Report Number: ICRR0022873

1. Project Data

Project ID P126596	**Project Name** Enhancing Climate Resilience of Coastal
Country Samoa	**Practice Area(Lead)** Environment, Natural Resources & the Blue Economy

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
TF-15828	31-Dec-2018	14,272,919.73
Bank Approval Date	**Closing Date (Actual)**	
27-Dec-2013	30-Jun-2021	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	14,600,000.00	14,600,000.00
Revised Commitment	14,600,000.00	14,272,919.73
Actual	14,554,386.89	14,272,919.73

Prepared by	Reviewed by	ICR Review Coordinator	Group
Chikako Miwa	Maria Vanessa Corlazzoli	Christopher David Nelson	IEGSD (Unit 4)

2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO) was "to support coastal communities to become more resilient to climate variability and change" (Grant Agreement, Schedule 1, page 4). The PDO formulation was identical to that in the PAD (para 17).

Regarding coastal communities targeted in the PDO, all the 16 districts that were supported under the project have coastlines (PAD, Figure A 2.1, page 29). Of the 100 villages reached by the project, 80 were coastal and 20 (mostly around Apia) were located further inland (ICR, para 51).

The PAD implicitly assumed that resilience of coastal communities to climate variability and change would be assessed through four intended resilience outcomes: (i) population assisted to adapt to climate variability and change; (ii) increased protection of people's lives and livelihoods; (iii) increased protection of coastal and inland infrastructure and environment; and (iv) increased awareness of climate change impacts and adaptation activities in communities, civil society, and the government (ICR, para 33).

Climate change was defined as "a change in the state of the climate that can be identified … by changes in the mean and/or the variability of its properties and that persists for an extended period," and climate variability as "variations in the mean state and other statistics … of the climate … beyond that of individual weather events" (IPCC 2014, cited in ICR, page 2).

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
27-Dec-2015

c. Will a split evaluation be undertaken?
No

d. Components
Component 1: Implementation of Priority Adaptation Measures to Manage Climate and Disaster-related Threats *(Estimate: US$10.2 million; Actual: US$10.0 million)* intended to strengthen the adaptive capacity of communities and increase the resilience of coastlines to climate change risks, by: (i) updating CIM Plans through a participatory process to include disaster risk management, village sustainable development, and watershed management; (ii) preparing sub-projects aimed at strengthening climate resilience; and (iii) providing sub-grants to finance implementation of eligible sub-projects. At appraisal, provision of sub-grants for implementing priority climate resilience was planned under component 1. At the first restructuring in 2015, the reference to sub-grants was removed from component 1 and replaced with a sub-component to prepare and implement village-level sub-projects aimed at strengthening climate resilience. The second restructuring added another sub-component to prepare and implement similar sub-projects at district-level.

Component 2: Strengthened Climate Information Services *(Estimate: US$1.5 million; Actual: US$1.9 million)* intended to increase public awareness of climate change issues and improve the availability and use of data for risk analysis, hazard mapping, and knowledge sharing, by: (i) providing training for CSOs to enhance their capacity for delivery of climate change-related services; and (ii) developing a Community Engagement Plan (CEP) and an associated communication strategy; and (iii) strengthening data platforms

for spatial hazard mapping through financing of a comprehensive light detection and ranging system (LiDAR) throughout the country.

Component 3: Institutional strengthening for climate and disaster resilience, project coordination and monitoring *(Estimate: US$2.9 million; US$ 2.0 million)* intended to strengthen government capacity in project management, coordination, and monitoring.

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

Project Cost: At appraisal, the project was estimated to cost US$14.60 million (PAD, Table 1, page 9). At project closing, the actual cost was US$17.92 million (ICR, Table 3.2, page 41).

Financing: At appraisal, the project was planned to be financed by US$14.60 million grant from the Strategic Climate Fund (SCF) - Pilot Program for Climate Resilience (PPCR) (PAD, para 25). At project closing, the actual disbursements were approximately US$13.93 million from the SCF-PPCR (ICR, Table 3.1, page 41) and approximately US$0.18 million from the Enhancing the Climate Resilience of Coastal Resources and Communities (ECR) project funded by the Adaptation Fund (ICR, Table 3.2, page 41).

Recipient Contribution: At appraisal, no contribution from the recipient was explicitly described in the PAD. At project closing, US$3.81 million was provided from the recipients, i.e., the Government, the Implementing Agencies (IAs), and Target Villages (ICR, Table 3.2, page 41).

