroyed, and 34% of houses were damaged. The direct cost of recovery was estimated around US$2.8 million (to be funded by donors). Indirect costs incurred by householders and the cost of economic recovery would be considerably higher.

For individual village level sub-projects, the PAD presented a simplified economic analysis (PAD Annex 6). The costs included investments in retrofitting, strengthening, or relocating infrastructure (such as buildings), which are vulnerable to damage by earthquakes, cyclone winds, storm surge waves and tsunami. The benefits were the damage averted and it was assumed that damage averted would increase up to the design standard return period, after which the structure would fail completely. The standard design return period was taken as twice the economic design life; higher design standards give lower economic returns. However, design standards are also set for other reasons, including minimum acceptable levels of public safety (PAD Annex 6). For all cases of retrofit investments that cost up to 50% of replacement cost, the economic rate of return (ERR) was 10% and above.

At completion, however, only two of the 70 sub-projects - a primary school and a community shoreline protection, involved retrofitting and could be directly compared with appraisal estimates (all others were new investments). Both had a 20-year design standard, with strengthening costs amounting to 38% and 41% of replacement value, respectively. The ex-post ERR was 17% for the school (compared to 10 to17.3% at appraisal for similar projects) and 11.6% for the community shoreline protection sub-project (compared to 10% at appraisal).

In addition, a comprehensive cost-benefit analysis was carried out at completion for all 70 sub-projects (grouped by type). The overall ERR was 18.2% with a net present value (NPV) of US$5.8 million (at 6 percent discount rate) (ICR para 67).

The ICR (para 69) noted that the individual sub-projects were generally cost-effective with unit costs averaging US$40,496 at completion, 12% below the original estimates, with community rainwater harvesting, gravity-fed systems and footbridges being the most efficient, at 17 - 21% below original estimates.

Administrative Efficiency

Although the project management costs were 17% of total costs, higher than 10% estimated at appraisal, it is comparable to similar projects - 15% in the Sao Tome and Príncipe Adaptation Project (P111669), and 21% and 12% respectively in Phases II and III of the Kiribati Adaptation Program (P089326 and P112615).

Overall, the project efficiency is **substantial**.

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:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	10.00	0 ☑ Not Applicable
ICR Estimate	✓	18.20	77.40 ☐ Not Applicable

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

6. Outcome

Under the original outcome targets. The relevance of objectives is rated high. The efficacy rating before restructuring was modest because of underachievement in the number of beneficiaries relative to the original Outcome 1 target. Efficiency is assessed as substantial. The overall project rating is ***moderately unsatisfactory* (3).**

Under the revised outcome targets. Relevance of objectives is rated high. The efficacy after restructuring is rated substantial as the revised outcome target was exceeded. Efficiency is assessed as substantial. The overall project rating is ***satisfactory* (5).**

A split rating is applied based on the disbursement shares before and after the project restructuring in 2018, which were 51.6% and 48.4% accordingly. The overall outcome rating is **Moderately Satisfactory**, the weighted value is 4 (0.516*3+ 0.484*5 =3.97).

a. Outcome Rating

Moderately Satisfactory

7. Risk to Development Outcome

Government Risk. The government ownership risk is considered low because the government has shown its commitment to improved disaster and climate risk management through the revised National Disaster Management Plan and mainstreaming it. The government also plans to include CCA/DRM activities in future projects focusing on integrated economic development in rural areas, which is likely to provide continued support to communities and provinces.

Operational and Maintenance Risk. The operational and maintenance risk of community investment is modest as the PMU has prepared operational and maintenance plans for each site. These plans included: (i) agreed roles and responsibilities, and (ii) maintenance strategy such as community inputs for routine maintenance, and fund-raising through Sub-Project Implementation Committees (SICs) or church committees for more substantial repairs.