Dates: The project was approved on December 27, 2013 and became effective on February 7, 2014. The Mid-Term Review was published on June 12, 2017.

There were four restructurings: the first (December 27, 2015), the second (June 7, 2017), the third (June 28, 2018), and the fourth (April 2, 2020). The first restructuring added the Ministry of Finance (MOF) as another executing agency alongside the Ministry of Natural Resources and Environment (MNRE). At the same time, legal covenants were revised from the statement “the Recipient (MNRE) shall provide sub-grants to beneficiaries to implement sub-projects” with “the Recipient (MOF, through CSSP) shall prepare and implement sub-projects” (ICR, para 20). In addition, the original condition requiring adoption of a Community Engagement Plan prior to sub-grant disbursement was deleted (ICR, para 19). The second restructuring allowed the Implementing Agencies (IAs), i.e., the State-Owned Enterprises, line agencies, and other public bodies to become recipients of district-level sub-grants (ICR, para 17). The original sub-grants’ disbursement category (Category 2, US$9.4 million) was split into two, reflecting the expected allocation of US$2.5 million for village sub-projects (now Category 2) and US$6.9 million for district sub-grants (now Category 3). (ICR, para 19). At the same time, an additional disbursement condition for Category 3 was established, requiring an adoption of a District Sub-Project Plan and a consequent revision of the Project Operational Manual (ICR, para 19). Moreover, the second restructuring increased targets of PDO indicators 2 and 3. However, at the third restructuring, the PDO indicator 2’s formulation was revised along with the Intermediate Results (IR) indicators 3 and 6. The PDO indicator 3 was deleted. New IR indicators 8 and 9 were added. The third and the fourth restructurings extended the project closing date by 18 months and 12 months, respectively, in order to complete the prolonged activities (ICR, para 21).

The project closed on June 30, 2021, after two closing date extensions totaling two and a half years of delay from the original closing date of December 31, 2018.

IEG conferred with the ICR (para 32) that a split evaluation was deemed unnecessary because "the revision of outcome targets did not result from a narrowing of the project's scope, but rather from the types of sub-projects which districts and villages ultimately prioritized."

3. Relevance of Objectives

Rationale

Country and Sector Context: Although 70 percent of Samoa's population lived within one kilometer from the coast, 80 percent of its 403 km coastline was considered sensitive or highly sensitive to erosion, flooding, and landslides, that were expected to be worsened by economic and urban growth (PAD, para 2). According to the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI, 2011), the country's future average annual losses from cyclones, earthquakes, and tsunamis were estimated to be US$9.9 million, with an average of 19 fatalities per year (ICR, para 2). Losses and damages to human lives, houses, and economies from the severe natural disasters such as the 2010 tsunami and the 2012 Cyclone Evan highlighted the need to mobilize villages to better manage the risks of natural hazards and climate variability and change.

Relevance to Government Strategies: At appraisal, the objective was in line with the Strategy for the Development of Samoa (SDS) 2012-2016, which focused on strengthening economic resilience and encouraging inclusive growth by strengthening climate resilience of the country as a whole and enhancing the resilience of communities to the impact of climate change and natural disasters (PAD, para 15). At project closing, the objective was well aligned with four of the 14 key outcomes of the SDS 2016/17-2019/20, that were, community development enhanced, access to clean water and sanitation sustained, environmental resilience improved, and climate and disaster resilience (ICR, para 30).

Relevance to Bank Assistance Strategies: At appraisal, the objective was in line with the Country Partnership Strategy that was approved in 2012 and aimed for building resilience to natural disasters and climate change as one of the main themes (PAD, para 16). At project closing, the objective aligned with the Regional Partnership Framework (RPF) FY17-21, particularly regarding Objective 3.1 "Strengthened preparedness and resilience to natural disasters and climate change" under Focus Area 3 "Protecting incomes and livelihoods" (RPF, page 91). The objective was also in line with Samoa 2040 and its vision to transform the economy to sustainably increase the incomes and employment of all Samoans through interventions such as investing in climate-resilient physical infrastructure (page 52).

Prior Sector Experience: In the 2000s, the World Bank and other assistance started providing support to develop a Coastal Infrastructure Management (CIM) Strategy and CIM Plans in each district that focused on the resilience of coastal infrastructure to flooding, erosion, and landslides, and identified potential solutions. The CIM Strategy was revised in 2015 to shift its focus from coastal infrastructure to a more integrated ridge-to-reef approach (ICR, para 18), which induced a change in the long form of CIM from Coastal Infrastructure Management to Coastal Integrated Management. This project was designed as one of two investments prioritized under the Samoa Climate Resilience Investment Program to integrate a ridge-to-reef approach into CIM Plans to cover from the upper watersheds to the coast with a wider range of adaptation solutions. In parallel to this project, a complementary project with the same name was

implemented by the United Nations Development Programme and funded by the Adaptation Fund in other districts and completed in 2018.

The project's objective was well aligned with the Government's national plans and programs and the World Bank's country assistance strategies. The objective was also in line with the country and sector context and the prior sector experience. However, the lack of clarity of the project's objective undermined the undoubted relevance of the need to for coastal communities to "become more resilient to climate variability and change." To "support" the achievement of this objective implied a low level of ambition for an important task, resulting in an ambiguity on what was the end result that the project aimed to achieve (ICR, para 82 and 112) (e.g., the communities' sense of safety or actual increases in the communities' livelihoods and savings in financial and food resources to prepare for natural disasters). The low level of ambition in the PDO might have been compensated by robust PDO indicators. However, this was not the case since the two indicators only measured the numbers of "project beneficiaries" and "sub-projects with climate/disaster resilience satisfactorily implemented" (ICR, page 37). These indicators were output-focused or did not provide baseline data to assess enhanced resilience of coastal communities and hence a weak confirmation of the project's contribution to enhanced resilience of coastal communities. Therefore, despite the high relevance of the objective to government and Bank development strategies, the overall relevance of the project's objective is rated substantial.

Rating
Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective
To support coastal communities to become more resilient to climate variability and change

Rationale
Theory of Change (TOC): The project's retroactive TOC envisioned that project activities such as updating the Coastal Integrated Management (CIM) Plans in a participatory manner, developing and implementing district- and village-level sub-projects guided by updated CIM Plans and Community Engagement Plan (CEP) procedures, providing training to the Community Service Organizations (CSOs) to implement village level sub-projects, developing CEP toolkit, and producing spatial hazard maps would result in intermediate outcomes such as coastal communities benefited from climate adaptation activities. Critical assumptions here were: (i) the CIM Plans and the Light Detection and Ranging (LiDAR) system were completed in a timely manner to inform designing of the sub-projects; (ii) the investments prioritized by the communities would specifically address resilience issues rather than broader development issues; and (iii) sector agencies would effectively support implementation of the sub-projects. The TOC also envisioned that project activities such as developing an institutional framework for a programmatic approach to climate change and disaster resilience would result in outputs such as an establishment of a common platform for external funding and support, contributing to intermediate outcomes such as the Government's capacity and coordination for the

programmatic approach strengthened. The TOC envisioned that those intermediate outcomes would contribute to outcomes such as an increased protection to coastal communities' lives and livelihoods, an increased protection to coastal infrastructure and environment, and an increased awareness of climate change impacts and adaptation activities from the community level to the government level. A critical assumption here was that a sufficient level of implementation capacity at the national level would be allocated to this project. In the long-term, the outcomes were envisioned to contribute to impacts such as strengthened resilience against shocks and improved quality of life for all.

Outputs (based on ICR para 32-51 and Annex 1):