Social Capital Risk. The social capital risk that the capacity of the communities to manage natural disasters and climate change is substantial, especially in case of increased frequency and/or intensity of disasters. The adaptive capacity of the communities may be exhausted and would require long term support. The ICR reports (para 49) that several respondents mentioned that they had forgotten the details of what they learned at the training.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project design benefitted from the experience of other projects in the region: the Kiribati Adaptation Program – Phase III (P112615); the Samoa Second Infrastructure Asset Management Project (P075523); and the Samoa Enhancing the Climate Resilience of Coastal Resources and Communities Project (P126596). The project assumed communities would strengthen disaster and climate risk management by implementing various parts of their Community-Based Disaster Risk Management/Vulnerability and Adaptation (CBDRM/V&A) plans (i.e., through a process) modeled on the Samoa and Kiribati experiences. However, it overlooked the fact that in these countries, actual implementation was mostly limited to single priority investments during the projects' lifetime - i.e., communities acquired adaptation capacity primarily through an output (ICR para 85).

The risk assessment at appraisal was realistic, with an overall rating of substantial. The project included adequate mitigation measures such as: training, specialist consultants and international senior advisors to help mitigate technical, fiduciary and project management risks.

The project design had few shortcomings: (i) weak M&E design (see section 9a); (ii) inadequate assessment of cost and time required to reach remote location (this resulted in the reduction of beneficiaries and decrease in the targets for the first PDO indicator); and (iii) relegating the development of screening tools or scorecard for the measurement of PDOs 2 and 3 to the implementation phase. These were never fully developed, thus leading to inconsistent reporting of these indicators.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

The ICR reports (para 123) that the supervision teams were adequately staffed with technical, procurement, financial management, and social and environmental specialists. Financial management reviews were comprehensive and practical advice was given to PMU. Also, intensive support was provided to the PMU procurement officer.

The Implementation Status and Results Reports (ISRs) ratings for "progress towards achievement of PDO" and "Overall implementation Progress" were realistic. They were moderately unsatisfactory for 1.5 years beginning in mid-2017 until performance improved. Financial and procurement reviews led to several downgrades in fiduciary ratings until problems were solved.

In late 2014, the Bank team organized a south-south exchange with the Vanuatu Meteorology and Geohazards Department to advise the government on the seismic network and to ensure consistency with Melanesian Volcano Network and Oceania Regional Seismic Network standards.

After the mid-term review, the World Bank team worked proactively with the government to restructure the project and adjust indicators and procedures that had hindered progress. There was one change in the World Bank Task Team Leader, which resulted in some discontinuity, but, overall, the handover was managed well (ICR para 126).

The main shortcoming was that the screening tools or scorecard for the measurement of PDOs 2 and 3 were not developed.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design
The results framework was designed to be simple, however, there were some shortcomings:

- There were issues relating to the measurability of the second and third outcome indicator. The methodology was not clearly specified. For the second indicator, the PAD proposed measuring it as the "percentage of targeted communities assessed with a satisfactorily implemented CBDRM plan based on a scoring system", suggesting two possible methodologies: number of communities applying at least 70 percent of CBDRM/V&A recommendations; and/or using a composite scorecard to assess behavioral change. The ICR notes (para 96) that first methodology was inherently problematic, since, apart from the sub-projects, communities would not have been able to implement other CBDRM/V&A recommendations without alternative funding. The second was in theory measurable, but scorecard development was left until the implementation stage. The third outcome indicator assumed a mainstreaming screening tool would be developed during implementation, with ministries' annual work plans and budgets sufficiently detailed to enable screening (see M&E Implementation below).

- No M&E advisor or specialist was planned at appraisal. The PAD envisaged that during implementation, the PMU would hire an M&E advisor to establish a practical M&E system, as well as an M&E specialist to evaluate the project at mid-term and completion.

b. M&E Implementation
During implementation, the baseline data on number of beneficiaries and community vulnerabilities was collected. However, the M&E advisor and specialist planned at appraisal were not hired. Therefore, the tools proposed at appraisal to measure the second and the third outcome indicators were never fully developed, leading to their inconsistent reporting (ICR para 99).The Ministry of Environment, Climate Change, Disaster Management, and Meteorology assigned an in-house M&E officer to carry out M&E function. However, the M&E officer transitioned to other functions (in May 2018), thus adversely affecting M&E implementation. The ICR reports (para 100) that PMU had to rely on sporadic feedback, from engineers, work supervisors and community helpers to update the results framework. The third PDO

indicator was clarified at restructuring, which removed the need to monitor ministries' budgets against their mainstreamed activities.