- Participants in consultation activities during project implementation were 14,900 participants, which was almost triple the original target of 5,000. Female participants were 71,000, which had no formal target. This indicator measured the participants in the consultations for the CIM Plan, the design and implementation of village- and district-subprojects, outreach/media events, and the End of Project Review surveys. (Target achieved)
- The trained CSOs that were providing climate change related services under the project were five CSOs, meeting the revised target of five.
- The CIMs that were updated through consultative processes and incorporated other planning frameworks were 18 CIMs, meeting the original target of 16.
- People provided with access to resilient water supply was 58,138 people, almost four times the original target of 15,000 people.
- The overall score of the water quality and flow conditions of three water sources based on a qualitative scoring system was Medium, improving from the baseline of Poor and meeting the original target of Medium. The score range was classified as Poor, Medium, Good, and Excellent. One project's water quality was classified as Good (ICR, page 32).
- 6 improved climate information and tools were used, meeting the revised target of 6. The improved information and tools included: (i) CIM Plan Toolkit; (ii) Community Engagement Plan; (iii) LiDAR data and aerial photography; (iv) District Sub-Project Plan; (v) Climate documentaries, training material and Infographics; and (vi) PPCR Scorecard.
- 40 percent of stakeholders were estimated to have improved their understanding of climate change, increasing from the baseline of 10 percent and meeting the original target of 40 percent. It was estimated that at least 40,000 people out of the total number of 99,372 populations (based on the 2016 Census) saw the climate resilient documentaries via several media platforms and participated in developing the CIM Plans and implementing sub-projects.
- 18 district maps were prepared to include information on bathymetry (i.e., coastal waters) and topography (i.e., land) for Upolu and Savai'i and used to design the risk management interventions, meeting the original target.
- National planning and four sectors used climate information in decision making. The coordination among Climate Resilience Investment Coordinating Division (CRICD), Climate Resilience Steering Committee (CRSC), Civil Society Support Programme (CSSP) and line agencies was improved.

Outcomes (based on ICR para 32-51 and Annex 1):

- 117 sub-projects to enhance resilience to climate change and disasters were satisfactorily implemented, based on a scoring system, meeting the revised target of 116 sub-projects. Of the total sub-projects that were satisfactorily implemented, sub-95 sub-projects were at the village level, not

meeting the revised target of 100 sub-projects. The district level sub-projects were 22, meeting the original target of 16. To measure the satisfaction level of the beneficiaries of the sub-projects, the Government used a scoring methodology and conducted End of Project Review surveys between June 2020 and January 2021 (ICR, Annex 7, page 63). . The only sub-projects that were rated by the beneficiaries as 3 (Satisfactory) or 4 (Highly Satisfactory) out of the score range from 0 to 4 were included in the actual achieved for this indicator.

- Project beneficiaries were 141,842 people, which were more than triple the revised target of 45,000 people. The actual achievement might have double counted some beneficiaries who benefited from both village and district level sub-projects (ICR, page 27). Female beneficiaries were 49.40 percent, exceeding the revised target of 48 percent. Though this indicator was set as a PDO indicator, the number of direct beneficiaries measured an output-level result.

In addition to the outcomes defined in the Results Framework, the ICR reported on the following achieved outcome which did not have any formal targets.

- According to the beneficiary survey:
    - Some 75 and 82 percent of respondents were very satisfied with either quality or quantity of their new water systems, respectively. Targeted beneficiaries were among the poorest and most isolated, commonly those who had recently moved inland following the 2010 tsunami and Cyclone Evan in 2012. They also included households without access to treated water and prone to inland flooding. Beneficiaries of rainwater tanks were confident that their families would maintain them because: (i) perceived quality of water tanks; (ii) ease of maintenance; (iii) importance to households; and (iv) incentives put in place by CSSP and village councils, whereby poorly performing households or villages were excluded from future village projects (ICR, para 110).
    - Beneficiaries' sense of safety was increased by the escape roads which provided them with quick access to safer inland areas in case of disasters. Safe havens provided refuge and shelter for vulnerable people, as well as a place to safely store personal assets and valuables during extreme events. Based on Samoa's disaster casualty risk (extrapolated to the beneficiary population), these investments are conservatively estimated to help save on average 0.15 lives and prevent 0.61 serious injuries per year—equivalent to 4 percent of the casualty risk from cyclones, earthquakes, and tsunamis in Samoa (ICR, para 40). On the other hand, beneficiaries from escape roads and safe havens were not confident in their ability to maintain the sub-projects, as escape roads became muddy and dirty during the rainy season and safe haven walls were reportedly subject to rotting (ICR, para 110).
    - Beneficiaries' sense of food security was increased through the ability to store food ahead of cyclone and dry seasons, as well as improved financial security from the sale of surplus crops. The project helped supported and trained farmers to plant previously degraded land with coconuts, cocoa, fruit, timber trees, and food crops, contributing to incremental crop revenues that were estimated at US$1,207/household/year, in addition to subsistence crops worth US$306/household/year (ICR, para 42).
- Adaptive learning was the highest rated resilience attribute in the beneficiary survey, with 72 percent of respondents agreeing, or strongly agreeing, that learning how we dealt with past disasters would be crucial in successfully dealing with future events (ICR, Annex 7, para 7.19). The respondents recognized the project as a cause to enhance learning from the past disasters.

Referring to the TOC above, the project contributed to achievements of outcomes that were implicitly assumed in the PAD (ICR, para 33): (i) protection to coastal communities' lives was increased through building the safe shelters and escape roads; (ii) protection to coastal communities' livelihoods was increased through improving the quality and the quantity of accessible water and providing new technologies for agriculture and fisheries; (iii) coastal infrastructure such as culverts was upgraded to reduce flooding risk; (iv) environmental protection was increased by establishing mangrove reserves and replanting degraded watersheds; (v) awareness of climate change impacts and adaptation activities were increased at both the community level and the government level, through CIM planning and CSO-led awareness building. Moreover, the beneficiary communities were satisfied with the climate resilience sub-projects that were developed and implemented in a participatory manner to construct community infrastructures such as water supply systems, waste management systems, and escape roads. The beneficiary communities also considered that adaptive learning from the project supported them to learn from the past disasters to better prepare for future events. The beneficiary communities' perception on their food and financial security improved. To analyze the extent to which the communities' livelihoods and savings in financial and food resources increased through the project, further data would be required. Overall, the efficacy is rated high because the coastal communities' perception on their resilience to climate variability and change were strengthened.

Rating
High

OVERALL EFFICACY

Rationale
As described above, the efficacy is rated high, as the coastal communities' perception on their resilience to climate variability and change were strengthened.

Overall Efficacy Rating

High

5. Efficiency

Economic Analysis: At appraisal, the project had an Economic Internal Rate of Return (EIRR) of 8.9 percent and an NPV of US$11.79 million with a discount rate of 3 percent (PAD, para 52). The ex-ante economic analysis assumed that the project would reduce average annual future damages from disasters by 50 percent in target districts. This assumption was not replicable at the ex-post economic analysis, as the sub-projects actually focused more on improving qualitative aspects such as protecting lives, livelihoods, and ecosystems. At project closing, the project had an EIRR of 11.9 percent and an NPV of US$19.5 million with a discount rate of 3

percent (ICR, para 55). When only sub-projects were taken into the ex-post economic analysis, the EIRR was 18.0 percent and the NPV was US$23.7 million at a discount rate of 3 percent (ICR, para 55).

Cost Effectiveness: At appraisal, the estimated cost was US$216 per beneficiary (ICR, para 57). At project closing, the actual cost was US$43 per beneficiary for village sub-projects and US$88 per beneficiary for district sub-projects (ICR, para 57).

Aspects of Design and Implementation that Influenced Efficiency: The project design to contract a firm for project management as the Project Management Services (PMS) and to receive extensive support from Ministry of Finance through Civil Society Support Programme and Climate Resilience Investment Coordinating Division contributed to increase administrative efficiency. Project management costs at project closing amounted to 14.5 percent of total costs, which was lower than 19.9 percent that was estimated at appraisal (ICR, Annex 4, para 4.45). On the other hand, it took approximately 3 to 4 years to initiate sub-projects due to delays in procuring services and systems that were essential for starting implementation, such as the PMS, the Light Detection and Ranging (LiDAR) system, and CIM Plan updating services (ICR, para 58).

The ex-post EIRR was higher than the ex-ante EIRR, though the two EIRRs were not directly comparable due to differences in assumptions. The actual costs per beneficiary for sub-projects were lower than the estimated cost. Contracting a firm for project management contributed to an increased administrative efficiency; however, prolonged processes in contracting the qualified firm delayed the implementation of the sub-projects. Overall, the efficiency is rated 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	✓	8.90	100.00 ☐ Not Applicable
ICR Estimate	✓	11.90	100.00 ☐ Not Applicable

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

6. Outcome

The relevance of objectives is rated substantial, as it aligned with the strategies of the Government and the Bank assistance but the formulation of the PDO did not clarify the expected outcomes. The efficacy is rated high, as the coastal communities' perception on their resilience to climate variability and change were strengthened. The efficiency is rated substantial, as the cost efficiency at project closing was higher than the

estimate at appraisal but implementation of sub-projects was delayed by procurement inefficiencies. Overall, the outcome is rated satisfactory.

a. Outcome Rating
Satisfactory

7. Risk to Development Outcome

Risk Related to Exposure to Natural Disasters: There might be a risk that an intensified climate change could increase the frequency and intensity of natural disasters and threaten community resilience. This risk was mitigated by providing basic services to and improving livelihoods of households who relocated from more exposed coastal zones to safer inland areas. There is a remaining risk that droughts and floods in inland areas could negatively affect sustainability of infrastructure and systems that were built under the sub-projects.