A beneficiary survey was carried out using sound methodology and was implemented by trained surveyors (para 101). It covered 35% of the communities and 20 percent of provincial sub-projects. The ICR reports that the beneficiary provided reliable and consistent feedback on key project outcomes and processes (ICR para 101). The GEF tracking tool that was developed at appraisal was not updated during implementation (ICR para 103).

c. M&E Utilization

The ICR reports (para 104 and 105) that the M&E findings were used to increase the number of volcanic/seismic stations from two to seven to ensure adequate national coverage.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

Appraisal

The project was assigned Environmental Category "B" and following five safeguards policies were triggered: Environmental Assessment OP/BP 4.01, Physical Cultural Resources OP/BP 4.11, Natural Habitats OP/BP 4.04, Indigenous Peoples OP/BP 4.10, Involuntary Resettlement OP/BP 4.12.

Since the specific nature and location of sub-projects were not known in advance, the project prepared an Environmental and Social Management Framework (ESMF), which included an Indigenous Peoples Participation and Consultation Framework; a Grievance Redress Mechanism; Land Acquisition and Compensation Guidelines; and a Resettlement Policy Framework. The ESMF and other safeguards related documents were disclosed locally and at the InfoShop on October 29, 2013. Since most beneficiaries were indigenous peoples' communities, a separate Indigenous Peoples' Plan was not required.

During implementation

The project complied with applicable environmental and social safeguards and was rated Satisfactory on these aspects throughout implementation (ICR para 109). The PMU hired a Social and Environmental Safeguards Officer, who supported subproject screening and monitoring.

Environmental Assessment OP/BP 4.01. The Environmental and Social Management Plans were developed for provincial sub-projects, including a Public Environment Report for the Tulagi shoreline protection. This was approved by the Environment and Conservation Division. While most sub-projects did not generate major environmental impacts, the Tulagi shoreline protection works resulted in waste and sediments deposited around exposed roots of centenary foreshore trees and needed further landscaping to

return the beach to pre-construction conditions. Appropriate mitigating measures were taken prior to project completion (ICR para 110).

Natural Habitats OP/BP 4.04. The ICR mentions that the screening procedures allowed sub-projects to be implemented in natural habitats provided benefits outweighed negative impacts and the mitigation took place in accordance with OP 4.04 (ICR para 108). No additional details were provided.

Physical Cultural Resources OP/BP 4.11. The ESMF prepared at appraisal included provisions to avoid impacts on known "taboo" sites or physical cultural resources and included a protocol to manage chance findings. The ICR does not report if there were any chance findings.

Indigenous Peoples OP/BP 4.10. The ICR only mentions that "as most expected beneficiaries were indigenous peoples communities, a separate Indigenous Peoples' Plan was not required". It does not provide additional details for this safeguards policy.

Involuntary Resettlement OP/BP 4.12. The ICR (para 109) reports that for community sub-projects involving land, written voluntary land donation agreements were secured prior to the opening of bank accounts by Sub Projects Implementation Committees (SICs). The project team clarified that there was no involuntary resettlement.

For seismic station placement, the PMU prepared a Land Acquisition Plan (in accordance with OP 4.12 and the 1996 National Land and Title Act) and mobilized Land Acquisition Officers to manage consultations with provincial governments and customary owners. The land acquisition for seismic stations was satisfactorily addressed in all sites except Savo (Central Province) where the landowner disputed the proposed compensation despite an appeal court judgement and legal advice from the Attorney General against him. Following further consultations with the PMU, an agreement was eventually reached with the landowner (ICR para 108).

b. Fiduciary Compliance

Financial Management. Although the project complied with its financial covenants, there were significant delays (about two to five months) in the submission of annual audits and Interim Unaudited Financial Reports (ICR para 114). The 2014-18 audits were unqualified. At the time of the writing of the ICR, the 2019 audit (due June 30, 2020) and 2020 audit (due March 2021) had not been submitted (ICR para 115). The project team informed IEG that the 2019 audit report is still outstanding, and the team is following this up with the government.

There were several weaknesses in financial records: (a) posting errors in the financial system; (b) late acquittals of travel advances; (c) delays and errors in the consultants' tax liability; (d) out-of-date commitments register and project budget; (e) weaknesses in fixed assets register and contract management; and (f) persistent delays in bank reconciliation statements. To address these, the PMU appointed a financial assistant in 2015 to support the Financial Officer's team and a short-term financial advisor in 2018. A detailed action plan, agreed with the World Bank team, helped resolve most issues (ICR para 116).