Financial Risk: There might be a risk that funding for maintenance of the infrastructure and system established under the sub-projects could be inadequate. For the village sub-projects, the Civil Society Support Programme (CSSP) had not yet secured funding at project closing. The beneficiary communities of escape roads and safe havens were responsible for maintaining them, though they were not confident in their ability for maintenance, according to the beneficiary survey (ICR, para 110). The historical dependency on donor support for management of natural resources such as the Marine Protected Areas and upland forest (ICR, para 111) might result in inadequate funding for sustained activities. The financial risk was mitigated for some district sub-projects, by incorporating the district sub-projects into their respective Implementing Agencies' performance frameworks and operational budgets, such as Samoa Water Authority's Corporate Plan for 2021-2024 that allocated an annual budget of US$1.7-1.8 million for O&M of system assets (ICR, para 111).

8. Assessment of Bank Performance

a. Quality-at-Entry
The strategic relevance was well considered, as the project aligned with the Government's strategy, institutional capacity, and policy framework. Technical aspects were adequately designed, as the project used the ridge-to-reef approach to provide holistic climate resilience interventions in a participatory manner. Social and gender aspects were well considered and addressed through social and gender assessments. Risk assessments appropriately identified capacity constraints on project management, which resulted in an arrangement to contract an experienced firm (KVAConsult) to provide the service (ICR, para 17). Environmental aspects were adequately considered to clarify responsibilities and prohibit environmental degradation activities such as sand mining and mangrove clearance (ICR, para 104). On the other hand, the implementation and fiduciary arrangements for sub-projects were not fully adequate, as the CSO assessment overestimated their capacities (ICR, para 104). The community groups lacked sufficient experience and capacity for fiduciary management of sub-projects (ICR, para 25), as well as for climate resilience activities notwithstanding the training provided (ICR, para 24). M&E arrangements did

not adequately consider the capacity of village councils and IAs (ICR, para 104). The PDO formulation was unclear about its expected outcomes, as described in Section 3. Overall, the quality at entry is rated moderately satisfactory.

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision
The implementation support missions were conducted at least bi-annually to provide adequate technical and operational support. Safeguard aspects were closely reviewed by the World Bank's safeguards team in the field visits in 2018-19, who proposed to re-classify eight district sub-projects from C to B (ICR, para 94). The performance reporting was candid in general, as the World Bank team downgraded implementation progress based on procurement delays from 2015 to 2018 and implementation delays in the sub-projects in 2019. Aide Memoires focused on key implementation challenges, presenting a rolling action plan to address them. The World Bank team responded to the Government's requests to restructure the project four times (ICR, par a106), to pilot a way through which external projects could channel sub-grants to the IAs without a need for subsidiary agreements (ICR, para 50), and to resolve procurement delays due to border closures during the COVID-19 lockdown. As transition arrangements, the Ministry of Finance and Civil Society Support Programme (CSSP) agreed to provide support on financial management. On the other hand, the focus on development impact was not fully adequate. The World Bank team focused on encouraging harmonized procedures with IAs and CSSP in early years of the implementation. Later, the focus was shifted to helping the national team complete the large portfolio of sub-projects, which might have distracted from focusing on the project's own development impact and required deployment of a local consultant and engagement of CSSP and the IAs in collecting complementary data for the final evaluation. Overall, the quality of supervision is rated moderately satisfactory.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design
The theory of change was not explicitly presented in the PAD, which resulted in inconsistent descriptions regarding what outcomes the project expected to achieve in the project duration. It negatively affected the clarity of the PDO. The indicators in the Results Framework did not fully encompass all outcomes of the PDO statement. The indicators were specific, measurable, achievable, and time-bound in general, except for some indicators with design flaws. For example, the sub-indicators of the PDO indicator on the area restored or re/afforested only measured mangrove and natural coastal revegetation, and not upland

watershed management, even though the project implemented the reef-to-ridge approach. The PDO indicator also had unachievable annual targets that did not align with the country's vegetation areas of mangrove (ICR, para 83). The Intermediate Results (IR) indicator on improved awareness of climate change risks and hazards among targeted population did not specify methods for sampling and data collection.