Procurement.

The ICR reports (para 111) that the project complied with its procurement guidelines and that there was no evidence of mis-procurement, fraud or corruption. In 2017, there was a theft of a small amount of building materials from one of the sub-projects in Temotu (estimated around US$50). This was reported to the police and the project team informed IEG that this amount was recovered.

During the initial years, the procurement of sub-project materials was slow as the PMU relied on community participation in procurement. To improve procurement, the PMU began procuring most goods and services not available locally to the communities, using Invitations to Quote (ITQs) covering several sub-projects. There were delays in procurement in 2014 and 2015. These were resolved through the recruitment of an international procurement specialist to support the national procurement officer in December 2015, and again in 2017, when the procurement officer resigned.

The procurement reporting under the Systematic Tracking of Exchanges in Procurement (STEP) system encountered some problems. The project team elaborated that the STEP was complicated to navigate due to cascading menu and users need some dedicated time to become familiar with the system. In addition, initially the low-bandwidth capacity in Honiara meant that the system was slow, leading the PMU to continue to use an excel based procurement monitoring system, particularly since most procurement did not require prior review. Eventually, STEP user difficulties were managed through intensive support from the Bank team, as well as improvement in the ICT in Solomon Islands.

c. Unintended impacts (Positive or Negative)

---

d. Other

The project engaged women through active participation in Sub-Project Implementation Committees (SICs). Women acted primarily as treasurers, secretaries or technical members. Women voiced their opinions in sub-project proposal discussions, particularly to prioritize water, organized community works and raised funds (ICR para 75). During implementation, women helped carry gravel, sand, stones and timber to worksites, provided food and water to workers, and helped with digging and land clearing at some sites (ICR para 76). They played key role in maintenance through cleaning, weeding and beautifying areas around water tanks, taps, footbridges and community halls; preventing children from wasting water or damaging taps; organizing family maintenance groups; and raising funds.

The sub-projects increased women's personal safety, particularly during droughts and storms, as they no longer had to venture far for water. Moreover, the sub-projects freed up a considerable amount of time, enabling them to: earn incremental sales from gardens or fishing, and engage more in community activities (ICR par 77).

The project contributed to poverty reduction directly, through increased access to cash income, and indirectly through education, and by reducing the risk of asset losses during disasters (ICR para 81).

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	Substantial	

12. Lessons

The following key lessons are taken from the ICR (paras 132 to 136), with some adaption in language:

Measuring outcomes is particularly complex in disaster risk management/climate change adaptation projects and requires strong attention during design and implementation. In this project, the proposed scorecard to measure community risk management capacity and a screening tool to measure national mainstreaming were never developed, hampering guidance on how outcomes would be measured. Instead, most of the regular monitoring focused on outputs and intermediate results indicators. Therefore, common outcome indicators for climate and disaster reliance projects need to be developed and applied through specific training and advice suited to the country and project context

Mainstreaming disaster risk management/climate change adaptation in sectoral ministries takes time and needs to be measurable. Given the wide-ranging impacts of climate change and disasters on the country, the project focused on institutional change aimed at incorporating climate and disaster risk into key sectors. However, this type of mainstreaming requires time and considerable political influence and has to be clearly traceable through planning and budgeting processes. Therefore, mainstreaming climate and disaster risk and resilience should be implemented through a government agency responsible for development and budgetary processes, with input from technical ministries as needed

Community-driven development can be a major challenge for climate and disaster resilience projects particularly for remote communities with weak capacity and when inputs are not locally available. In this project, PMU-led bulk procurement but allowed communities to retain some funds for local purchases, and transparently agreeing on PMU-managed funds in community sub-grant agreements. This helped overcome the challenges while maintaining strong community ownership.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is well-written and provides a detailed overview of the project. It is results based. The theory of change is clearly presented in a logical sequence from activities to achievement of the PDO and underlying assumptions are also discussed. The ICR draws good lessons from the experience of implementing this project. The ICR could have been more concise (31 pages), as per the Bank ICR IPF guidance that recommends for the main text not to exceed 15 pages. Overall, the quality of ICR is substantial.

a. Quality of ICR Rating
Substantial