The PAD (para 39) mentioned conducting two sample surveys in the beginning and end of the project, without any further descriptions on data collection methodology. It was also unclear how the IR indicator analyzed what data to set its baseline and target. The M&E arrangements were designed to be embedded within local institutions (ICR, para 84); however, the actual M&E arrangements during implementation relied more on an international, independent M&E expert (ICR, para 86; Meeting with the last TTL of the project, hereafter, TTL meeting).

b. M&E Implementation

The indicators in the Results Framework were measured and reported in general. An international, independent M&E expert was hired by a separate funding in 2015, who helped to construct an M&E database to link resilience indicators in the Strategy for the Development of Samoa, the Pilot Program for Climate Resilience program, and three relevant projects including this project (ICR, para 86). The data in application forms for village and district sub-projects were verified by project officers to maintain objectivity. The Project Management Services developed a geospatial database for village sub-projects to collect data in fields through mobile phones and tablets. In addition, a beneficiary survey and a short survey to the IAs were conducted to triangulate data on efficacy and obtain background data on efficiency. The robust end-line surveys compensated for shortcomings in the design of the Results Framework by identifying the perceptions of beneficiaries on climate resilience. On the other hand, the collection of planned baselines in the Results Framework was not completed until mid-2015, after the M&E expert ensured the collection. The methodology for counting direct beneficiaries for escape roads and nature-based solutions under the PDO indicator 1 was not clearly defined.

c. M&E Utilization

The end-line surveys were used to provide good-quality evidence of achievement of outcomes. The M&E data was widely shared with the project stakeholders (village councils, IAs, CSOs, CSSP, and CRICD). The M&E data informed restructurings of the Results Framework where the PDO indicator 3 in the PAD was downscaled and then dropped, due to villages' prioritization in water sub-projects.

The weaknesses in the M&E design were addressed during implementation. The robust end-line surveys carried out at completion provided outcome-level evidence on the project's achievements. Overall, the M&E quality is rated substantial.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

Environmental Safeguards: The project was classified as a Category B, triggering the following World Bank Operational Policies (OP): 4.01-Environmental Assessment; 4.04-Natural Habitats; 4.36-Forests; and 4.11-Physical Cultural Resources. An Environmental and Social Management Framework (ESMF), which incorporated policy requirements on Natural Habitats, Forests and Physical Cultural Resources, was prepared and disclosed in 2013.

The safeguard specialist in the Project Management Services provided training to CSOs and IAs in 2015 regarding safeguard procedures. The environmental and social classifications of all district level sub-projects were reviewed. A comprehensive safeguards field review was carried out in December 2018 to January 2019. As a result, eight district level sub-projects were reclassified from Category C to B. The project completed all reporting required for Category B projects at the district level, including Preliminary Environmental Assessment Reports and environmental site validation reports. All the village sub-projects were classified as Category C based on site visits.

Social Safeguards: The project triggered safeguard policies of 4.10-Indigenous Peoples and 4.12-Involuntary Resettlement. A Land Acquisition and Resettlement Framework was prepared and disclosed in 2013. A separate Indigenous Peoples Plan or Framework was not required, as 93 percent of Samoans were indigenous Polynesians. A brief summary, which summarized the project's compliance with OP/BP 4.12, was disclosed in 2013.

The project did not involve any involuntary resettlement or land acquisition throughout the implementation. While twelve district level sub-projects required land for water infrastructure and escape roads, four voluntary land donations and eight long-term lease agreements were agreed. The project prepared Land Access Due Diligence Reports. Of the three objections to land leases raised during a six-month public notification period, two were resolved before project closing and one was resolved in August 2021 (ICR, para 95).

Overall, the project complied with all its environmental and social safeguard policies (ICR, para 93, TTL meeting).

b. Fiduciary Compliance

Procurement: The project complied with the World Bank's procurement guidelines and the Grant Agreement. The project followed the procurement plan which was revised annually. No evidence of mis-procurement, fraud, or corruption was found (ICR, para 97). Procuring the Project Management Services (PMS), the Light Detection and Ranging system, and Community Integrated Management plans was critically delayed in early periods of project implementation (ICR, para 75). To address the procurement delays, the World Bank procurement expert conducted two training sessions with IA, CSSP, and CRICU staff from mid-2015 to early 2016. The Project Operations Manual was revised to explain procurement steps in detail. The IA specialists were further involved in contract specifications. The PMS also set up a procurement performance monitoring system to assess contract timeliness and budgetary efficiency, and hired a project assistant to improve procurement records. In early 2019, to address delays in procuring

water tanks for rainwater sub-projects at the village level, the Civil Society Support Programme (CSSP) set up bulk procurement, which further improved procurement efficiency.

The project did not switch from the Excel-based procurement monitoring to the Systematic Tracking of Exchanges in Procurement (STEP) when STEP was introduced in 2016. This was because most of the procurement plan had been completed by then and the limited bandwidth in accessing STEP.

Financial Management: The project complied with all its financial covenants, but with two- to four-month delays in the 2016 and 2017 audits and in some of the Interim Financial Reports (IFRs). All audits up to fiscal year (FY) 2019-20 were unqualified. The audit report for FY 2020-2021 was delayed due to a prolonged process of collecting financial documents and completed after project closing (TTL meeting). The World Bank's financial reviews and annual audits found and addressed some weaknesses in financial management, such as ineligible expenditure, inconsistencies in project transactions, and delays in reconciliation between the Government's system and the project records. Some CSSP expenses were not pre-audited to comply with the provisions of the 2001 Public Finance Management Act. At project closing, the Government was planning to return US$0.66 million in project funds, mostly from unused contingencies (ICR, para 101).

c. Unintended impacts (Positive or Negative)

The public-private partnerships were established with two private entities, Serendi Coco Samoa and Women in Business Development Inc., through the agro-forestry sub-projects at the district level (ICR, para 69).

According to the beneficiary survey, the beneficiaries enhanced their resilience to disasters other than climate related, as the project activities (e.g., constructing water supply system, establishing multi-cropping system with vegetables and more diverse crops that were resilient to climate change) supported the livelihoods and nutrition of communities during the border closure due to the COVID-19 (ICR, para 3 in page 56, paras 68 and 7.13; TTL meeting).

d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Modest	Substantial	The weaknesses in the M&E design were addressed during implementation. The robust end-line surveys carried out at

			completion provided some outcome-level evidence on the project's achievements. Overall, the M&E quality is rated substantial.
Quality of ICR	---	Substantial	

12. Lessons

The ICR presented four lessons and recommendations in Section V. The following lessons in the ICR can be relevant to other projects on enhancing climate resilience in coastal areas, and are presented here with some editing.

Overly broad objectives with unclear expected outcomes and incomprehensive Results Framework can weaken a climate resilience enhancing project's relevance of design. Although the PAD listed expected outcomes, some were not captured by the results framework (ICR, para 82). As resilience is multi-dimensional and may take a long time to achieve, the PDO may need to be narrowed further to the types of interventions and time frame that a project is expected to cover.

Nature-based adaptation solutions (e.g., mangrove protection and fish reserves) may not match with vulnerable and poor coastal households' short-term priorities and immediate needs. Under the project, communities tended to prioritize resilience investments that addressed their immediate needs based on gender roles (e.g., water supply infrastructure) (ICR, para 113). Nature-based solutions were implemented at the district level by specialized agencies. Projects that use a participatory approach to define adaptation solutions need to be aware of priorities among different demographic and gender groups and guide the process accordingly. Giving women prominent roles in sub-project selection at the community level would be crucial.

The ridge-to-reef approach may offer a good model for adaptation that promotes longer-term, structural change by gradually helping coastal communities settle in safer upland areas, but it takes long time to implement. The project encouraged the coastal communities to voluntary resettle to inner areas by: (i) using participatory climate risk and resilience plans (i.e., CIM Plans) to prioritize adaptation investments; (ii) making village- and district-level investments within a given catchment and administrative area; and (iii) targeting the most vulnerable with basic services and livelihoods; however, the approach took seven years and a half (ICR, para 114). This adaptation has shown good results under this project. For example, piped water systems further inland helped coastal communities settle more permanently in safer upland areas, and upper watershed management aimed to decrease coastal erosion and flooding (ICR, para 51).

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provides a detailed overview of the project with a focus on results. The narrative supports the ratings and available evidence. It makes an attempt to triangulate data to reach conclusions where possible. There is a reference to the project's theory of change that helps the reader to understand how the ratings have been reached. The ICR's lessons are clear and based on evidence outlined in the ICR. Overall, the quality of the ICR is rated substantial.

a. Quality of ICR Rating
Substantial